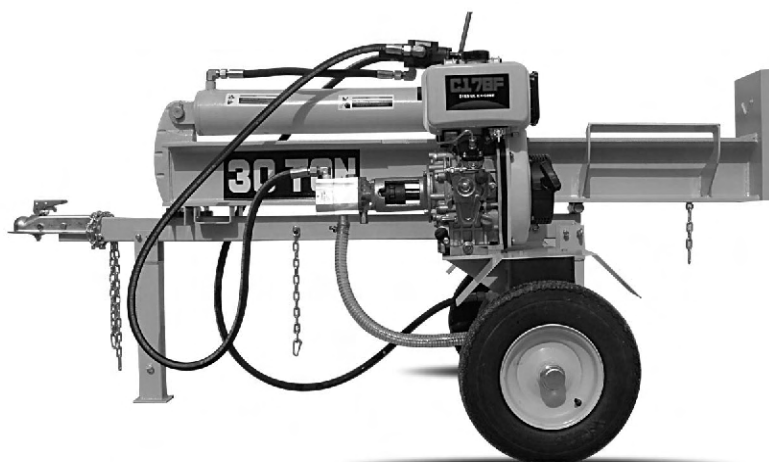


Log Splitter

□ AC-12391 (22TON)

ASSEMBLY AND OPERATING INSTRUCTIONG



WARNING! **IMPORTANT INFORMATION**

This trailer's Hitch Coupler **MUST** be properly secured to the hitch ball of the towing vehicle. After assembly and attachment, pull up and down on the Hitch Coupler to make sure the hitch ball is fitting snugly in the Hitch Coupler. **There must be no play between the hitch ball and Hitch Coupler.** If there is play, tighten the Adjustment Nut until no play is present. If the Adjustment Nut is too tight, the Handle will not lock. **Carefully read and follow the complete instructions in this manual BEFORE setup or use.**

If the Coupler is not secured properly, the ball could come loose while the trailer is in motion, possibly causing property damage, **SERIOUS PERSONAL INJURY, or DEATH.**

For technical questions and replacement, please contact us

Specifications

Maximum Pressure.....	3500PSI
Coupler Size.....	2inch Ball
Maximum Log Length.....	24inch/610mm
Pressure Relief Setting.....	3000PSI
Maximum Flow.....	11GPM(22 Ton)
	16GPM(30Ton/37Ton/40Ton)
Hydraulic Cylinder Bore.....	4.0inch/22 Ton
	4.5inch/30Ton
	5.0inch/37Ton
	5.0inch/40Ton

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.

Before Each Use – Inspection / Maintenance

Step One: Inspect and maintain log splitter before each use.

If the log splitter has been used previously, it must be inspected and maintained BEFORE EACH SUBSEQUENT USE.

WARNING

ALWAYS shut off the tractor, relieve system pressure, and disconnect hydraulic lines before inspecting, cleaning, adjusting, or repairing the splitter. Relieve system pressure by moving Split Control Lever back and forth several times.

IMPORTANT:

If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the log splitter.

1. Tractor off /relieve hydraulic pressure	Perform all inspections/repairs with the tractor off and hydraulic system pressure relieved. 1. Turn off tractor engine. 2. Relieve all hydraulic system pressure by moving the Split Control Lever and the tractor hydraulic control valve handle back and forth several times. 3. Disconnect the hydraulic lines.
2. Remove debris	Remove debris from moving parts. Debris on moving parts can cause excess wear. Clear debris from the slide beam wedge, and endplate.
3. Mechanical parts	Check to be sure all nuts and bolts are tight to make sure the log splitter is in safe working condition.
4. Hydraulic Components	Check the hydraulic components carefully: 1. Visually inspect all hoses and clamps/fittings for cracks, fraying, kinks, or other damage. 2. Check all components for oily residue, which may indicate a leak. Do NOT operate the log splitter if there is any indication of damage or oily residue. Small leaks in hydraulic lines can cause severe injuries and can also be an indication of catastrophic failure in the near future. The life of hydraulic hoses may be from a few months to a few years, depending on use and storage patterns. ▲ WARNING: High fluid pressures and temperatures are developed in hydraulic log splitters. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the log splitter: • Stop the engine and move all control valve handles back and forth to relieve pressure before changing or adjusting hydraulic system components such as hoses, tubing, fittings or other components. • NEVER check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood. • If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious.

Before Each Use – Inspection / Maintenance

	However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.
5. Shields / guards	Replace all guards and shields after servicing the log splitter.

Before Each Use – Work Site Selection & Set-Up

Step Three: Work site and log splitter set-up.

WARNING

It is important to select an appropriate work site and properly set up the log splitter in order to minimize the risk of slips and falls, equipment rolling or tipping over, carbon monoxide poisoning, and accidental fires.

1. Select location	Select an appropriate location for operating the log splitter. Requirements: 1. Dry, level surface with good footing. Stay clear of areas with mud, ice, tall grass, weeds, or brush. 2. Outdoors, away from air intakes. WARNING: The running tractor engine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it. • ONLY run log splitter OUTDOORS and away from air intakes. NEVER run log splitter inside homes, garages, sheds, or other buildings or semi-enclosed spaces. These spaces can trap poisonous gases, EVEN if you run a fan or open windows. • If you start to feel sick, dizzy, or weak while using the log splitter, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.
2. Fire precautions	Take the following precautions against fire: Keep a fire extinguisher available (classified for both ordinary combustibles & flammable liquids) as a precautionary measure when operating the log splitter in dry areas.
3. Position 7' from any combustibles or flammable liquids	Position tractor exhaust and other hot elements of the tractor engine at least 7 ft. from combustible objects during splitter operation. Hot exhaust fumes from tractor engine could cause fire.
4. Engage parking brake	Make sure the tractor's parking brake is engaged before operating the log splitter. ▲WARNING: If the parking brake is not engaged, the tractor could roll while you are operating the log splitter. Personal injury could result.

Splitting Operation

WARNING

Before starting the log splitter, review the following instructions and safety information for safe operation. Failure to follow these rules may result in serious injury to the operator or bystanders from moving parts that crush, cut, or entangle; from flying objects, fire, falling or tripping; or from carbon monoxide poisoning.

General Safety Information:

- **Read Manual.** Do not allow anyone to operate the log splitter who has not read the Owner's Manual or has not been instructed on the safe use of the log splitter. The log splitter owner should instruct all operators in safe log splitter operation.
- **Age Restrictions.** NEVER allow anyone under 16 years old to operate the log splitter. Children 16 years and older must be trained and supervised by a trained adult.
- **Intended Use.** Log splitters should only be used for splitting wood logs, lengthwise with the grain. Does not use for other purposes as unforeseen hazards may result.
- **Modifications.** NEVER modify or alter the log splitter in any way. Modifications can create serious safety hazards and will void the warranty:
 - **Attachments.** NEVER add attachments to the splitter, except for authorized accessories supplied by the manufacturer with instruction for safe installation and use.
 - **Remote Control.** NEVER attach a rope, cable, or other remote device to the splitting control.
 - **Splitting Wedge.** NEVER attempt to change the height or speed of the splitting wedge.
 - **Safety Equipment/controls.** Always operate the log splitter with all safety equipment in place and in good working order, and all controls properly adjusted for safe operation.
 - **Know How to Stop.** Be thoroughly familiar with all controls and with the proper use of the equipment. Know how to stop the log splitter and reliever system pressures quickly if needed.
 - **Operating Speed.** Always operate the log splitter at the manufacturer's recommended speed. Adjust the tractor engine speed so the flow rate does not exceed 11GPM/16GPM (see tractor specifications for determining relationship between flow rate and engine speed.) Higher flow rates make the beam slide move dangerously fast.
- **Daylight Only.** Only use the log splitter in day light so you can see what you are doing.
- **Smoking/Sparks.** NEVER smoke while operating the log splitter, and never operate near sources of sparks or flames.
- **Under the Influence.** NEVER operate, or let anyone else operate, the log splitter while under the influence of alcohol, drugs, or medication.
- **Unattended.** NEVER leave the machine unattended while the engine is running.
- **Adjusting/Repairing.** Turn the tractor off before cleaning, repairing, or adjusting the log splitter. Before changing or adjusting hydraulic system components such as hoses or fitting, first relieve hydraulic line pressure by moving the Split Control Lever and the tractor hydraulic control valve handles back forth several times, and then disconnect hydraulic lines.
- **Replace Labels.** Always make sure safety labels are in place and in good condition.

Splitting Operation

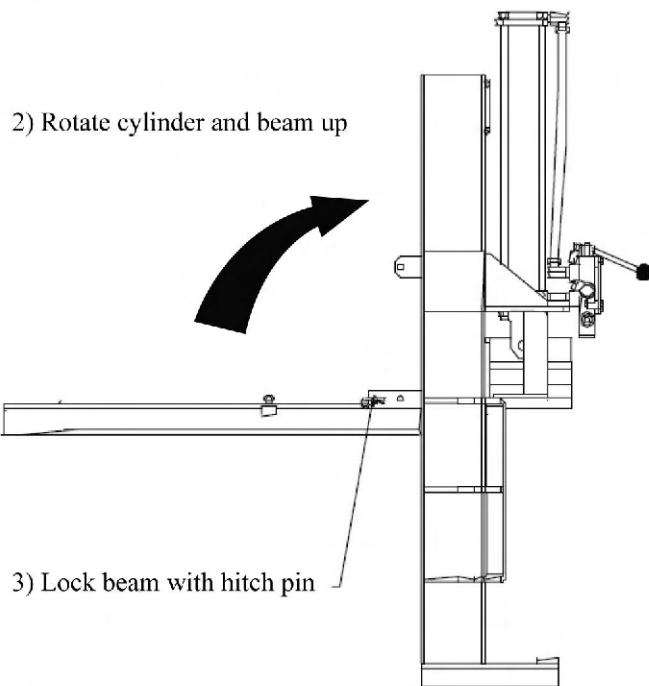
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Splitting Operation

position

1) Set in vertical position using following steps:

- a. Unlock beam by removing hitch pin.
- b. Rotate cylinder and beam until beam is vertical (NOTE: beam is heavy).
- c. Lock into position with hitch pin again.



2) To return to horizontal position:

- a. Unlock beam by removing hitch pin.
- b. Rotate cylinder and beam down carefully in a controlled manner until beam is horizontal.
- c. Lock beam in horizontal position with hitch pin.

▲ WARNING: Crush hazard. The beam is heavy- do not let it just drop. It could crush fingers or cause damage to the splitter.

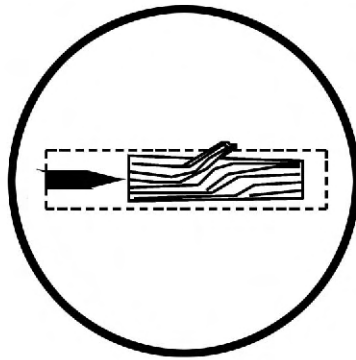
4. Load log

Load log onto beam with a cut end against the endplate – positioned for a lengthwise cut.

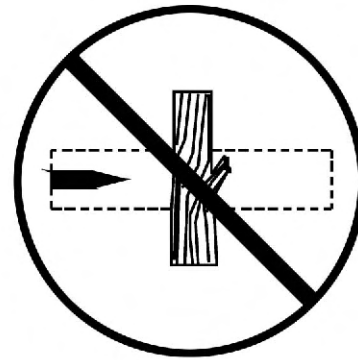
NOTES:

- a) The log splitter is designed only for cutting lengthwise with the grain NOT for cutting across the grain.
- b) This log splitter is designed for cutting logs only up to a limited length and diameter. Larger diameter logs can get stuck on the wedge and longer logs will not fit on the beam.
 The capacity of 22Ton machine: Max.24inch length, Max.16inch diameter
 The capacity of 30Ton machine: Max.24inch length, Max.18inch diameter
 The capacity of 37Ton machine: Max.24inch length, Max.20inch diameter
 The capacity of 40Ton machine: Max.24inch length, Max.22inch diameter

Splitting Operation



Correct log orientation



Incorrect log orientation

▲ **WARNING:** ALWAYS keep hands and feet away from the endplate, wedge, and partially split logs while loading, operating, and unloading the log splitter.

Important safety instructions:

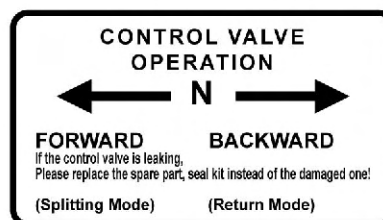
• **Hold bark side.** Hold the bark side of logs when loading or positioning, never the ends. Never place your hands or any part of your body between a log and any part of the log splitter.

Note for vertical position loading: Place the log on the endplate and turn it until it leans against the beam and is stable. If the log is too big or oddly shaped, stabilize the log with wooden shims between the log and the endplate or ground. DO NOT use your leg or knee to stabilize the log. NEVER stabilize the log by placing your hand on top of the log.

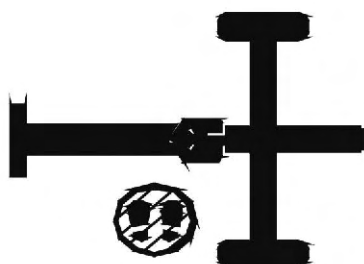
- **Wedge moving.** NEVER load or unload logs while the wedge is moving
- **Straddling / reaching across.** Never straddle, reach across, or step over the beam while the engine is running and the log splitter is in the horizontal position. You could trip, actuate the controls, and get seriously injured.
- **Unsplit log pile.** Do not pile logs to be split in a place that will make you reach across the log splitter in order to load them.
- **Square log ends.** Logs that are not cut square can slide out while splitting and become a safety hazard or cause excessive force to log splitter components. Use a chainsaw to cut logs square on each end before attempting to split them.
- **Single log.** Never attempt to split more than one log at a time. Pieces of log can unexpectedly be thrown from the machine causing serious injury.
- **Split along grain.** Do not use the log splitter to split logs across the grain. Doing so will damage the log splitter and could also cause pieces of log to be thrown, injuring the operator or bystanders.

5. Extend wedge

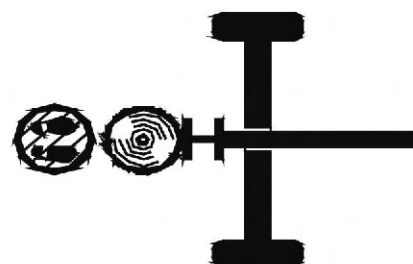
Move Split Control Lever toward endplate to extend wedge and split log.



Splitting Operation



Operator Position-Horizontal



Operator Position-Vertical

Important safety instructions:

- **Operator position.** ALWAYS operate the log splitter from the manufacturer's indicated OPERATOR POSITION. (See diagram above.) Other positions are unsafe because they can increase the risk of injury from crushing, cutting, flying objects, or burns.
- **Remove hands.** Remove both hands from log before activating Split Control Lever.
- **Hand activate.** Use only your hand to operate the Split Control Lever. Never use any other body part, or a rope, cable, or other remote device to actuate the control.
- **Second person.** Many accidents occur when there is more than one person involved in loading and operating the log splitter. Only one person should operate the controls. If a second person is assisting in loading logs, the operator must NEVER actuate the Split Control Lever until the assistant and all bystanders are at least 10 feet away. NEVER allow an assistant to hold the log in place while the operator actuates the Split Control Lever.

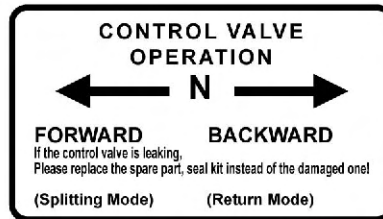
6. Stop wedge

Release Split Control Lever to stop wedge movement when log is split.

- ▲ **WARNING:** Cracks in logs can close quickly and pinch fingers. Keep fingers away from any cracks that open in partially split logs.

Splitting Operation

6. Important STUCK LOG procedure



If a log does not split completely and becomes stuck on the wedge, follow the instructions below to remove the log.

A log can become stuck to the wedge if the wedge becomes embedded in the log and the log doesn't split and separate. This can happen if the log is too stringy or tough to split completely.

A stuck log will move back with the wedge on the initial attempt to retract the wedge. If this happens, STOP retracting the wedge immediately and follow the directions below.

▲WARNING: NEVER attempt to remove a stuck log by:

- Using the hydraulic force of the splitter
- Modifying the splitter
- Adding attachments to the splitter

Personal injury could result from log or metal pieces flying out at high speed toward the operator or bystanders, or the splitter could become damaged.

1. If there is already 1" or more of clearance between the log and endplate, go to step 2. Otherwise, retract wedge just enough to remove pressure between the log and endplate about 1" clearance. (Move split control to return, allow wedge to move about 1", then stop the wedge by moving the split control to neutral "N".)

2. Turn engine OFF.

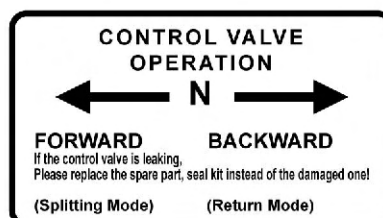
3. Remove stuck log from the wedge manually with a pry bar or a sledgehammer.

Important: Be extremely careful as log pieces may fly off as they separate from the wedge. Make sure bystanders are clear and wear safety goggles.

4. Do not attempt to resplit a stuck log once it has been removed from the wedge. Manually split with an axe, or cut with a chainsaw.

7. Return wedge

Move Split Control Lever away from endplate to return wedge. Once the control valve is actuated in the return direction, the wedge is designed to keep returning by itself completely and then stop automatically.



▲WARNING:

Stay clear while the wedge is returning. It is still powerful enough on the return stroke to cause serious injury.

Splitting Operation

8. Remove split wood	Remove split wood from area. Move each log away from log splitter after it is split. Split logs left near the log splitter are a trip hazard.
9. After use	Return splitter to horizontal position. If in the vertical position, return log splitter to the horizontal position for greater stability and prepare for transportation.

Storage

Follow the instructions below for storing you log splitter between uses.

1. Retract wedge	Retract the wedge completely to keep the rod protected from corrosion.
2. Wipe with oily rag	Wipe the beam and wedge with an oily rag to prevent corrosion.
3. Splitter storage location	Store the log splitter in a dry location away from corrosive material. <u>NOTE:</u> Do not store the log splitter near fertilizer or similar corrosive materials.

Troubleshooting

WARNING

Before troubleshooting or attempting to service, read the following safety instructions to avoid serious injury to the operator or bystanders from moving parts that can crush or cut, cause burns, fire or explosion, or escaping high pressure hydraulic fluid.

Important Safety Instructions:

1.Engine Off. Always make sure the tractor engine is off before cleaning, repairing or adjusting the splitter, except as recommended by the manufacturer.

2.Hydraulic Safety.

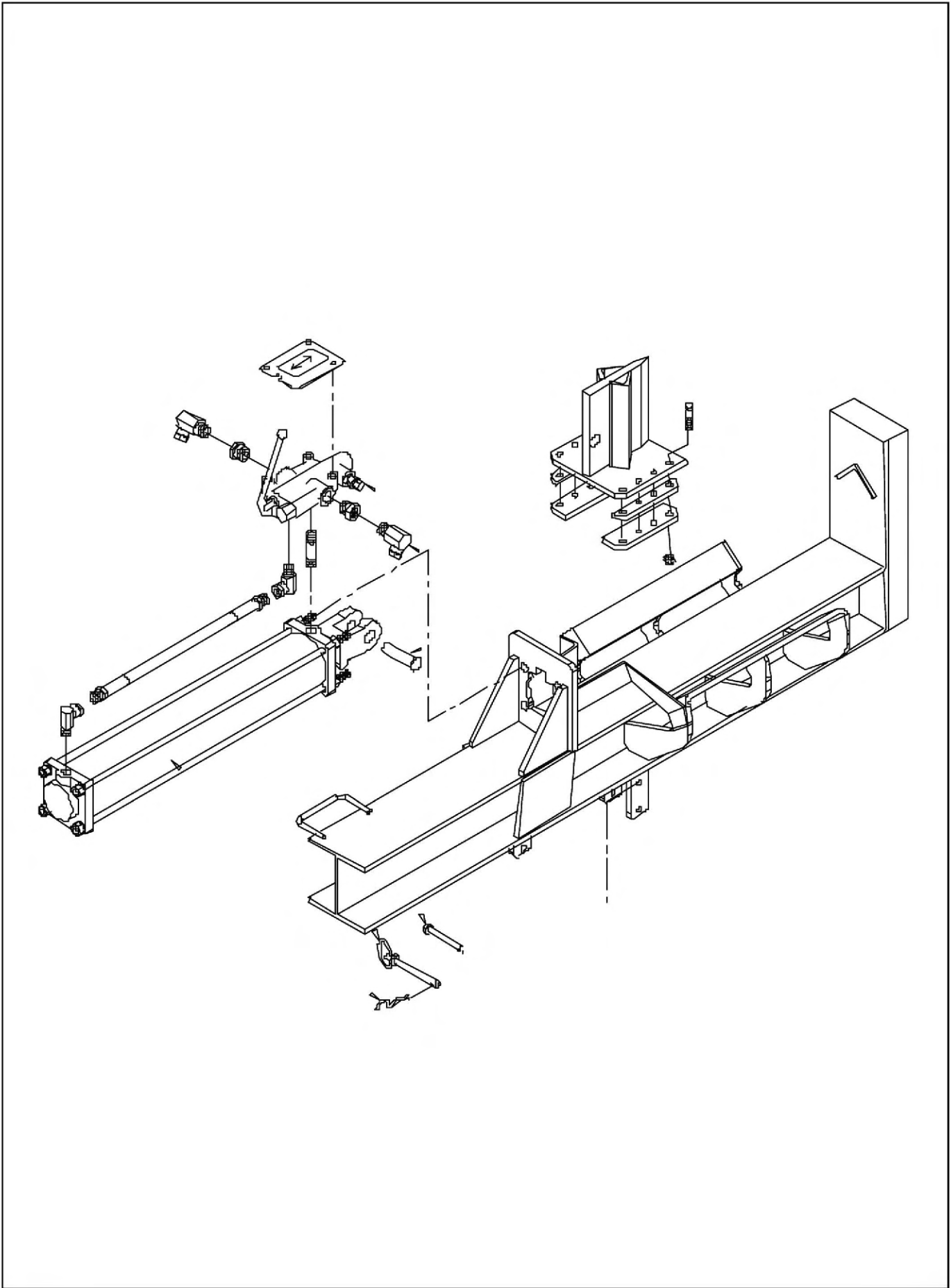
- 1.Please pour into at least 20L hydraulic fluid before using this machine for the first time.
- 2.We sincerely recommend you to choose ESSO “Nuto Hzz” or Royal Dutch Shell “Tellus Tzz” hydraulic fluid for your machine.
- 3.Before starting the engine, please pull the rope of the engine several times to make sure the fuel system filled with the hydraulic fluid, this may relieve the pressure for the hydraulic parts.
- 4.After using for the first time, place clean up the filter and make sure to do this cleaning for it regularly in order to avoid blocking the filter.

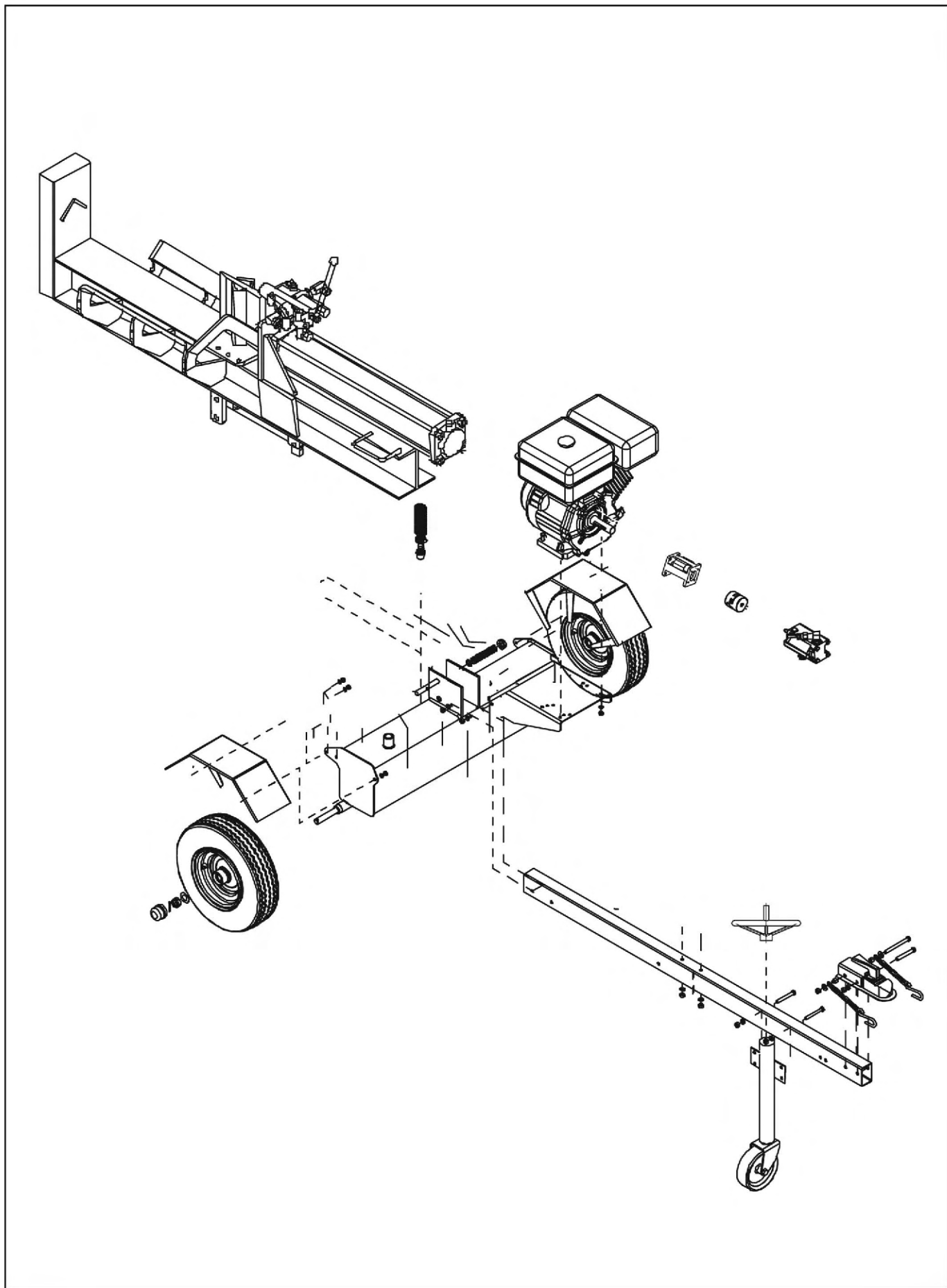
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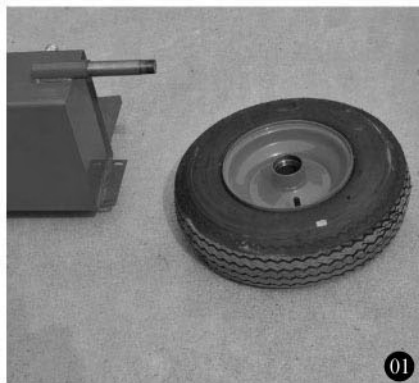
- Turn off tractor engine, move all control valve handles back and forth to relieve pressure, and disconnect hydraulic lines before changing or adjusting hydraulic system components such as hoses, tubing, fittings or other components.
- NEVER check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
- If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.

Problem	
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
Wood will not split or splits extremely slowly	Solution: A,B,C,F,I,K
Tractor engine bogs down during splitting	Solution: G
Tractor engine stalls under low load condition	Solution: D,E

Cause	Solution
A-Insufficient oil to pump	Check oil level in reservoir
B-Air in oil	Check oil level in reservoir
C-Excessive pump inlet vacuum	Check pump inlet hose for blockage or kinks
D-Blocked hydraulic lines	Flush and clean the splitter hydraulic system
E-Blocked control valve	Flush and clean the splitter hydraulic system
F-Low control valve setting	Adjust control valve with a pressure gauge
G-High control valve setting	Adjust control valve with a pressure gauge
H-Damaged control valve	Return control valve for authorized repair
I-Internal control valve leak	Return control valve for authorized repair
J-Damaged cylinder piston	Return cylinder for authorized repair
K-Internally damaged cylinder	Return cylinder for authorized repair







1. Take out the oil tank of hydraulic oil from the package



2. Assemble the bearing on each one wheel



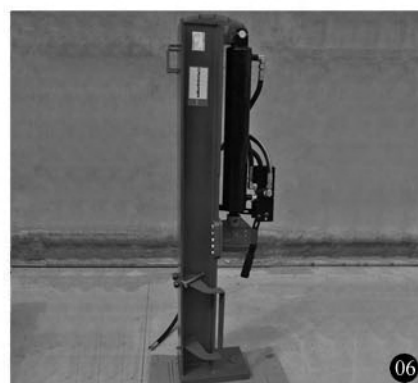
3. Fix the wheel with bearing on the axle of oil tank and fasten the nut with the wrench



4. Connect the draw pole with the oil tank



5. Connect the draw pole with the oil tank via bolt and nut



6. Stand up the main body



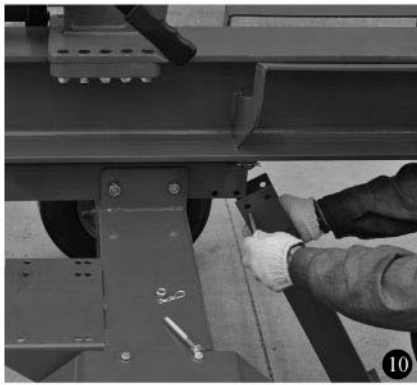
7. Connect the trailing end with the trunk with the bolt



8. One person pulls out the bolt (on the drawbar, with spring inside) and presses the draw pole hard; the other person put the main body down slowly



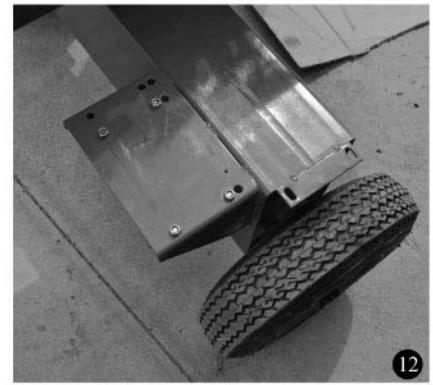
9. Put the bolt back at right position, now the main body is fixed on the draw pole



10. Assemble the rear jack



11. Keep the machine level by hand and assemble the front jack



12. Prepare the engine



13. put the engine (with oil pump) at the correct position on the stand of machine.



14. Fasten the nut, 4 sets of nuts and bolts



15. Connect the white color oil hose, between the oil pump (undersurface) and oil filter of oil tank and fasten the nut tightly



16. Connect the black color oil hose to the oil pump (bend connector of oil pump)



17. Connect the other black color oil hose to the oil tank



18. Complete machine photo

Please note, No.16, No.17, the oil hose should be connected by LEFT to LEFT, RIGHT to RIGHT, NOT CROSS.

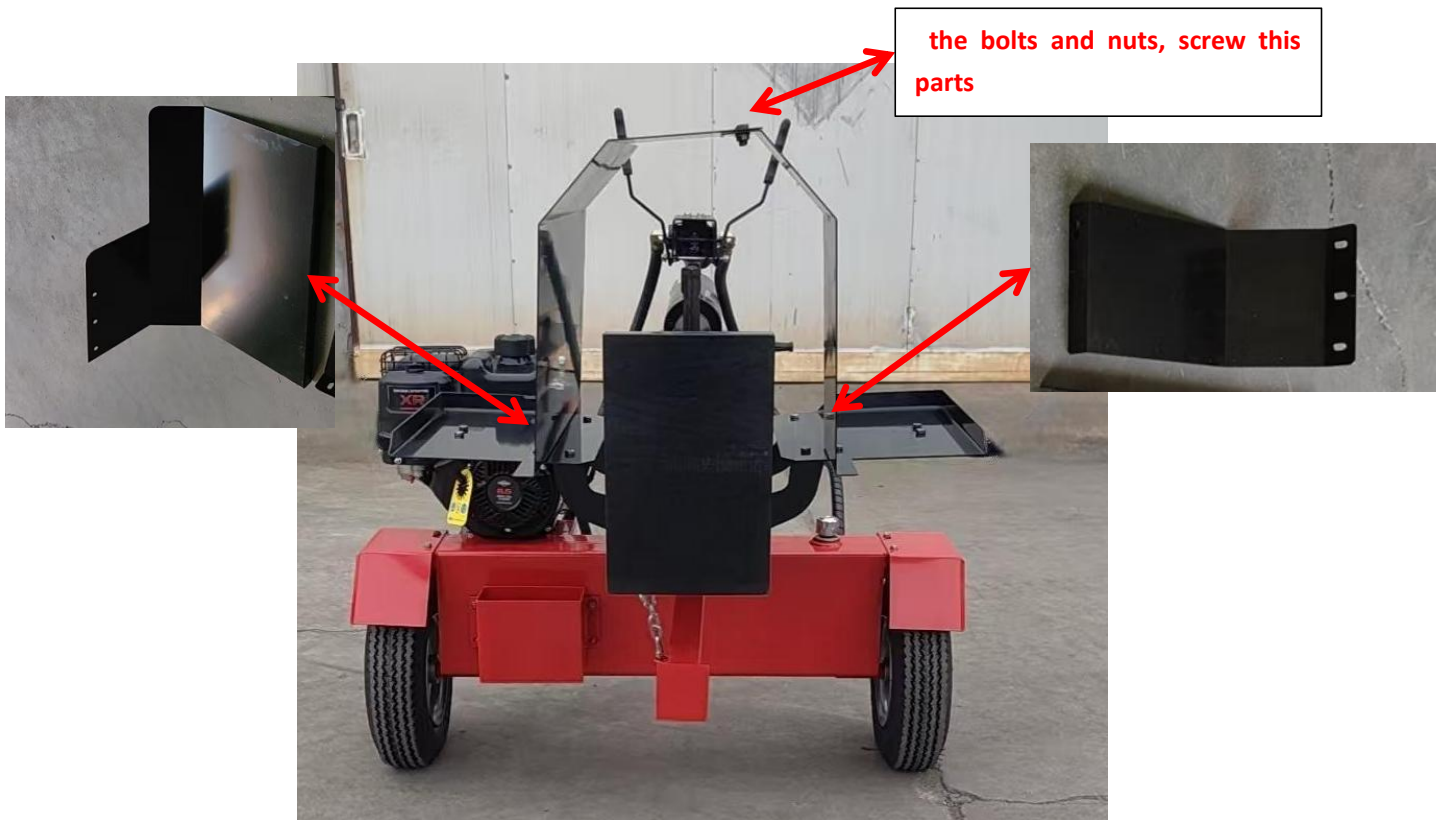
Please get parts ready as follows:



Step 1 : install the plate (both sides)

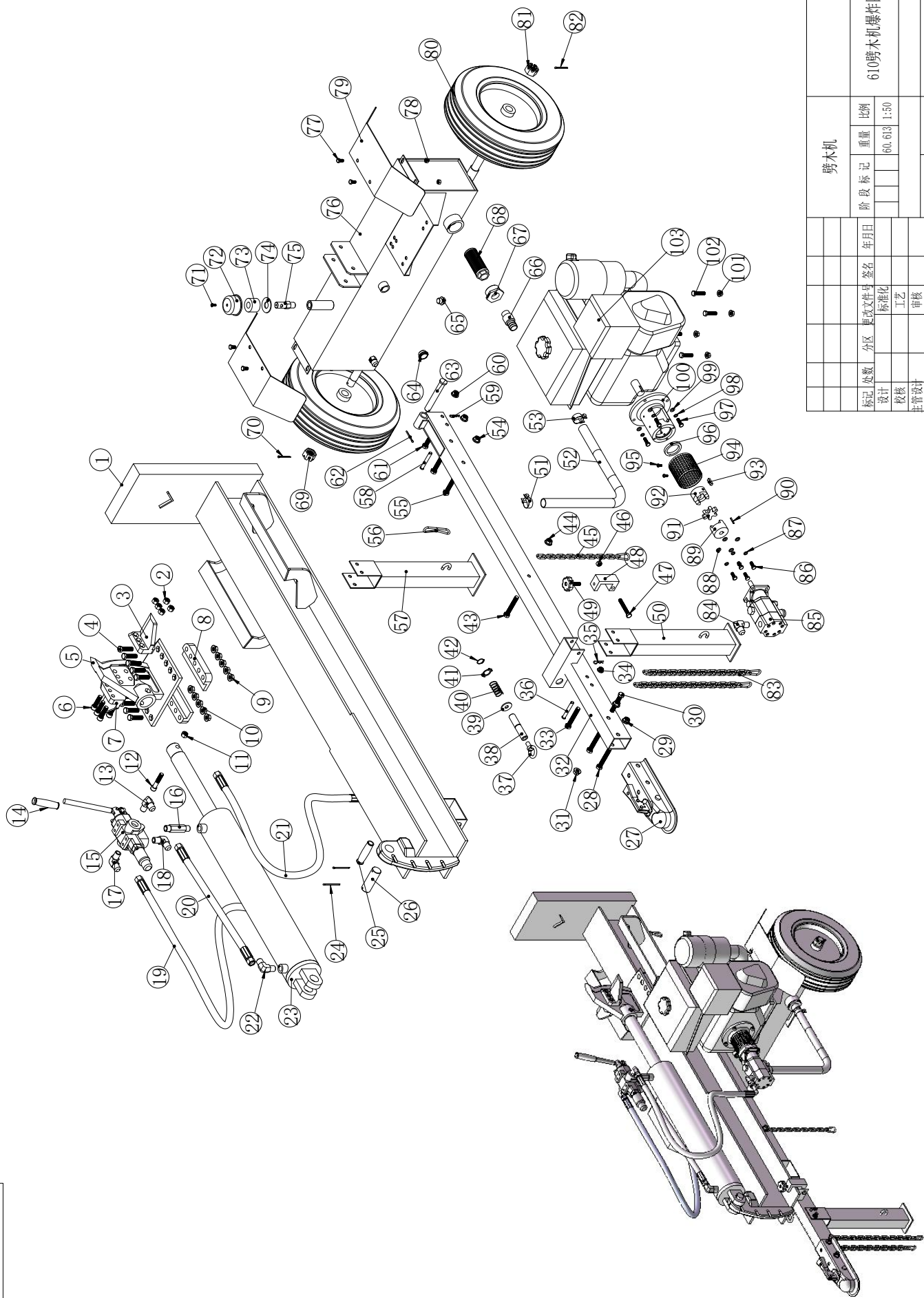


Step 2: after you assemble the plate at the both side , please install the guard cover.



Step 3: Install the log bracket(the both sides)





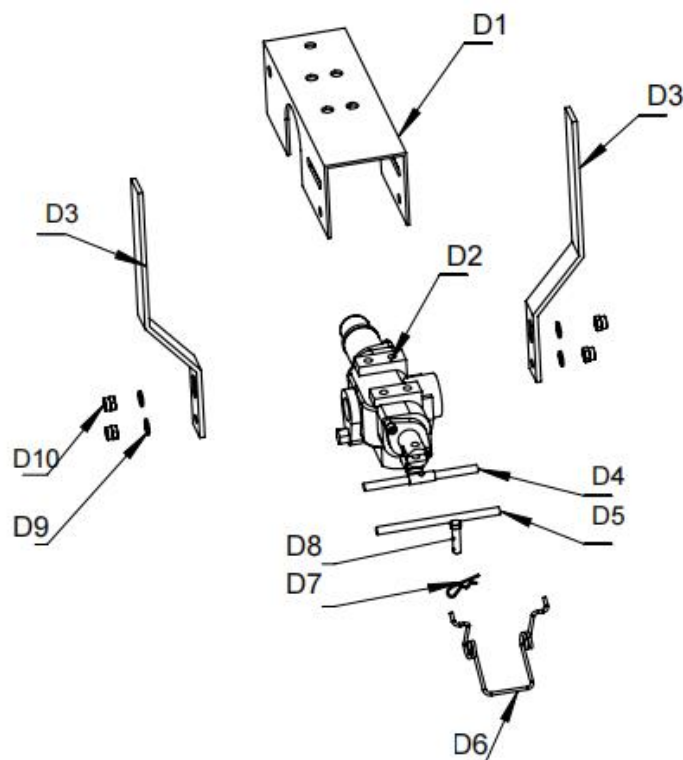
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标准/制造规范	
插图	
描述	
旧底图编号	
底图编号	
签字	
日期	

Log splitting parts list

Serial number	Name	Serial number	Name	Serial number	Name
1	Main beam	39	Large side flat pad	77	The screws of 8*20
2	Nut of secondary wedge	40	Spring	78	Nut M8
3	Secondary wedge	41	Positioning Flat pad	79	Fender
4	Screw of wedge	42	Circlip	80	Tyre
5	Wedge	43	The screws of 10*80	81	Cotter nut
6	Screw of Secondary wedge	44	Nut M10	82	Cotter pin
7	Secondary wedge	45	Chain	83	Safety chain
8	Guide plate	46	Nut M10	84	Angle head
9	Nut of wedge	47	The screws of 10*80	85	Oil pump
10	Nut of wedge	48	The locking block	86	The screws of 8*20
11	Nut of Cylinder	49	Torx screws	87	Spring washer
12	Screw of cylinder	50	Support	88	Flat pad
13	Angle head	51	Clamp of Inlet oil pipe	89	coupling
14	Distributor of hand set	52	Inlet oil pipe	90	The top wire
15	distributor	53	Clamp of Inlet oil pipe	91	The coupling shock absorber
16	Direct connector	54	Nut M12	92	coupling
17	Angle head	55	The screws of 12*80	93	Oil Pump key
18	Angle head	56	Chain of support	94	Protective net
19	Inlet oil hose	57	Support	95	Guard screw
20	Inlet oil hose	58	Screw 10*80	96	nylon ring
21	Inlet oil hose	59	Nut M10	97	The screws of 8*25
22	Angle head	60	B type pin	98	Spring washer
23	Cylinder	61	The pin shaft of 10	99	Flat pad
24	Cylinder cotter pin	62	B type pin	100	Oil pump bracket
25	The hand set of main beam	63	Pin shaft	101	Nut M10
26	Cylinder pin shaft	64	Observation hole	102	The screws of 10*40
27	Trailer ball head	65	Oil releasing nut	103	Engine
28	The screws of 12*80	66	Oil filter assembly		
29	Nut M12	67	Oil filter assembly		
30	The screws of 12*80	68	Oil filter assembly		
31	Nut M12	69	Cotter nut		
32	Traction rod	70	Cotter pin		
33	The screws of 10*80	71	Air release assembly		
34	Nut M10	72	Air release assembly		
35	B type pin	73	Air release assembly		
36	The pin shaft of 10	74	Air release assembly		
37	M12 rings	75	Air release assembly		
38	The shaft of pull rod	76	Tank		

Double handle valve parts list



Serial number	Name
D1	Valve cover
D2	Valve
D3	Operate handle
D4	Bolt for double handle double sided thread
D5	Positioning rod
D6	Spring on twin handle
D7	Pin
D8	B type pin
D9	Plain washer
D10	Nut