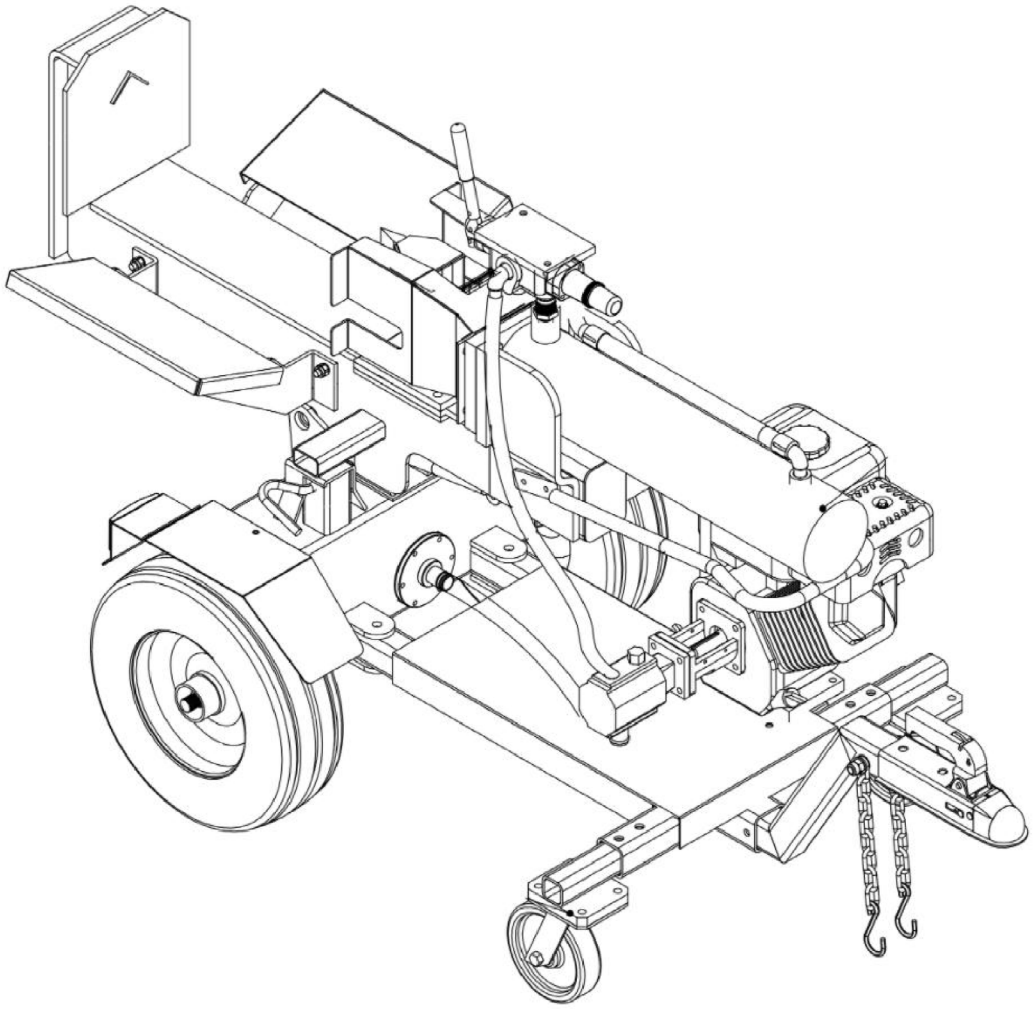
PETROL LOG SPLITTER 27 TONNE



TSLS28

www.thetoolshed.co.nz

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Thank You

For the purchase of this ToolShed product. We try our hardest to supply customers like you with the best quality products available, at the best price possible. We cant wait to continue working together in the future.

Please contact us for any servicing, replacement parts, or questions you might have about your ToolShed product by visiting our website, or calling: 0800 948 665.

PRODUCT DETAILS

Product Model	*ToolShed Petrol Log Splitter 27 Tonne*
Product Code	*TSLS28*

DISTRIBUTED BY:

Note:

This manual is for your reference only. Due to the continuous improvement of the ToolShed products, changes may be made at any time without obligation or notice.

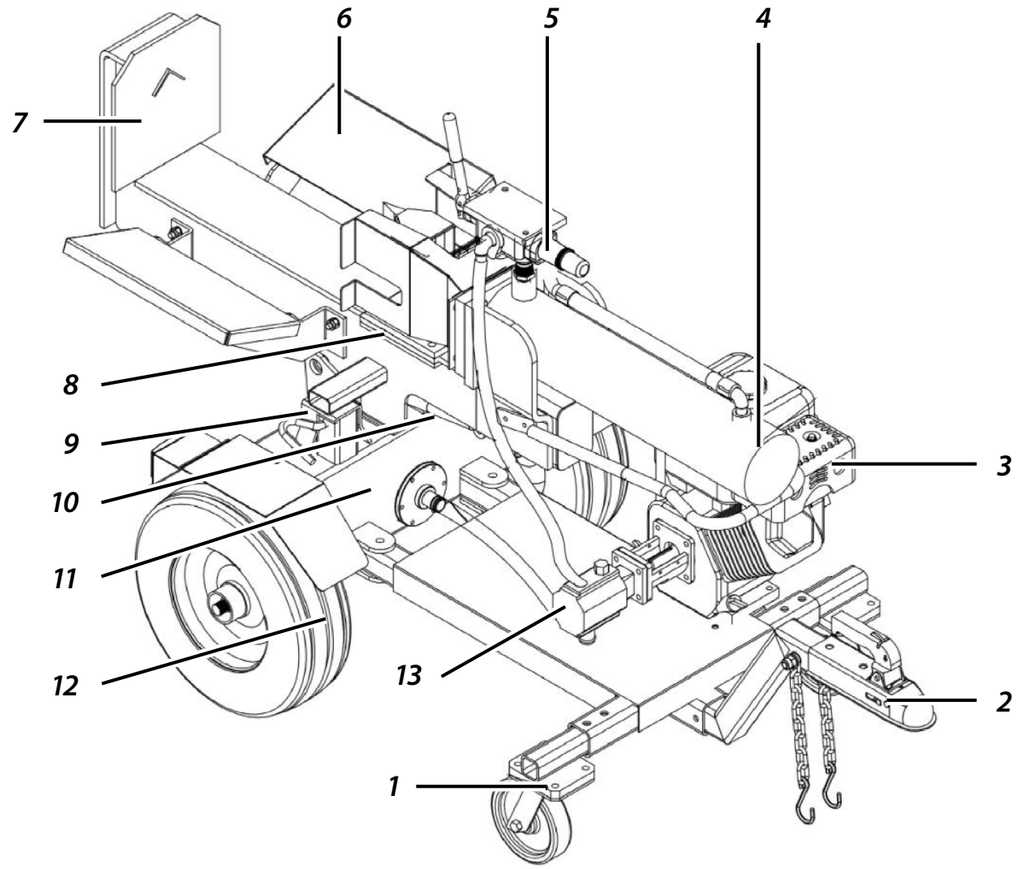
Warranty:

This product may be covered under The ToolShed warranty. For more information, see our Terms & Conditions at www.thetoolshed.co.nz

SPECIFICATIONS

Maximum Pressure	3500 PSI
Maximum Flow	30 LPM
Hydraulic Fluid Capacity	15 litres / 27 tonne
Coupler Size	2.0" Ball
Maximum Towing Speed	48 kmh
Maximum Log Length	520mm
Hydraulic Cylinder Bore	110mm / 27 tonne
Hydraulic Cylinder Stroke	520mm

PRODUCT IDENTIFICATION



1 ***Jockey Wheel***.
2 ***2" Coupler.*** Attaches the log splitter to your vehicle. Fits only 2" hitch balls.
3 ***Engine.*** The air cooled engine powers the hydraulic pump.
4 ***Hydraulic Cylinder.*** 110mm bore and 520mm stroke.
5 ***Control Valve.*** Controls the forward and backward movement of splitting wedge.
6 ***Log Cradle.*** Keeps the log on the beam without operator assistance.
7 ***Beam.*** The beam is made of 152mm wide flange beam (also called I-Beam).
8 ***Wedge.*** The wedge features a taper that makes splitting easier.
9 ***Safety Pin.***
10 ***Gas cylinder.***
11 ***Oil Tank.***
12 ***Tires.*** Maximum rated speed is 48 kilometres per hour.
13 ***Gear Pump.*** The gear pump makes the hydraulic oil flow through the system.

SAFETY GUIDELINES

WARNING

READ ALL SAFETY WARNINGS & INSTRUCTIONS. Failure to follow instructions and warnings could lead to serious injury, electric shock, or fire.

Work Area Safety

- **Ensure that your work area is kept clean and well lit.** Lack of visibility and clutter greatly increase the risk of accident when using tools.
- **Keep bystanders, pets, and children clear when operating this power tool or machine.** They can cause distraction or risk injury to themselves.
- **Ensure you are not operating the power tool or machinery in the presence of dust, liquids, flammable gases, or anything that can create an explosive atmosphere.** Power tools and machinery can create sparks which can lead to ignition and fire hazards in working environments.

Personal Safety

- **Always wear personal protective equipment (PPE).** Eye protection, ear protection, dust masks, and other protective equipment will help to reduce the risk of personal injury or long-term illnesses.
- **Dress appropriately. DO NOT wear loose clothing that can get caught in moving parts.** Keep hair, loose clothing, jewellery, and anything else that could be of risk, away from moving parts in the machine, or they could become caught therein.
- **Always remain alert and DO NOT operate power tools or machinery under the influence of any substances such as alcohol or drugs, including prescription medications.** Lack of focus could lead to injury or accidents while operating these power tools and machinery.
- **Always ensure proper footing and balance.** Overreaching can lead to slipping and falling which can result in injury or accident.
- **Ensure the power switch is in the OFF position before connecting any battery, or power source to the power tool or machinery.** This can cause injury as tools and machinery can suddenly fire incidentally when live, causing accidents.
- **Use all provided dust collection and extraction attachments, if included.** This equipment, along with the use of PPE dust masks, can help keep you safe from dust, and keep your work site clear from hazards.
- **Ensure loose parts such as wrenches or adjusting keys are removed before starting the power tool or machinery.**

SAFETY GUIDELINES

Power Tool & Machinery Use & Care

- **Use the correct tool for the job.** Forcing a tool to do a job it was not designed for increases the risk of accident or injury.
- **Disconnect tools and machinery from power, or remove batteries before doing any maintenance or adjustments, or before storing the tools and machinery.** This reduces or removes the risk of a power connection that causes the tool or machinery to accidentally fire, which can help prevent injury or accident.
- **Check the general condition of the power tool for damage or any problems that could affect the way the tool or machine works.** An unrepaired tool or machine can lead to accident and injury. Only have your tool or machine repaired with genuine parts from The ToolShed.
- **Only use the power tool and machinery with genuine parts or accessories that are designed to be used with this power tool and machinery.** Failure to do so could result in accident or injury, or damage your tool or machinery.
- **Store your tool or machinery out of reach of children, and away from untrained personnel when not in use.** Use by somebody untrained, or a child, could lead to accident or serious injury.

Service

- **Have your tools and machinery serviced at The ToolShed with ToolShed replacement parts.** This will ensure that the safety of the power tool or machine is maintained.

WARNING

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Always Use Common Sense

- It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. If you get into a situation where you feel unsafe, stop and seek expert advise. Contact your dealer, service agent, or an experienced user. Do not attempt any task you feel unsure of!
- **Do not let familiarity gained from the frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

SAFETY GUIDELINES

Fuel & Engine Safety

- Engine exhaust contains carbon monoxide, a colourless, odourless, poison gas. Breathing carbon monoxide will cause nausea, dizziness, fainting or death. If you start to feel dizzy or weak, get fresh air immediately.

WARNING

Operate this machine outdoors only in a well-ventilated area and point the exhaust away from you.

- DO NOT operate the machine inside any building, including garages, basements, crawlspaces and sheds, enclosures, or compartments, including the storage compartment of a recreational vehicle.
- DO NOT allow exhaust fumes to enter a confined area through windows, doors, vents, or other openings.
- NEVER use inside a home or garage, EVEN IF doors and windows are open. ONLY use OUTSIDE and far away from windows, doors, and vents.

WARNING

Using an engine indoors CAN KILL YOU IN MINUTES. Engine exhaust contains Carbon Monoxide. This is a poison you cannot see or smell.

Gasoline & Vapours

DANGER

GASOLINE AND GASOLINE VAPOURS ARE HIGHLY FLAMMABLE AND EXPLOSIVE. Fire or explosion can cause severe burns or death.

- Gasoline is highly flammable and explosive.
- Gasoline can cause a fire or explosion if ignited.
- Gasoline is a liquid fuel, but its vapours can ignite.
- Gasoline is a skin irritant and needs to be cleaned up immediately if spilled on skin or clothes.
- Gasoline has a distinctive odour; this will help detect potential leaks quickly.
- In any petroleum gas fire, you should not attempt to extinguish the flames unless it can be done in such a way by turning the fuel supply valve OFF. This is because if a fire is extinguished and a supply of fuel is not turned OFF, then an explosion hazard could be created.
- Never fill the gas tank to capacity as gasoline needs room to expand if temperature rises.
- Never use gasoline that is stale, contaminated, or mixed. Avoid getting contaminants, dirt or water in the fuel tank.

SAFETY GUIDELINES

When Adding or Removing Gasoline

- DO NOT light or smoke cigarettes.
- Turn the engine off and let it cool for at least two minutes before removing the gasoline cap. Loosen the cap slowly to relieve pressure in the tank.
- Only fill or drain gasoline outdoors in a well-ventilated area.
- DO NOT pump gasoline directly into the engine at the gas station. Use an approved container to transfer fuel to the engine.
- DO NOT overfill the gasoline tank.
- Always keep gasoline away from sparks, open flames, pilot lights, heat, and other sources of ignition.
- DO NOT refill the fuel tank while the engine is running or while the engine is still hot.
- When spills of fuel or oil occur, they must be cleaned up immediately. Dispose of fluids and cleaning materials as per local regulations.

When Starting the Engine

- DO NOT attempt to start a damaged engine.
- Make certain that the gasoline cap, air filter, spark plug, fuel lines, and exhaust system are properly in place.
- Allow spilled gasoline to evaporate fully before attempting to start the engine.
- Make certain that the unit is resting firmly on level ground.
- Spark from a removed spark plug wire can result in fire or electrical shock.

Log Splitter Specific Safety

- Ensure that the cord is fully protected and free from any damage caused by assembly or materials.
- Always maintain a safe distance between your hands and the log, as well as between the pusher and the wedge. When the splitter is turned on, never place your hands near the moving parts of the machine.
- This machine must be used by one operator only.
- Never attempt to split logs larger than the specified size capacity. Logs must not contain nails, as they could become dangerous projectiles or damage the machine. Ensure the log's end surface is cut level, and all branches are removed from the trunk. Always split the log along the grain direction. Never place the log vertically on the log splitter, as this may cause damage to the machine.
- The operator must handle the control device with both hands and should never use any other means to operate it.
- The log splitter should only be operated by those who have read and understood this operation manual.
- Position the machine on a support that is 60–75cm high, ensuring it is free from any objects that could restrict the operator's movement while working. We recommend using a specialised log splitter platform. If possible, avoid operating the machine on the ground, as this can increase the risk of injury from splinters or debris and make the operation more difficult.

SAFETY GUIDELINES

- Never attempt to split two logs simultaneously. Doing so may cause one or both logs to jump, creating a dangerous situation.
- Never place or adjust a log while the machine is running, as this poses a significant safety risk.
- While the machine is operating, ensure that all bystanders and animals are kept at least 5 metres away from the machine.
- Never tamper with the electrical or working parts of the log splitter.
- If you encounter a hard or difficult log to split, do not force the log splitter for more than 5 seconds. If the log does not split, stop the machine, rotate the log 90 degrees, and try again. If the log still won't split, stop the machine, remove the log, rotate it again, and repeat the process.
- Never leave the machine unattended while it is running. If the machine is not in use, stop it and unplug the power.
- Never use this machine near natural gas, gasoline tanks, or other flammable materials.
- Never open the switch box or electrical motor cover. If necessary, contact a qualified electrician.
- Ensure that both the machine and the power cable are kept away from water. Handle the cable with care – never yank or tear it. Keep the cable away from high temperatures, oil, and sharp objects.
- The specified length / diameter of the log capacity is for reference only:
- Log Size capacity: Max 520mm (length) x 50–250mm (Diameter).
- Keep proper footing and balance at all times.
- Never stand on log splitter. Serious injury could occur if the tool is tipped or if the cutting tools is unintentionally contacted. Do not store anything above or near the log splitter where anyone might stand on the tool to reach them.
- Do not attempt to load the log on until the log pusher has stopped.
- Keep you hands away from splits and cracks which open in the log; They may close suddenly and crush or amputate your hands. Do not remove jammed logs with your hands.
- Don't use the log splitter for a purpose for which it was not intended.

Physical Hazards

- Log splitting involves specific hazards. Always wear safety gloves, hard-toed shoes, and eye protection. Watch out for splinters to prevent injury and tool jamming. Do not split logs that are too large, too small, or contain nails, wire, or debris. Keep your work area clean, as accumulated wood and debris can create slip, trip, and fall hazards.

Hydraulic Systems

- Never operate this tool if there are any hazards associated with the hydraulic system. Before using the splitter, inspect for hydraulic leaks.
- Ensure the tool and your work area are clean and free of oil spills, as hydraulic fluid can create serious hazards, including slip-and-fall accidents, reduced control while operating the machine, and fire risks.

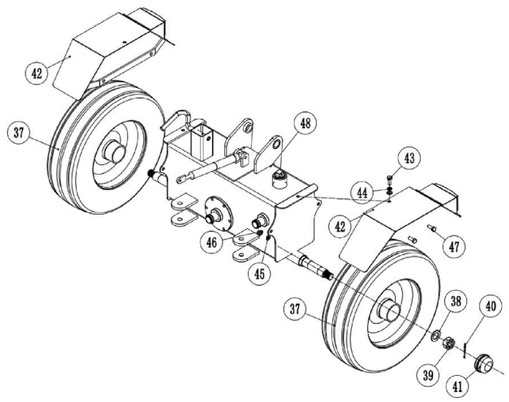
ASSEMBLY

Unpacking Instructions

- Place the shipping crate on a solid, flat surface.
- Carefully cut the shipping bands and remove the crate lid.
- With two people, lift and remove the engine, oil tank, wheels, tow bar, support legs, and hardware from the crate. (Refer to the Exploded Parts List on the last page of this manual for reference).
- Ensure all components and hardware are accounted for before beginning assembly.

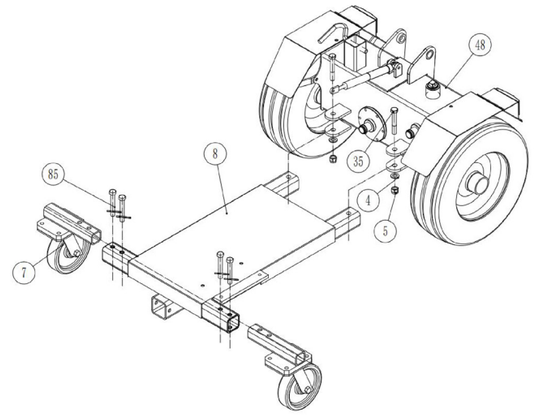
Wheel & Engine Cradle Assembly

- Secure the wheel to the oil tank axle using the M20×1.5 slotted nut (#39) and Ø4×40 cotter pin (#40), then attach the axle cap (#41).
- Install the fender using two bolts (#43) and tighten securely.



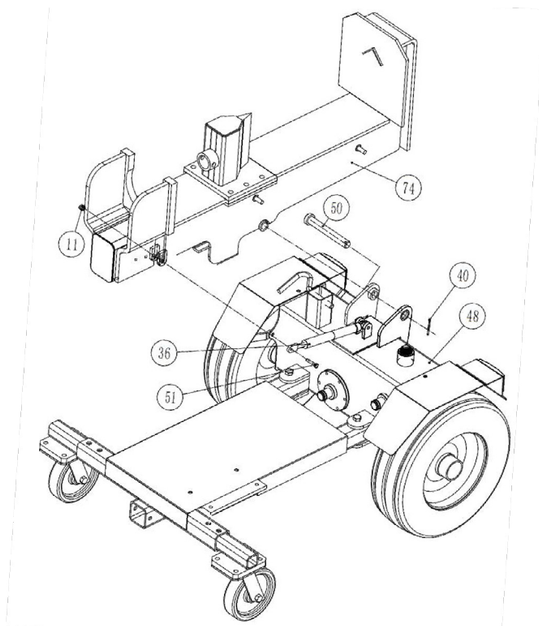
Attach the Support Frame

- Attach the support frame (#8) to the oil tank (#48) using a M12×90 bolt (#35), M12 lock nut (#5), and flat washer (#4).
- Mount the jockey wheel (#7) to the support frame and secure it in place using the catch (#85).



Attach the Tow Bar to Oil Tank

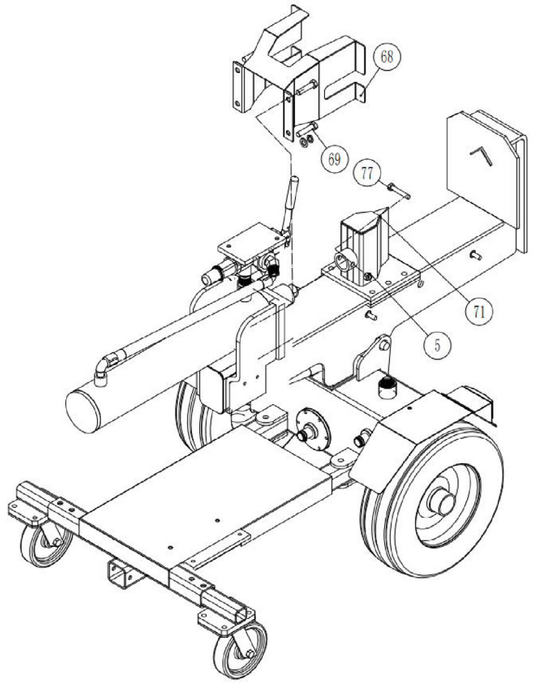
- Attach the beam (#74) to the oil tank using the rotating shaft (#50) and Ø4×40 cotter pin (#40).
- Secure the gas cylinder (#36) to the beam with a M8×50 hex bolt (#51) and M8 lock nut (#11).

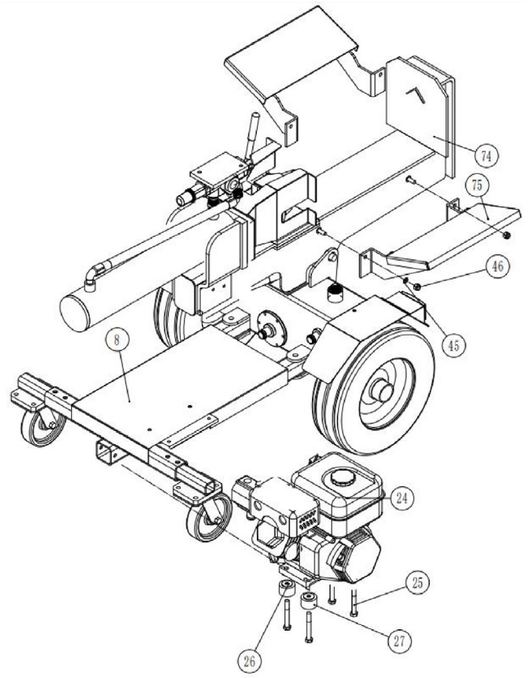


ASSEMBLY

Attach Cylinder & Wedge Cover

- Attach the cylinder to the wedge using a M12×60 hex bolt (#77) and M12 lock nut (#5).
- Secure the wedge cover (#68) in place with M12×50 hex bolts (#69), along with flat washers and spring washers.



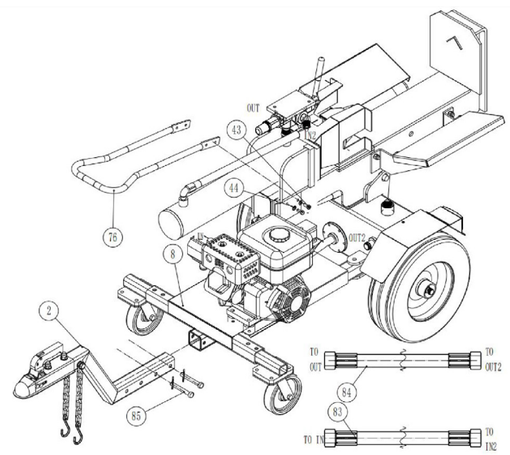


Cylinder Support & Tow Bar

- Attach the cylinder support (#76) to the beam using a M10×20 hex bolt (#43) and Ø10 spring washer (#44).
- Secure the tow bar (#2) to the support frame (#8) using the catch (#85).

Attach Engine & Log Cradle

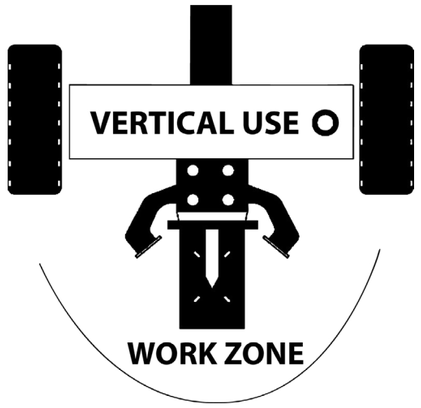
- Mount the engine (#24) onto the support frame (#8) using M8×70 hex bolts (#25), Ø8 flat washers (#26), Ø8 shock pads (#27), and M8 lock nuts.
- Attach the cradle (#75) to the beam using a hex bolt, flat washer (#45), and lock nut (#46).

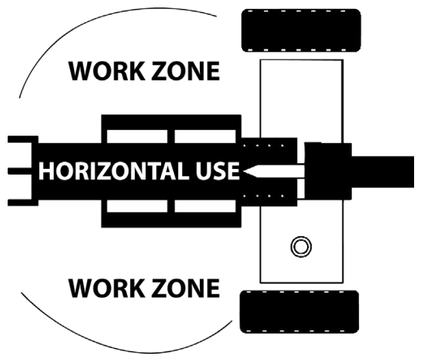


OPERATION

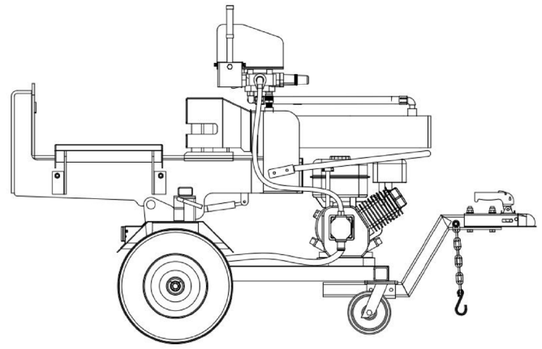
Operating Instructions

- Load a log onto the beam and position it firmly against the end plate.
- Keep all bystanders outside the work zone during operation, serious injury may occur if others are nearby.
- Ensure hands and body parts remain clear of all crush hazard zones.
- Using both hands, push the control valve handle forward to split the log.
- Then, using both hands, pull the control valve handle backward to return the wedge to its starting position.
- Once the cycle is complete, remove the split wood from the work area before loading the next log.

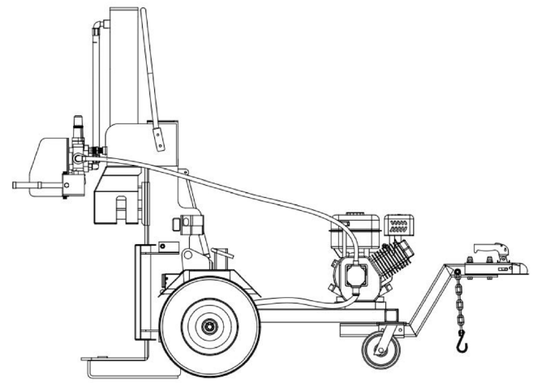




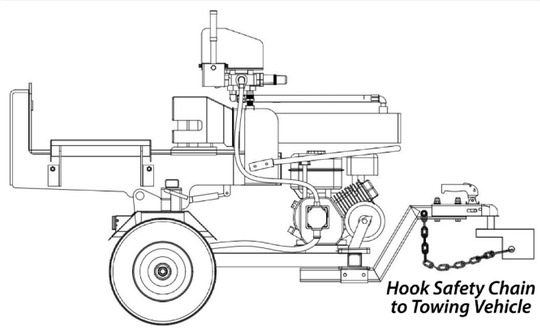
FOR HORIZONTAL USE



FOR VERTICAL USE

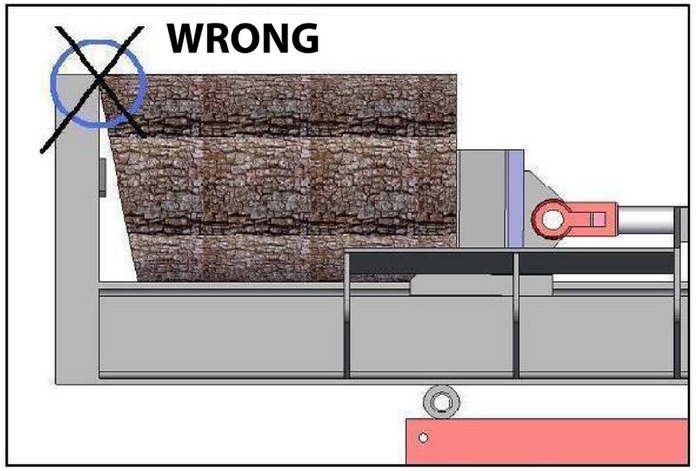


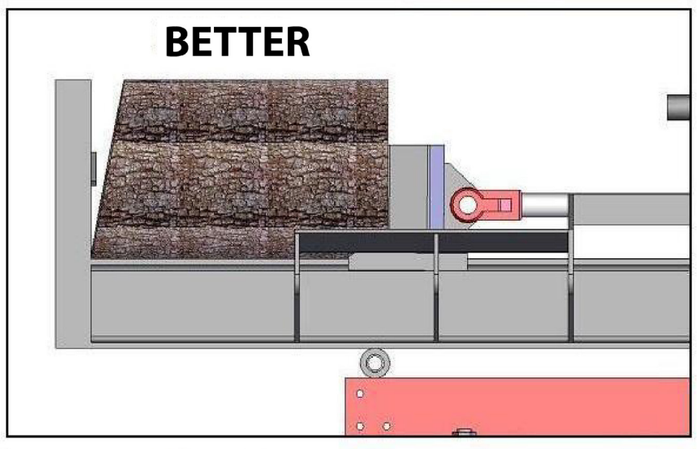
FOR VEHICLE TOWING

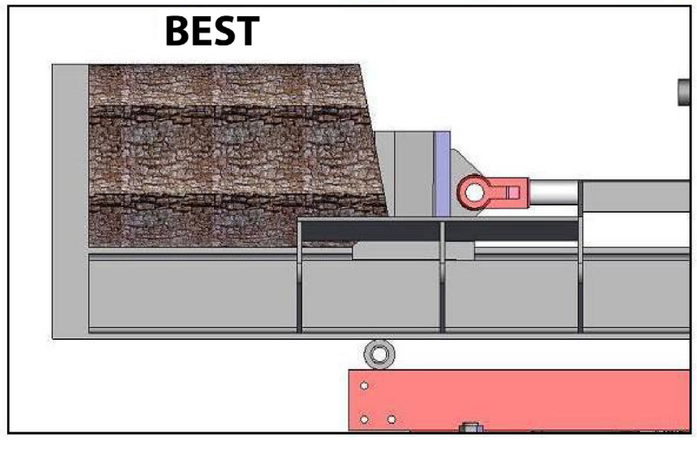


OPERATION

How to Split the Log With Slant Surface







MAINTENANCE

WARNING

Always be sure that the tool is switched off and unplugged before attempting to perform any inspection or maintenance.

- Ventilation openings and switch levers must be kept clean. DO NOT attempt to clean by inserting pointed objects through openings.
- If you discover any damaged or broken parts, consult your nearest ToolShed for replacements and advise.

Environment & Disposal

- Packaging materials are raw materials and can be re-used. Separate the different packaging materials and take them to the appropriate waste disposal facility. More information can be obtained from your local authorities.
- Old machines do not belong in your household garbage! Dispose of old machines appropriately, we are all responsible for the environment.

Maintenance & 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.

Maintenance Schedule

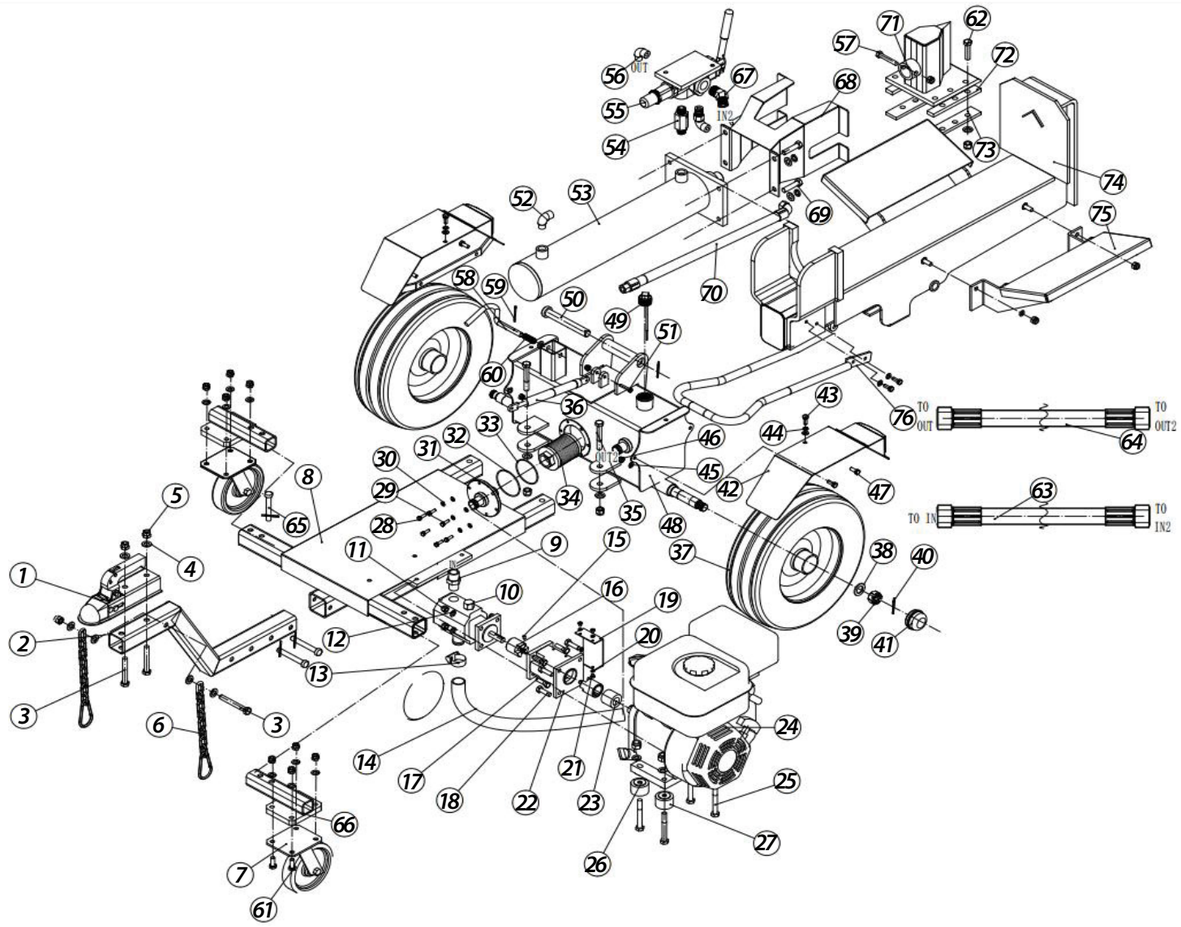
WHAT	*WHEN*	*HOW*
Hoses	Each Use	Inspect for exposed wire mesh and leaks. Replace all worn or damaged hoses before starting engine
Hydraulic Fittings	Each Use	Inspect for cracks and leaks. Replace all damaged fittings before starting engine
Nuts and Bolts	Each Use	Check for loose bolts
Beam	Each Use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

TROUBLESHOOTING

Problem	
Cylinder rod will not move	SOLUTION: A,D,E,H,J
Slow cylinder rod 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

	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	Internal cylinder leak	Return cylinder for authorized repair
K	Internally damaged cylinder	Return cylinder for authorized repair
L	Engine Control out of adjustment	Adjust idle control nuts
M	Engine is loaded during idle down mode	Use shorter log length to allow engine to speed up before contact.

TSLS28 EXPLODED VIEW & PARTS LIST



1	Coupler	X1	*20*	Flat Washer Φ5	X4	*39*	Slotted Nut M20×1.5	X2	*58*	Latch	X1
2	Tow Bar	X1	*21*	Hex Bolt M5×10	X4	*40*	Cotter Pin D4×40	X3	*59*	Cotter Pin D3.2×25	X1
3	Hex Bolt M12×80	X3	*22*	Gear Pump Bracket	X1	*41*	Cover	X2	*60*	Spring	X1
4	Flat Washer	X21	*23*	Engine Connector	X1	*42*	Fender	X2	*61*	Hex Bolt M10×30	X8
5	Lock Nut	X13	*24*	Engine	X1	*43*	Hex Bolt M10×20	X2	*62*	Hex Bolt M12×45	X6
6	Safety Chains	X2	*25*	Hex Bolt M8×70	X4	*44*	Spring Washer Φ10	X2	*63*	Hose	X1
7	Jockey Wheel	X2	*26*	Flat Washer Φ8	X4	*45*	Flat Washer Φ10	X18	*64*	Hose	X1
8	Support Frame	X1	*27*	Shock Pad	X4	*46*	Hex Lock Nut M10	X16	*65*	Catch	X6
9	Gear Pump Joint	X1	*28*	Hex Bolt M6×20	X6	*47*	Hex Bolt M10×25	X4	*66*	Mounting Rack	X2
10	Gear Pump	X1	*29*	Spring Washer 6	X6	*48*	Oil Tank	X1	*67*	Joint	X1
11	Lock Nut M8	X4	*30*	Flat Washer Φ6	X6	*49*	Oil Plug	X1	*68*	Wedge Cover	X1
12	Flat Washer Φ8	X8	*31*	Flange	X1	*50*	Rotating Shaft	X1	*69*	Hex Bolt	X4
13	Clamp	X2	*32*	O Ring D80×2.4	X1	*51*	Hex Bolt M8×50	X2	*70*	Hose	X1
14	Hose	X1	*33*	O Ring D75×2.4	X1	*52*	Right Angle Joint	X2	*71*	Wedge	X1
15	Jack Screw M6×10	X1	*34*	Filter	X1	*53*	Cylinder	X1	*72*	Backing Plate	X2
16	Gear Pump Connector	X1	*35*	Hex Bolt M12×90	X2	*54*	Cylinder Joint	X1	*73*	Pressure Bar	X2
17	Hex Bolt M8×30	X4	*36*	Gas Cylinder	X1	*55*	Valve	X1	*74*	Beam	X1
18	Hex Bolt M8×25	X4	*37*	Tire	X2	*56*	Right Angle Joint	X1	*75*	Log Cradle	X2
19	Cover	X1	*38*	Flat Washer Φ20	X2	*57*	Hex Bolt M12×60	X1	*76*	Cylinder Support	X1