



20 TONNE HYDRAULIC LOG SPLITTER

HLS2000P

**ASSEMBLY, TESTING, OPERATION, SERVICING
& STORAGE INSTRUCTION**

PETROL

WARNING!

READ and UNDERSTAND this manual completely before using The log splitter. All operators of this equipment must read and completely understand all safety information, operating instructions, maintenance and storage instructions.

Failure to properly operate and maintain the log splitter could result in serious injury to the operator and bystanders from moving parts that can crush or cut, flying objects, burns, fire or explosion, escaping high pressure hydraulic fluid, or carbon monoxide poisoning.

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1.0. DISCLAIMER

1.1. About your Log Splitter

Congratulation on purchasing your new 20 ton Ducar log splitter

This log splitter is designed to split wood logs using a hydraulically powered moving wedge. The log splitter's 196cc powered engine is used to pressurize the hydraulic system.

ATTENTION:

All Rental Companies and Private Owners who loan this equipment to others!

All persons to whom you rent, loan or use this the log splitter must have access to and read this manual.

Keep this owner's manual with the splitter at all times and advise all persons who will operate the machine to read it.

You must provide instruction on how to safely operate the splitter and remain available to answer any questions a renter/borrower might have.

The log splitter is heavy power machine and can crush, burn and cause serious ***injury*** if proper safety precaution and not taken.

Follow all safety precautions presented throughout this manual, for safely moving, towing and operating this 60 ton log splitter.

Read the Owner's Manual completely before operating the machine to understand how to safely operate and maintain the log splitter.

ALWAYS MAKE SURE SAFETY LABELS ARE IN GOOD CONDITION.

Failure to follow all instructions and warnings exactly may result in serious injury and/or damage to the product which will void all implied and express warranties

2.0. SAFETY USAGE

2.1. General Safety

- **UNDERSTAND YOUR LOG SPLITTER**
Read and understand the owner's manual and labels affixed to the log splitter. Learn its application and limitations as well as the specific potential hazards peculiar to it.
- **DRUGS, ALCOHOL AND MEDICATION**
Do not operate the log splitter while under the influence of drugs, alcohol, or any medication that could affect your ability to use it properly.
- **AVOID DANGEROUS CONDITIONS**
Keep your work area clean and well lighted. Cluttered areas invite injuries.
Do not use the log splitter in wet or damp areas or expose it to rain. Do not use it in areas where fumes from paint, solvents or flammable liquids pose a potential hazard.
- **INSPECT YOUR LOG SPLITTER**
Check your log splitter before turning it on. Keep guards in place and in working order. From a habit of checking to see that keys and adjusting wrenches are removed from tool area before turning it on. Replace damaged, missing or failed parts before using it.
- **DRESS PROPERLY**
Do not wear loose clothing, gloves, neck ties or jewelry (rings, wrist watches). They can be caught in moving parts. Protective electrically non conductive gloves and non-skid footwear are recommended when working. Wear protective hair covering to contain long hair, preventing it from getting caught in machinery.
- **PROTECT YOUR EYES AND FACE**
Any log splitter may throw foreign objects into the eyes. This can cause permanent eye damage. Always wear safety goggles and/or face shield. Everyday eyeglasses have only impact resistant lenses. They are not safety glasses.
Do not put the log splitter on the ground for operations. This is awkward operating position that the operator has to bring his face close to the machine, and thus risks being struck by wood chips or debris.
- **KEEP AWAY FROM VISITORS AND CHILDREN**
The log splitter must be always operated by one person only. Other people should keep a safe distance from the work area, especially when the log splitter is under operations. Never use other people to help you with freeing jammed log.

Avoid use of free and inadequately insulated connections. Connections must be made with protected material suitable for outdoor use.
- **INSPECT YOUR LOG**
Make sure there are no nails or foreign objects in logs to be split. The ends of the logs must be cut square. Branches must be cut of flush with the trunk.
- **DON'T OVERREACH**
Floor must not be slippery. 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 are unintentionally contacted.
Do not store anything above or near the log splitter where anyone might stand on the tool to reach them.
- **AVOID INJURY FROM UNEXPECTED ACCIDENT**
Always pay full attention to the movement of the log pusher.
Do not attempt to load the log on until the log pusher has stopped. Keep hands out of the way of all moving parts.
- **PROTECT YOUR HANDS**
Keep your 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 FORCE TOOL**
It will do a better and safer job at its design rate. **Never** try to split logs larger than those indicated in the specifications table. This could be dangerous and may damage the machine.
Don't use log splitter for a purpose for which it was not intended.
- **NEVER LEAVE TOOL RUNNING UNATTENDED**
Don't leave the tool until it has come to a complete stop.
- **PROTECT THE ENVIRONMENT**
Take used oil to an authorized collection point or follow the stipulations in the country where the log splitter is used. Do not discharge into drains, soil or water.
- **MAINTAIN YOUR LOG SPLITTER WITH CARE**
Keep the log splitter clean for best and safest performance.
- **MAKE THE WORKSHOP CHILDPROOF**
Lock the shop. Disconnect master switches. Store the log splitter away from children and others not qualified to use it.

2.2. Application Conditions

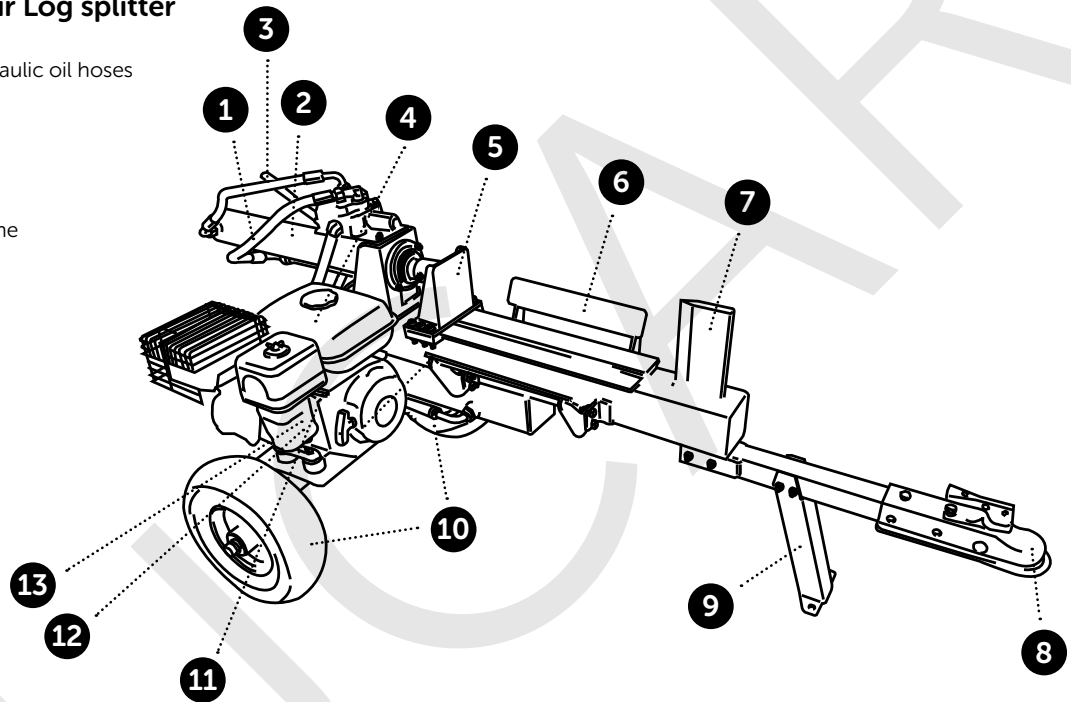
This log splitter is a home use model.
It is designed for operating under ambient temperatures between +5°C and 40°C and for installation at altitudes no more than 1000m above M.S.L.

The surrounding humidity should less than 50% at 40°C.
It can be stored or transported under ambient temperatures between -25°C and 55°C.

3.0. PRE-SET UP AND OPERATION

3.1. Knowing your Log splitter

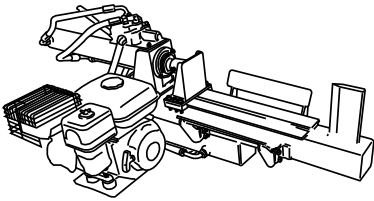
1. High pressure hydraulic oil hoses
2. Cylinder
3. Operation handle
4. Gasoline engine
5. Wood Pusher
6. Wood support frame
7. Splitting wedge
8. Towing handle
9. Front support legs
10. Wheels
11. Throttle lever
12. Choke lever
13. Gas Valve



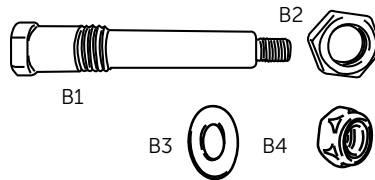
4.0. ASSEMBLY INSTRUCTIONS

4.1. Parts for Assembly

A Hydraulic Log Splitter QTY: 1



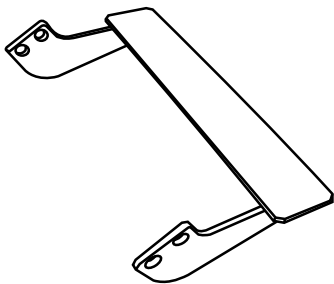
B Wheel Brackets & Nut QTY: 2



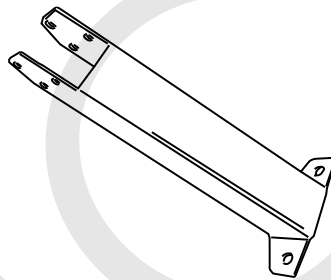
C Wheels QTY: 2



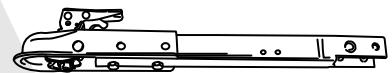
D Wood Support Frame QTY: 2



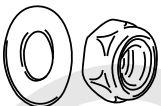
E Front Support leg QTY: 1



F Draw Bar QTY: 1



G M8 Waser & Bolt Already Attached



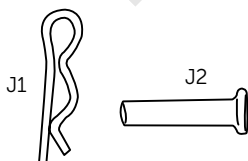
H M10 Screw, Waser & Bolt QTY: 6 each



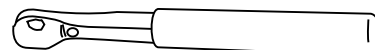
I M10 Screw, Waser & Bolt QTY: 2 each



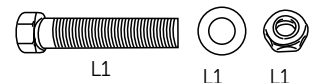
J Handle Pin & Bolt Already Attached



K Handle Already Attached



L M10 Screw, Waser & Bolt QTY: 8 each



4.2. Removing from the steel crate



WARNING!

CLOSELY INSPECT ALL LOG SPLITTER COMPONENTS.

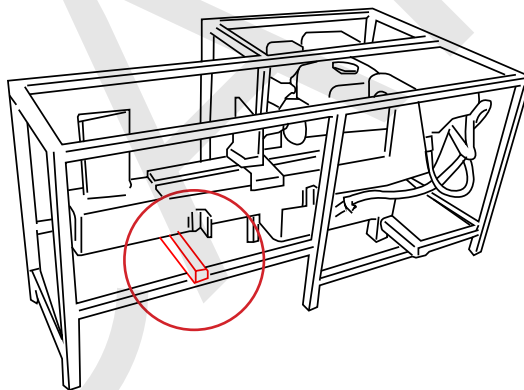
- If you have missing components, contact the seller
- If you have damaged components, contact the seller

SAVE BOLTS FROM PACKAGING:

Some packaging bolts are used to assemble the log splitter, while others are used for attachments or spares

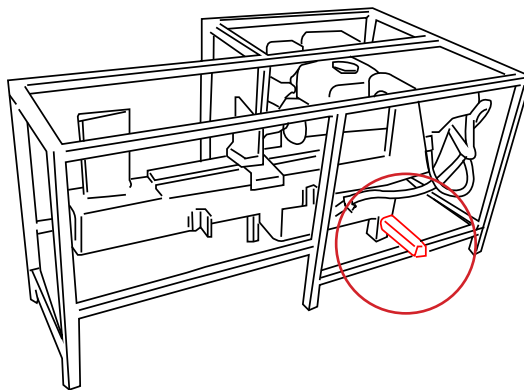
Step 1

Undo nuts and bolts holding the front bar in place and remove the bar



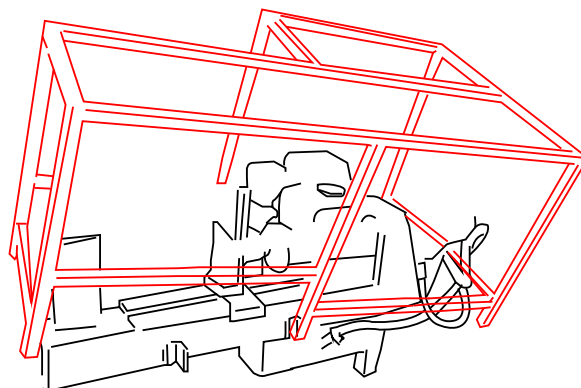
Step 2

Undo nuts and bolts holding the back bar in place and remove the bar



Step 3

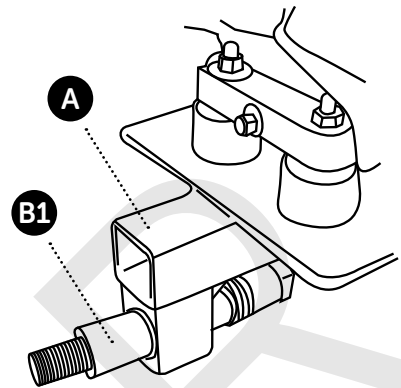
Lift the up the steel frame over the log splitter



4.3. Assembling the wheels

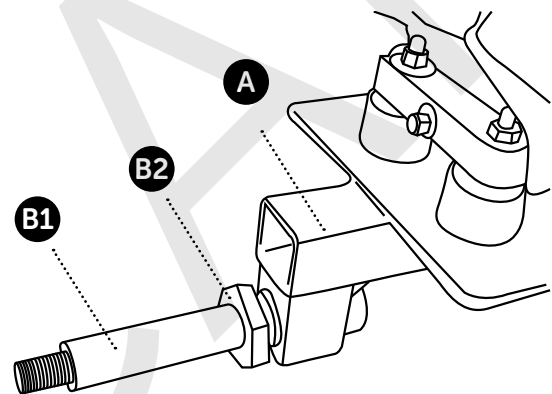
Step 1

Slide the Wheel axle (**Part B1**) through the wheel axle holder on the ram (**Part A**)



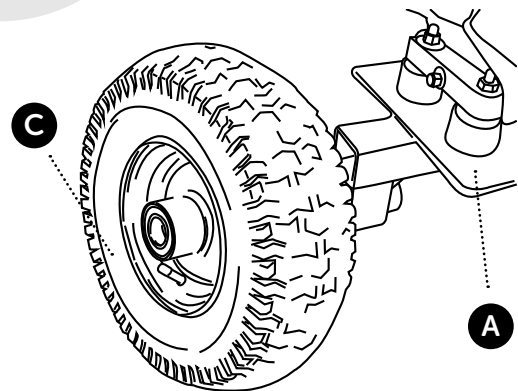
Step 2

Fix the axle into place with the M20 nut (**Part B2**) use to spanners



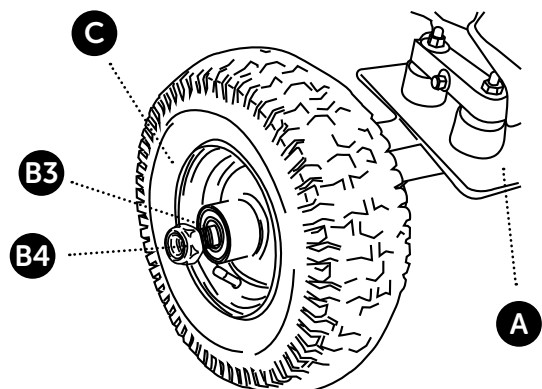
Step 3

Slide the wheels (**Part C**) onto the end on the Wheel axle (**Part B1**)



Step 4

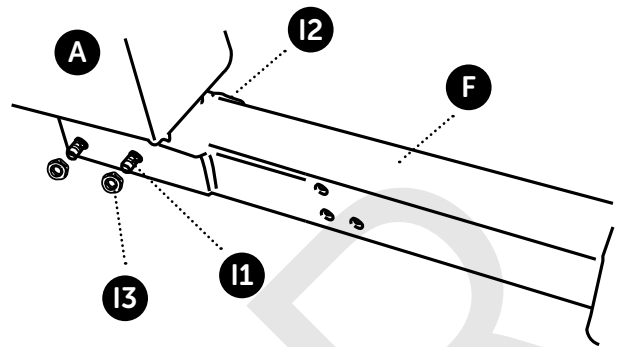
Attach the M12 axle washer (**Part B3**) & nut (**Part B4**) to Wheel axle (**Part B1**)



4.4. Assembling the Draw Bar

Step 1

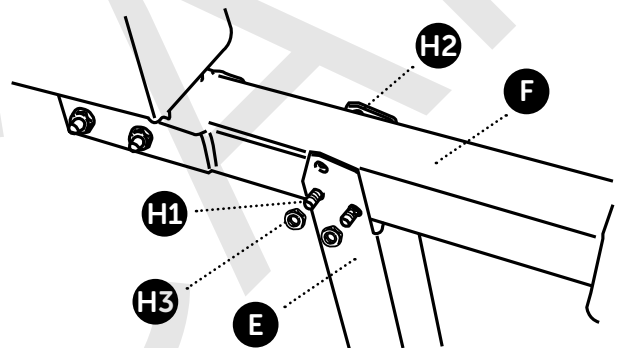
Install the draw bar **(Part F)** to the main log splitter frame **(Part A)** bolts **(Part I1)**, washer **(Part I2)** & Nut **(Part I3)**



4.5. Assembling the Wood Support leg

Step 1

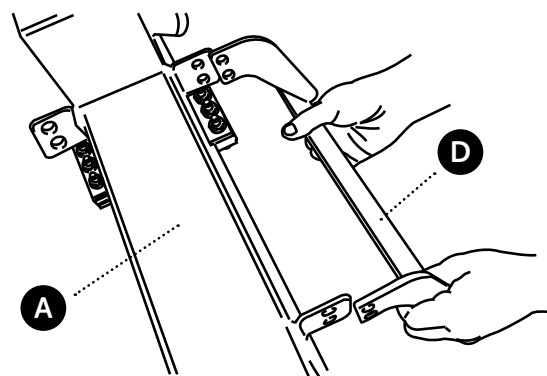
Install front support leg **(Part E)** to the draw bar **(Part F)** using bolts **(Part H1)**, washer **(Part H2)** & Nut **(Part H3)**



4.6. Assembling the Wood Support Frame

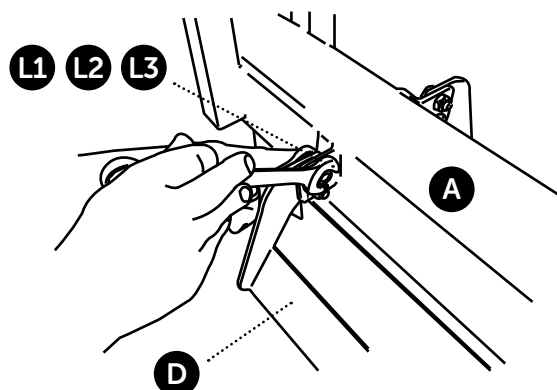
Step 1

Place the Wood support frame **(Part D)** to the supports on the bed of the log splitter **(Part A)**. Placing one side on the inside and the other on the outside of the supports on the bed **(Part A)**



Step 2

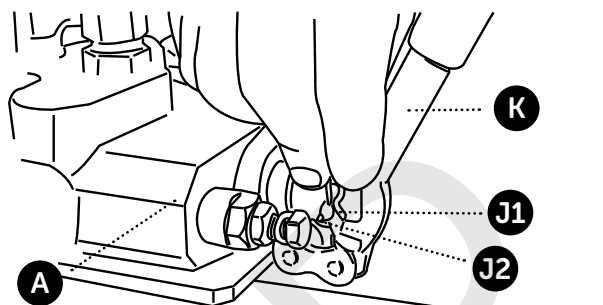
Attach the screw Wood support frame **(Part D)** to the supports on the bed **(Part A)** using bolts **(Part L1)**, washer **(Part L2)** & Nut **(Part L3)**



4.7. Installing the Hydraulic Handle

Step 1

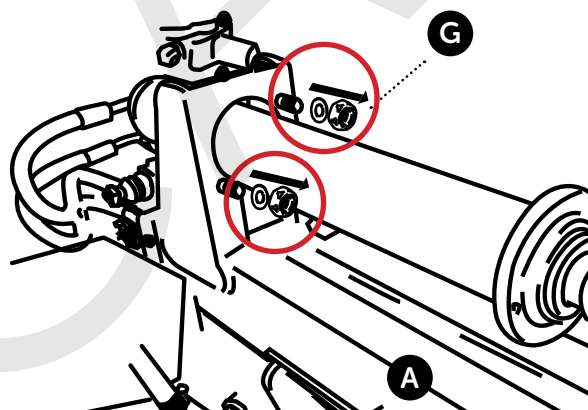
Install the handle (**Part K**) to the control valve located on top of the ram, using handle pin (**Part J1**) & bolt (**Part J2**)



4.8. Assembling the Cylinder / Wood Pucher

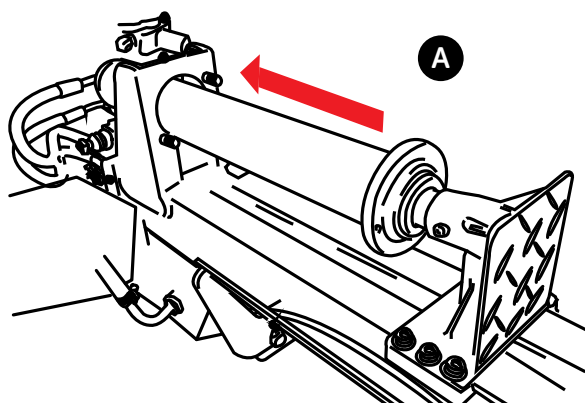
Step 1

Turn Log Splitter Off.
Unscrew the M8 nut & washer (**Part G**). Fig. A



Step 2

Push the cylinder to the opposite direction of the splitting wedge.

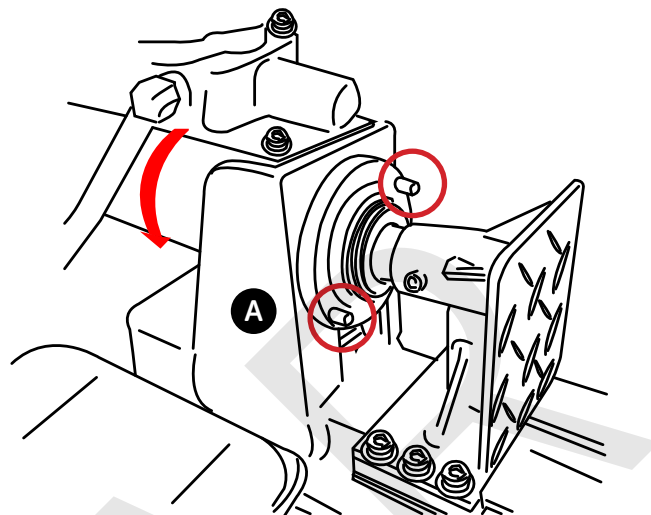


Step 3

Lit from right to left and fit the steel stud to the cylinder holes.

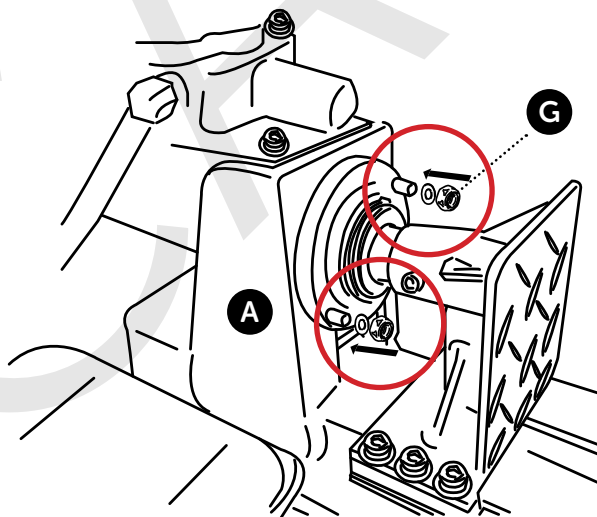
Note: you may need to undo the wood pusher (**Part G**) and move from away from the cylinder (**Part G**) to line the holes with the stud.

Once the holes on the cylinder (**Part G**) are line up you can then use an allen key to rotate the ram in the cylinder (**Part G**) to line up the holes on the Wood Pusher (**Part G**)



Step 4

Install and tighten the M8 nut (**Part G**) Nuts must be tightened before using (**Part G**)



5.0 PRE-CHECKS BEFORE OPERATIONS

Before operating the log splitter, the Bleed Screw should be loosened by some rotations until air can go in and out of the oil tank smoothly.

Air flow thru the Bleed Screw hole should be detectable during the log splitter is under operations.

Before moving the log splitter, make sure the Bleed Screw is tightened to avoid oil leaking from this point.

WARNING!

FAILED TO LOOSEN THE BLEED SCREW WILL KEEP THE SEALED AIR IN HYDRAULIC SYSTEM BEING COMPRESSED AFTER BEING DECOMPRESSED.

SUCH CONTINUOUS AIR COMPRESSION AND DECOMPRESSION WILL BLOW OUT THE SEALS OF THE HYDRAULIC SYSTEM AND CAUSE PERMANENT DAMAGE TO THE LOG SPLITTER.

DO NOT ADJUST THE MAX PRESSURE LIMITING SCREW!

Max pressure was set before the log splitter ex work and the max pressure limiting screw is sealed with glue to ensure the log splitter works under pressure no more than 20 tons.

The setting was done by qualified mechanic with professional instruments.

Unauthorized resetting will cause the hydraulic pump fail to output enough splitting pressure or **RESULT IN SERIOUS INJURY AS WELL AS DAMAGE TO THE MACHINE.**

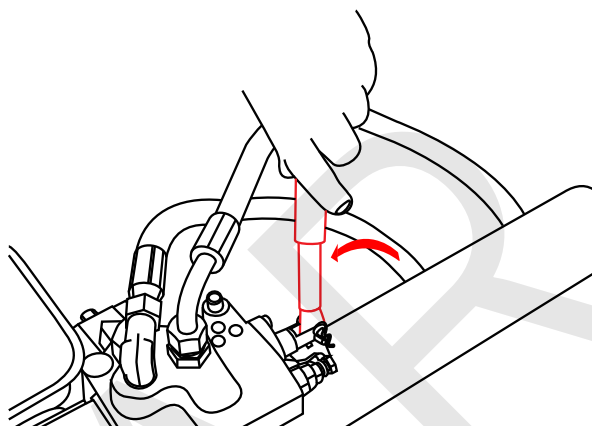
5.1. Select location

- Select an appropriate location for operating the log splitter.
- Dry-level surface with good footing. Stay clear of areas with mud, ice, tall grass, weeds, brush, or snow.
- 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.
- Block the wheels to prevent unintended movement of the log splitter.

6.0 OPERATIONS INSTRUCTION

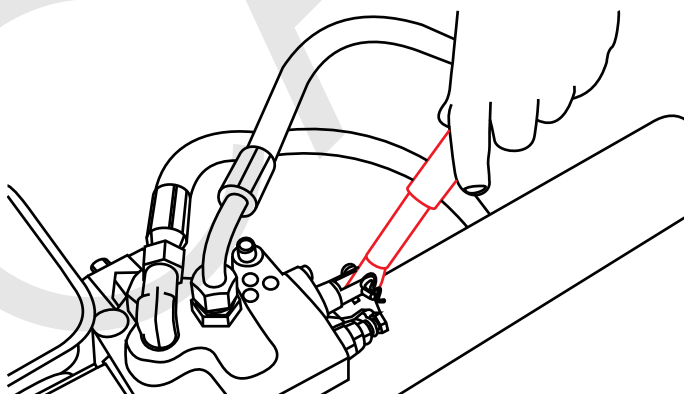
Step 1

Push the handle forward for splitting mode.



Step 2

Pull the handle backward for returning mode .



7.0 ENGINE START-UP GUIDE

BEFORE STARTING.

check and fill engine with approximately 0.8 litres
SAE10W-30oil. Fill the fuel tank with 93+ octane unleaded gasoline

NOTE: This engine includes an automatic low oil shut down sensor that disables the engine if the oil level is too low

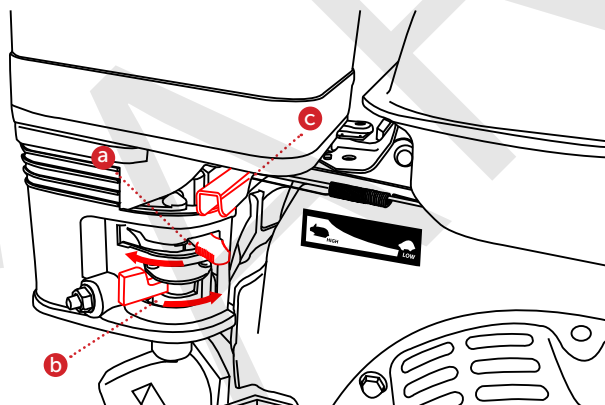
7.1. Starting the Engine

Step 1

Close the choke [a] by moving it to the left.
Open the gas valve [b] by moving to the right.

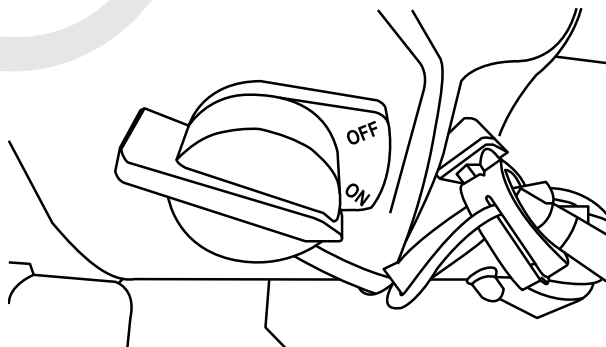
Note: If the engine is already hot, it is not necessary to close the choke.

Open the throttle [c] by moving to the left



Step 2

Turn the engine switch to the on position.

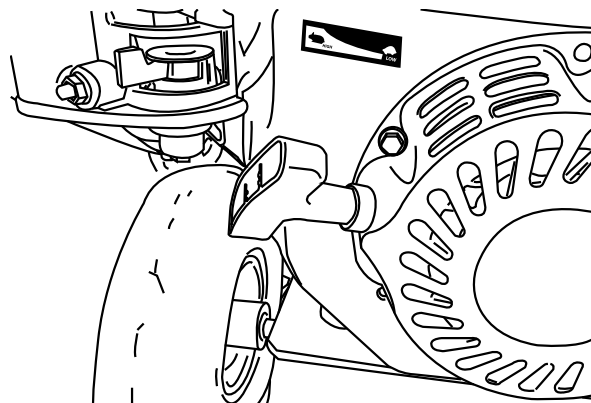


Step 3

Gently pull the recoil starter handle until it engages, then pull it all the way out in a rapid pull. May take 5 pulls to start.

Once the engine starts, move the choke to 1/2 choke position. After 15 seconds, open choke by moving to right.

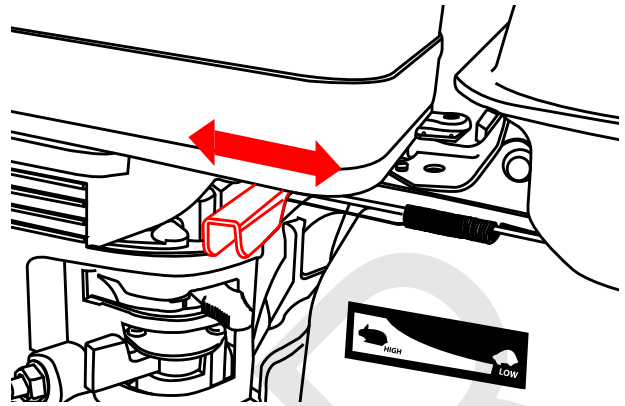
Note: Moving the choke too fast can kill the engine.



Step 4

Adjust the throttle to the speed you desire.

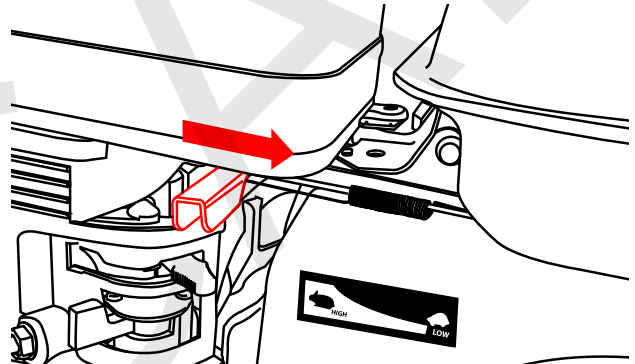
IMPORTANT: Allow the engine to warm up with no load for at least 1 minute after each start-Up.



7.2. Stopping the Engine

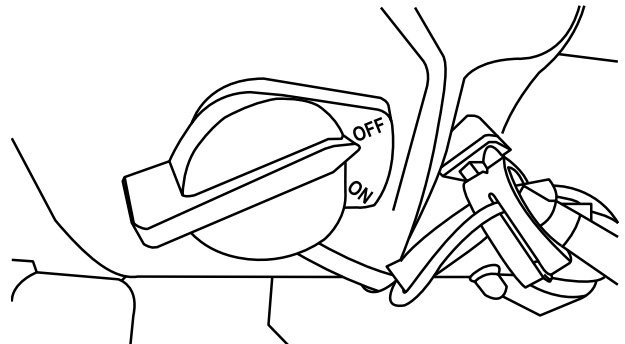
Step 1

Move the throttle lever to the right (idle Position).



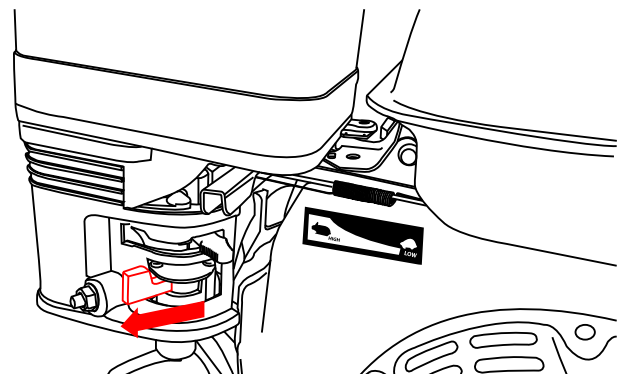
Step 2

Turn the engine switch to the **OFF** Position.



Step 3

Close the gas valve by moving to the left.



8.0 OPERATIONS & MAINTENANCE

8.1. Loading Log

- Load the log onto beam with a straight cut end against the splitting wedge - positioned for a lengthwise cut
 - The log splitter is designed only for cutting lengthwise with the grain, **NOT** for cutting across the grain.
 - 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.
-

8.2. Operator Position

- ALWAYS operate the log splitter from the manufacturer's indicated OPERATOR POSITION
 - Other positions are unsafe because they can increase the risk of injury from crushing, cutting, flying objects, or burns.
-

8.3. Second Person

- If loading a heavy log a 2nd person may be required to help load the log only 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 splitter Control Lever until the assistant and all bystanders are at least 10 feet away
 - **EVER** allow an assistant to hold the log in place while the operator actuates the 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.
-

8.4. Log splitter operation

Never force the log splitter for more than 5 seconds by keeping pressure on it to split excessively hard wood.

After this time interval, the oil under pressure will be overheated and the machine could be damaged.

For such extremely hard log, rotate it by 90° to see whether it can be split in a different direction. In any case, if you are not able to split the log, this means that its hardness exceeds the capacity of the machine and thus that log should be discarded to protect the log splitter.

Always set logs firmly on the log retaining plates and work table. Make sure logs will not twist, rock or slip while being split. Do not force the blade by splitting the log on the upper part. This will break the blade or damage the machine.

Break log in the direction of its growing grain. Do not place log across the log splitter for splitting.

It may be dangerous and may seriously damage the machine. Do not attempt to split 2 pieces of logs at the same time. One of them may fly up and hit you.

8.5. Freeing a jammed log

1. After the log pusher moves back and completely stops at its starting position, insert a wedge wood under the jammed log.
2. Start the log splitter to push the wedge wood to go completely under the jammed one.
3. Repeat above procedure with sharper slope wedge woods until the log is completely freed.

Do not try to knock the jammed log off. Knocking about will damages the machine or may launch the log and cause accident.

8.6. Replacing hydraulic oil

Replace the Hydraulic oil in the log splitter after every 150 hours of use. Take following steps to replace it.

- Make sure all moving parts stops and the log splitter is unplugged.
- Unscrew Oil Drain Bolt with Dipstick to remove it.
- Turn the log splitter on the Support Leg side over an 4 liters capacity container to drain the hydraulic oil off.
- Turn the log splitter on the motor side.
- Refill fresh hydraulic oil at the volume as per the hydraulic oil capacity of a particular model indicated in above specifications table.
- Clean the surface of Dipstick on the Oil Drain Bolt and put it back into the oil tank while keep the log splitter vertically.

- Make sure the level of the refilled oil is just between 2 grooves around the Dipstick.
- Clean the Oil Drain Bolt before thread them back. Make sure they are tightened to avoid leakage before place the log splitter horizontally.

Periodically check oil level to ensure it is between 2 grooves around the Dipstick. Upon Lower oil level, oil refilling is required.

Following hydraulic oils or equivalent are recommended for the log splitter's hydraulic transmission system:

- SHELL Tellus 22
- MOBIL DTE 11
- ARAL Vitam GF 22
- BP Energol HLP-HM 22

8.7. Sharpening the Wedge

After using the log splitters for some time, sharpen the wedge of the log splitter using a fine-toothed File and smooth any burrs or crushed area along the cutting edge.



IMPORTANT

If a part needs replacement only use genuine Ducar parts that meets the manufacturer's specifications.

Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the log splitter.

9.0 SPECIFICATIONS

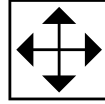
9.1. Log Specification & Guide



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 into single logs.



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.



Max Log Size. The diameter of the log is indicative-a small log can be difficult to split when it has knots, tough fiber or green. On the other hand, it may not be difficult to split logs with regular fibers even if its diameter exceeds the Max Log size.

Max Splitting Length	Max Splitting Diameter
520mm	70 -350mm



Warning. Splitting log that are not cut square or has knots or tough fiber or green or not along the grain will damage the log splitter which would not be covered under the manufacture warranty



IMPORTANT

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

10.0 TROUBLESHOOTING

Problem	Probable Cause	Suggested Remedy
Motor Stops Staring	Overload Protection Device disengaged to protect the log splitter from being damaged	Contact a qualified Electrician for opening the Pushbutton Box to engage the overload Protection Device inside
Fails to split logs	Log is Not properly positioned	Refer to "Log Splitter Operation"section for perfect log loading.
	The sizes or hardness of the log exceeds the capacity of the machine	Reduce the log sizes before splitting it on the log splitter
	Wedge cutting edge is blunt	Refer to "Sharpening Wedge"section to sharpen the cutting edge.
	Oil leaks	Locate leak(s) and contact the dealer
	Unauthorized adjustment was made on Max. Pressure Limiting Screw. Lower max pressure rating was set.	Contact the dealer.
The log pusher moves jerkily, taking unfamiliar noise or vibrating a lot	Lack of hydraulic oil and excessive air in the hydraulic system.	Check oil level for possible oil refilling
Oil leaks around cylinder ram or from other points	Air sealed in hydraulic system while operating	Loosen Bleed Screw by some rotations Before operating the log splitter
	Bleed Screw is not tightened Before moving the log splitter	Tighten the Bleed Screw up before moving the log splitter
	Oil Drain Bolt with Dipstick is not tight	Tighten the Oil Drain Bolt with Dipstick
	Hydraulic Control Valve Assembly and / or seal(s) worn	Contact the dealer

11.0 WARRANTY

- Kmate Pty Ltd provides a 12 month warranty for this product when used for domestic purposes. Commercial use of the product will void all warranty.
- The benefits of this warranty are provided in addition to other rights and remedies you may have under a law in relation to the goods and services to which this warranty relates. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- Before making a claim under warranty, please refer to your user/installation manual to ensure that you have followed correct operating procedures of your product, and refer to the trouble shooting section (if such exists) to assist solving any problems.
- The warranty period begins from the day of purchase.
- Your proof of purchase must be produced before assistance will be provided.
- Where the Product is replaced pursuant to this Warranty, the replacement Product will be subject to the warranty terms and warranty commencement date of the original product.
- This warranty is only valid if the product is operated and maintained in accordance with the manufacturer's instructions.
- Damage to property including but not limited to grass, outdoor areas, outdoor furniture, walls, or any other event either directly or indirectly are excluded from warranty as well as any losses or expenses incurred by you in relation to the product or making a claim under this warranty including without limitation any costs associated with installation, reinstallation or transporting the product.
- A claim may be refused if the defective claim has arisen for reasons other than a manufacturers fault or defective parts or workmanship. Circumstances in which a warranty claim may be declined include, but are not limited to the following:
 1. Normal wear and tear
 2. Misuse or abuse, including failure to properly maintain or service
 3. Damages caused by improper or incorrect installation, force-majeure, abnormal outdoor conditions, inclement weather, lightning etc are not eligible for warranty repair
 4. Insect or vermin infestation; Failure to clean or improper cleaning and/or operation of the product
 5. If the product is modified without authorisation from Supplier in writing;

Contact Details

Kmate Pty Ltd

PO Box 234, Mount Waverley VIC 3149

Email: warranty@klikea.com.au

Phone: 03 9790 0055

