

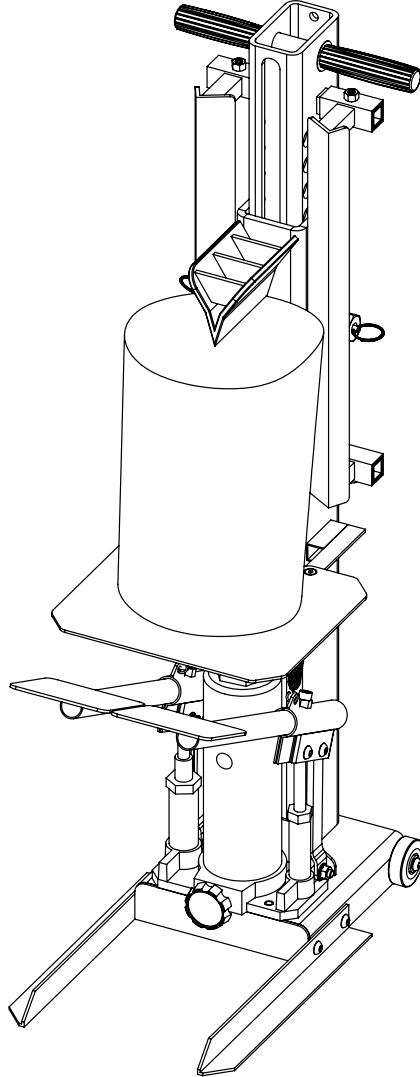
# DUOCUT MANUAL

Patent  
Pending



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## 10 Ton Manual Hydraulic Log Splitter



**IMPORTANT: Read this manual fully before assembly and use and observe all safety rules and operating instructions**



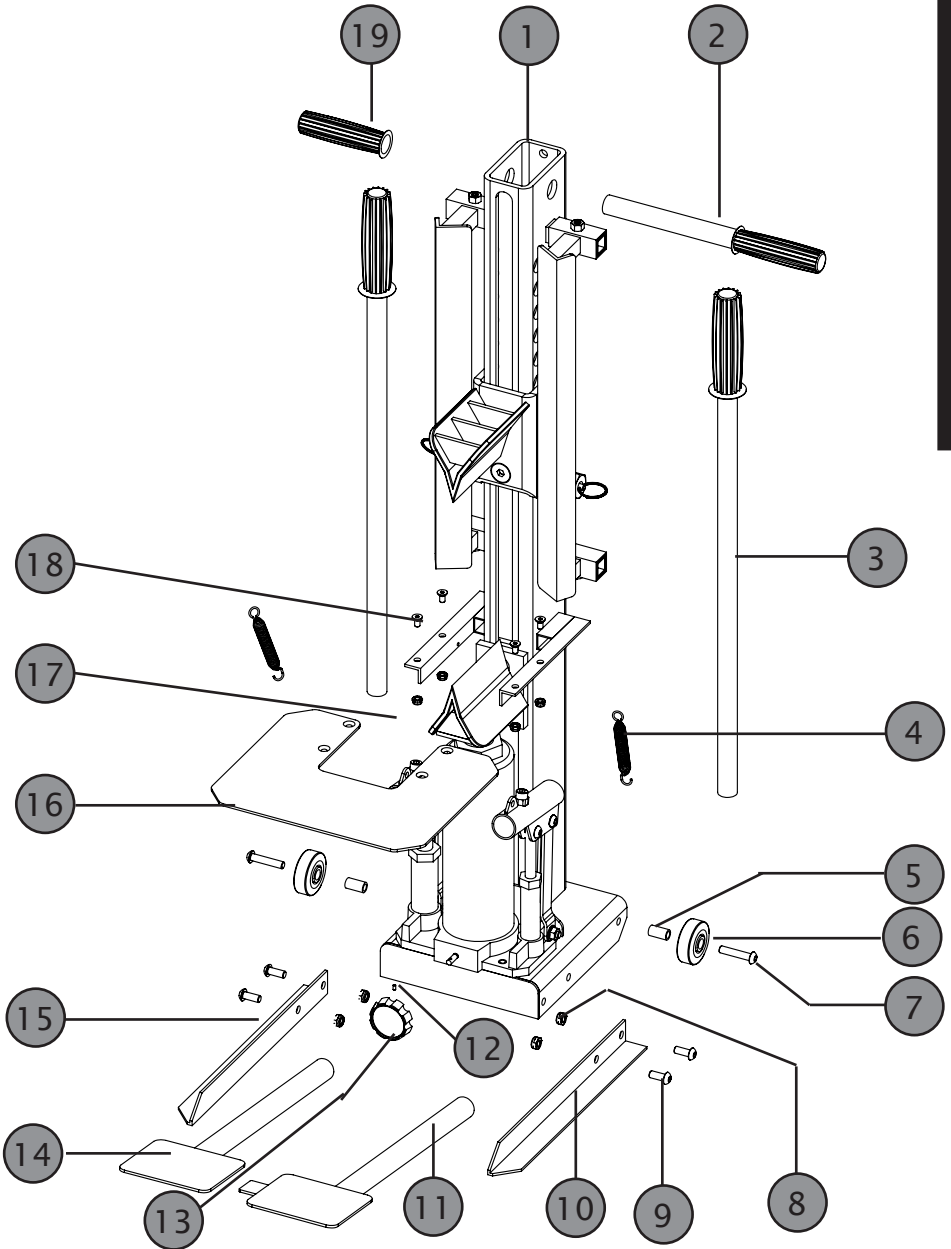
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|   |         |
|---|---------|
| Preset maximum force                        | 10 ton  |
| Approximate lift per stroke (left pedal)    | 9-11 mm |
| Approximate lift per stroke (right pedal)   | 3-6 mm  |
| Maximum log length                          | 510 mm  |
| Maximum log diameter (vertical operation)   | 300 mm  |
| Maximum log diameter (horizontal operation) | 600 mm  |
| Height (vertical operation)                 | 1005 mm |
| Width                                       | 300 mm  |
| Weight                                      | 35 kg   |



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Exploded Diagram





| Item | Description                        | Qty |
|------|------------------------------------|-----|
| 1    | Main Splitter Assembly             | 1   |
| 2    | Top handle                         | 1   |
| 3    | Hand lever                         | 2   |
| 4    | Spring                             | 2   |
| 5    | Wheel Spacer                       | 2   |
| 6    | Wheel                              | 2   |
| 7    | M8 x 40 mm socket button head bolt | 2   |
| 8    | M8 nyloc nut                       | 6   |
| 9    | M8 x 20 mm socket button head bolt | 4   |
| 10   | Right stabilising foot             | 1   |
| 11   | Right foot pedal                   | 1   |
| 12   | Grub Screw                         | 1   |
| 13   | Return Valve Knob                  | 1   |
| 14   | Left foot pedal                    | 1   |
| 15   | Left stabilising foot              | 1   |
| 16   | Log platform                       | 1   |
| 17   | M6 nyloc nut                       | 4   |
| 18   | M6 x 15 countersunk bolt           | 4   |
| 19   | Hand grip                          | 1   |



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**IMPORTANT:** Please read these instructions carefully. Note the safe operational requirements, warnings & cautions. Use the product correctly and with care for the purpose for which it is intended. Failure to do so may cause damage and/or personal injury and will invalidate the warranty. Please keep these instructions safe for future use.

Safety

### Safety And Maintenance

Keep the log splitter clean for safest and best performance. Maintain the log splitter in a good condition. Use a qualified person to lubricate and maintain the log splitter.

**DO NOT** top up hydraulic unit using brake fluid. Use hydraulic jack oil only.

**DO NOT** operate the log splitter if damaged. Replace or repair damaged parts.

### Workshop/Environmental Safety

Locate the log splitter on dry, level and solid ground in a suitable work area with adequate lighting. Keep the area clean and tidy and free from unrelated materials. Do not leave tools, logs or other items lying around where they could become a trip hazard.

**DO NOT** operate the log splitter in wet or damp areas or expose it to rain.

**DO NOT** operate the log splitter in areas where fumes from paint, solvents, or flammable liquids pose a potential hazard.

### OPERATOR SAFETY

Remove ill fitting clothing. Remove ties, watches, rings and other loose jewellery, and contain long hair.

Wear protective clothing such as safety shoes and work gloves. Always wear safety goggles. Everyday spectacles are not sufficient protection.

Maintain correct balance and footing, do not over-reach. Ensure the floor is not slippery and wear nonslip, protective footwear.



**DO NOT** allow untrained persons to operate the log splitter.  
**DO NOT** operate the log splitter with the guards or guides removed.  
**DO NOT** operate the log splitter when you are tired or under the influence of alcohol, drugs or intoxicating medication.  
The log splitter must always be operated by one person only.  
Keep hands away from moving parts of the log splitter.  
Keep hands away from splits and cracks which open in logs. They may close suddenly which could cause serious personal injury. For this reason do not attempt to remove jammed logs by hand. A jammed log is a log which is only partially split and continues to grip the splitting wedge.

### **Safety Of Others**

**DO NOT** allow another person to help you with a jammed log.  
Keep children and unauthorised persons away from the work area.  
The log splitter must always be operated by one person only. Other people must keep a safe distance from the log splitter especially when it is in operation.  
Store the log splitter in a safe area away from children and other people not qualified to use the log splitter.

### **GENERAL SAFETY**

**DO NOT** make any modifications to the log splitter.  
**DO NOT** exceed the stated log capacity of the log splitter.  
**DO NOT** use the log splitter for a task it is not designed to perform.  
**DO NOT** force the log splitter to work beyond its specified capacity.  
Ensure that there are no nails, screws or other foreign objects in logs to be split.

**WARNING!** The warnings, cautions and instructions referred to in this manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution must be applied by the operator when using the log splitter.

When not in use, store the log splitter, with the hydraulic unit fully lowered, in a safe, dry, childproof location.

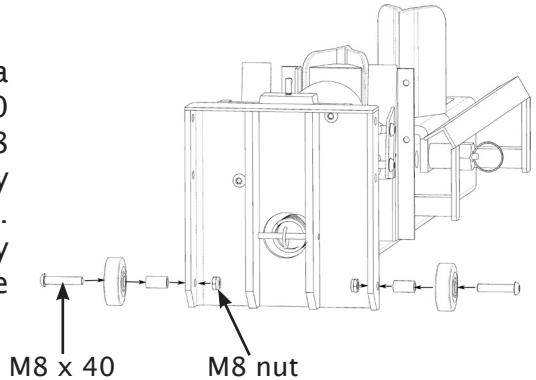
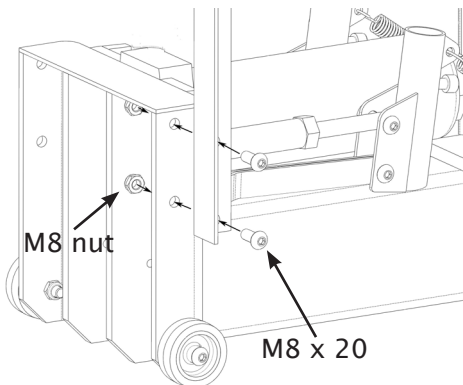
Before commencing assembly, check that you have all the required parts and the correct nuts and bolts and ensure you have read and understood these assembly instructions. Ensure the assembly area is clean and free of obstructions.

Note that throughout these instructions, the terms left and right refer to the users left and right when facing the front of the splitter as in operation.

The initial stages of assembly are easier to carry out if the log splitter is on it's back. Stand behind the splitter and holding the Duocut by the top of the vertical post, carefully tilt it backwards and lie it on it's back.

## Step 1

Insert a wheel spacer(5) into a wheel(6) then using an M8x60 button head bolt(7) and an M8 nut(8), attach the wheel assembly to the rear of the base as shown. Tighten the nut and bolt until they pinch the spacer. Repeat for the opposite wheel.



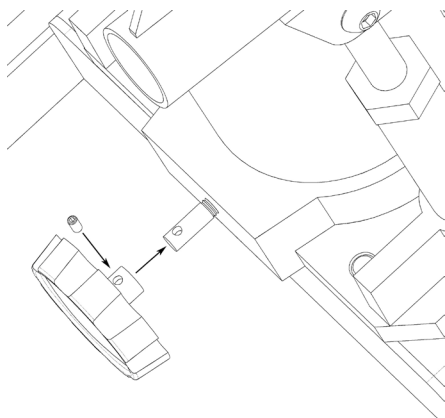
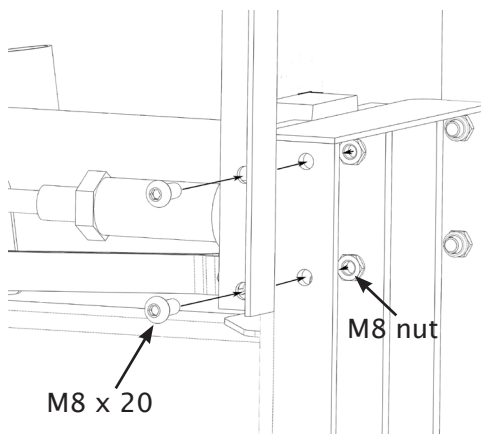
## Step 2

Attach the right stabilising foot(10) to the base using 2 M8x16 button head bolts(9) and 2 M8 nuts(8).



### Step 3

Attach the left stabilising foot(14) to the base using 2 M8x16 button head bolts(9) and 2 M8 nuts(8).

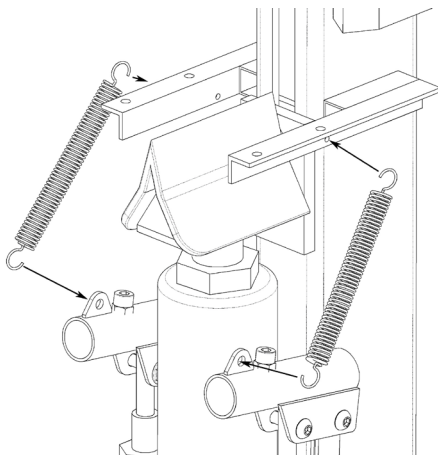


### Step 4

Push the return valve knob (13) over the return valve stem that protrudes from the front of the jack at the base and secure the knob with the grub screw (12). There is an indentation in the valve stem and the grub screw in the valve knob should be aligned with this before tightening.

### Step 5

Hook one end of a spring (4) through the hole in the lug on the forward end of the right hand jack arm and hook the other end through the hole in the middle of the vertical face of the platform support arm. The spring should be hooked on from the outside. Repeat for the other spring on the left hand jack arm.

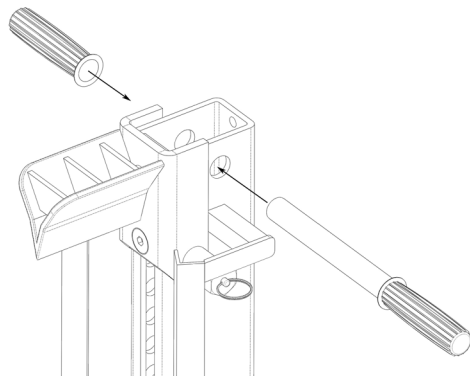
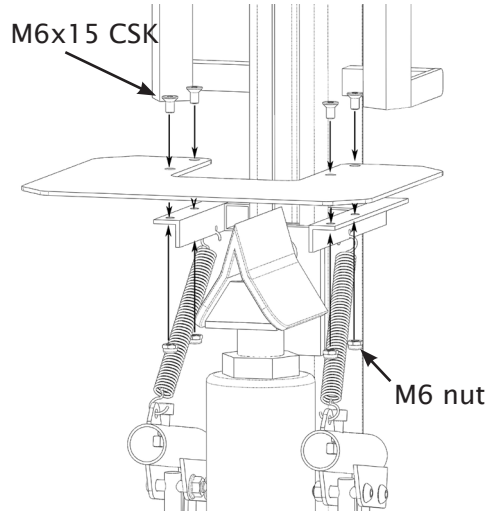




## Step 6

Attach the log platform(16) to the 2 support arms using the 4 M6 countersunk bolts(18) and 4 M6 nuts(17).

After attaching, the top surface of the platform should be just above the edge of the lower axe blade. If it is not, open the jack release valve and check that the lower axe blade is fully returned.



## Step 7

Insert the end of the top handle(2) (without the hand grip) through the large holes at the top of both sides of the splitter post and push the remaining hand grip(19) over the end of the top handle.

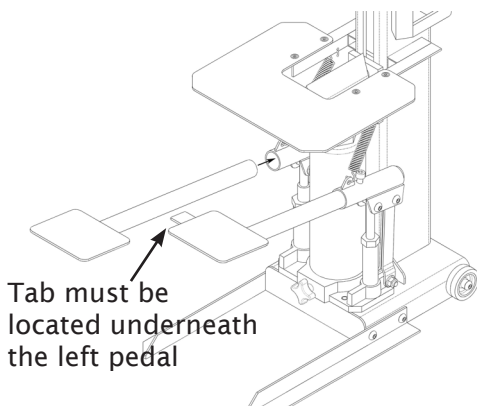
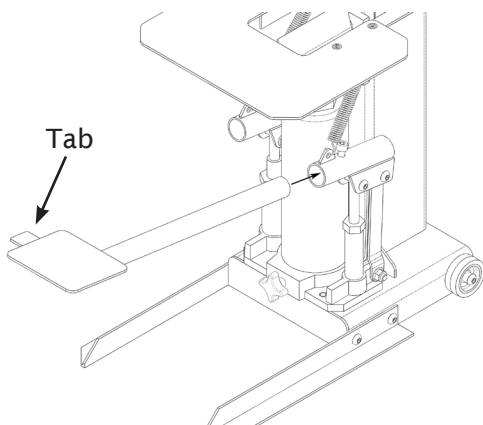
In case it may be necessary later to remove the hand grips and top handle, it may help to place a very small amount of lubricant in the hand grips.



## Step 8

Insert the right foot pedal(11) into the right hand jack arm and secure with the bolt in the top of the arm.

Ensure that the tab on the lever is positioned pointing to the inside as shown.



## Step 9

Insert the left foot pedal(14) into the left hand jack arm and secure with the bolt in the top.

Ensure that the tab on the right hand lever is located underneath the left hand lever.

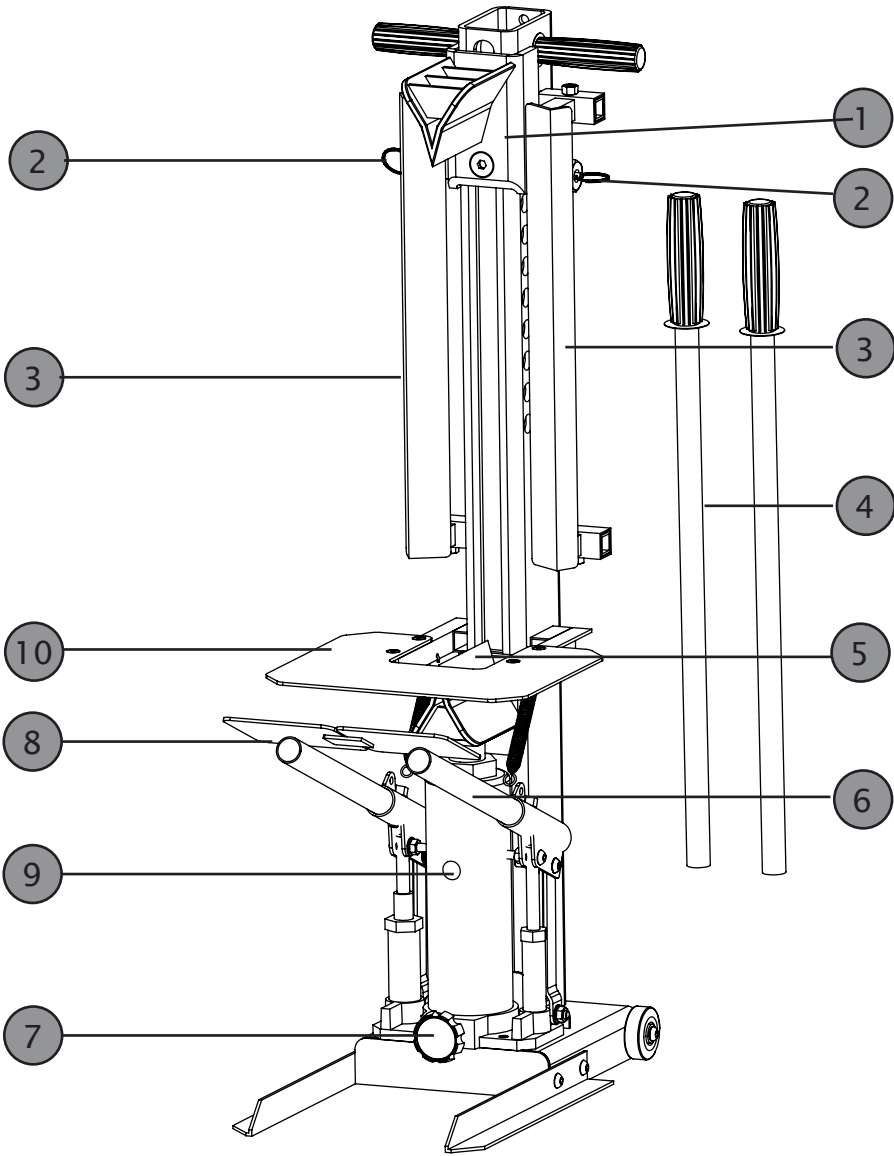
## Step 10

Check that all nuts and bolts have been properly secured. This check should be made each time the splitter is used.



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Know your Duocut





|    |                             |
|----|-----------------------------|
| 1  | Upper axe blade             |
| 2  | Locking pin                 |
| 3  | Log support rail            |
| 4  | Hand lever                  |
| 5  | Lower axe blade             |
| 6  | Right foot pedal            |
| 7  | Return valve                |
| 8  | Left foot pedal             |
| 9  | Hydraulic fluid filler plug |
| 10 | Log platform                |



**WARNING!** Ensure you read, understand and apply the safety instructions at the beginning of this manual before use.

**WARNING!** This system has been designed to prevent the operator from handling the log during the splitting process. For safety reasons the operator must not ask a second person to place or handle the log. The system is designed to be operated by one person only.

**WARNING!** Always split a log along its grain. Never attempt to split a log laid across the machine as this could be dangerous for the operator and could seriously damage the splitter. Never attempt to split a log if it is sitting at an angle.

**WARNING!** Always position the logs as shown in these instructions. Failure to follow these guidelines can result in damage to the log splitter.

**WARNING!** Never fully unscrew the return valve. One full turn is sufficient to lower the blade.

### Transportation

Carefully tip the log splitter backwards onto it's wheels, using the handles to transport it short distances.

### Work Site Preparation

Plan the work site beforehand to ensure a safe working environment and to save effort by positioning the logs so they can easily be reached. Ensure that the log splitter is positioned on firm and level ground. Locate site so that the split wood can be stacked or loaded directly into a suitable vehicle or trailer.



A video showing the correct use of the splitter can be viewed by scanning the code to the right or by going to the following address,

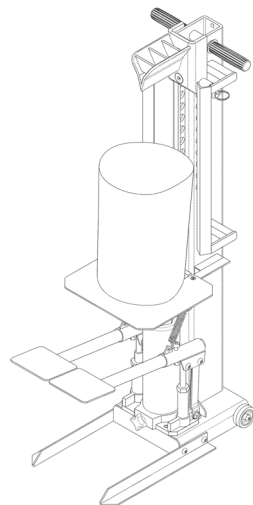
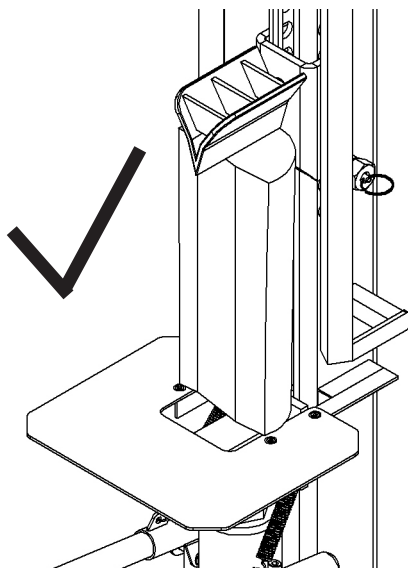
<http://www.forest-master.com/duocut-manual-log-splitter.php>.



## Step 1

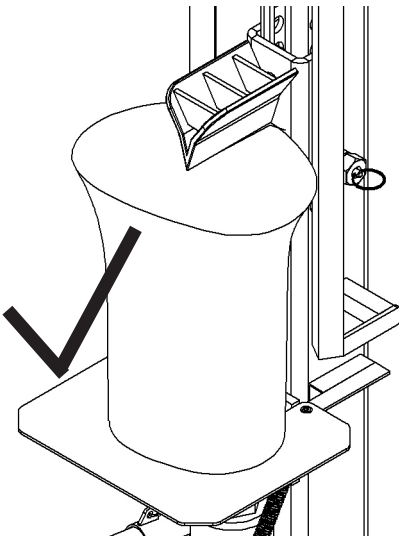
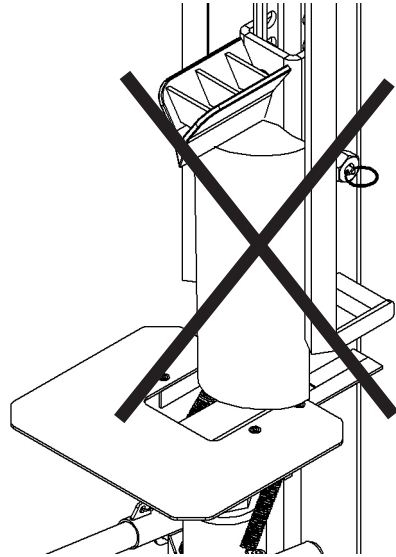
Place the log to be split, onto the support platform so that the back of the log is just forward of the lower blade back plate. Ensure the log is stable on the platform.

**DO NOT** place small diameter logs directly onto the lower blade as they may slip and cause damage to the support platform.



If splitting a log that has already been split, always place the log so the rounded outer face is against the blade back plates.

**NEVER** place a split log with the split face or faces against the back plates of the blades, as this can cause the log to jam against the log guides as it splits, thereby bending and possibly breaking the log guides.



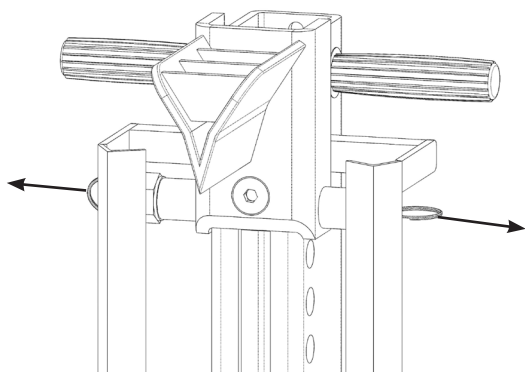
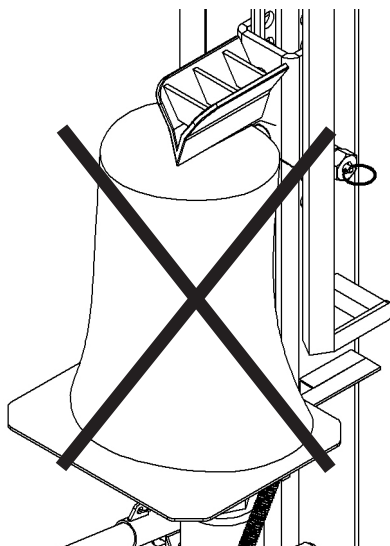
If splitting a log of extremely irregular shape, e.g. where one end flares considerably in diameter. Place the log so the widest end is uppermost.

This will avoid the possibility of the wide end jamming against the guides as the log is raised and begins to split.



**DO NOT** place an irregular log in such a way that it is possible for it to jam between the base and the log guides.

If the log jams between the base and guides it can bend or break the guides if you continue to split the log.



## Step 2

Pull outwards simultaneously on the ring pulls for both of the upper axe blade locking pins and lower the blade so it rests on the top of the log.

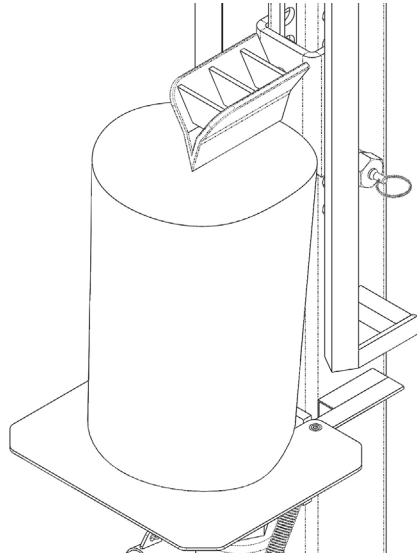




## Step 2a

**DO NOT** adjust the position of the blade to locate the locking pins in a hole. The blade will automatically lock as it is raised.

Check that the jack return valve is closed.



## Step 3

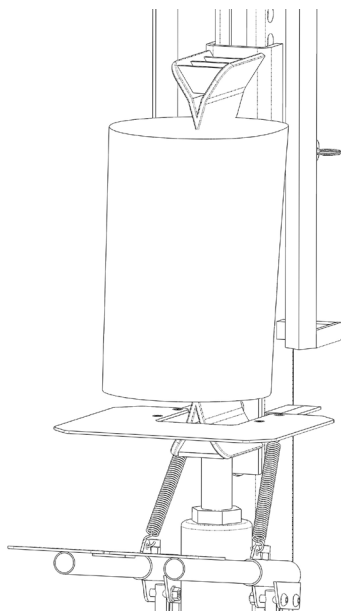
Use the left pedal to gently raise the lower blade and lift the log, this will in turn lift the upper blade. Continue raising the log until the locking pins on the upper blade are heard to click into place in the next set of holes. **DO NOT** steady the log with your hands, your hands should be placed on the top handle for stability.





## Step 4

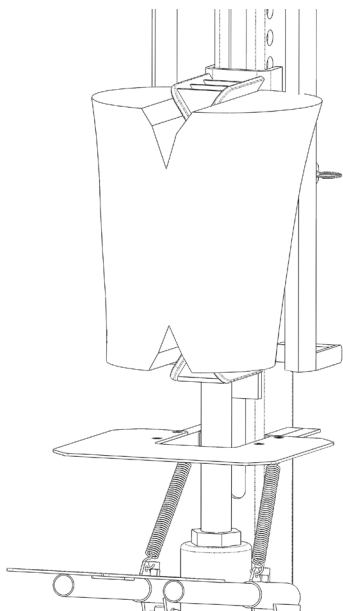
Continue to pump with the left pedal. As the blade presses into the surface of the log the resistance will increase. Start pumping with the right pedal to apply the full 10 tons of force and split the log.



## Step 5

Once the log begins to split, the resistance will drop and you can switch back to the left pedal to finish splitting quickly.

**DO NOT** attempt to assist the log in splitting with your hands or any form of implement. With soft woods it may be possible to split the log entirely using the left pedal.



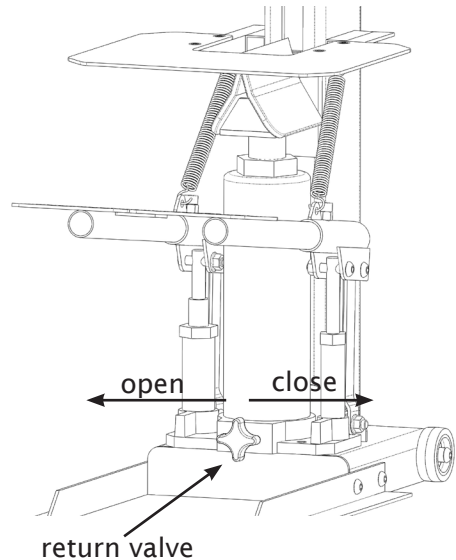


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## Step 6

Once the log has split, remove the pieces and stack them to one side away from the splitter to keep the work area clear. Clear any wood chips that may obstruct operation away from the splitter.

Slowly open the return valve on the jack no more than one full turn and allow the lower axe blade to return to it's starting position, then close the return valve.



Operation

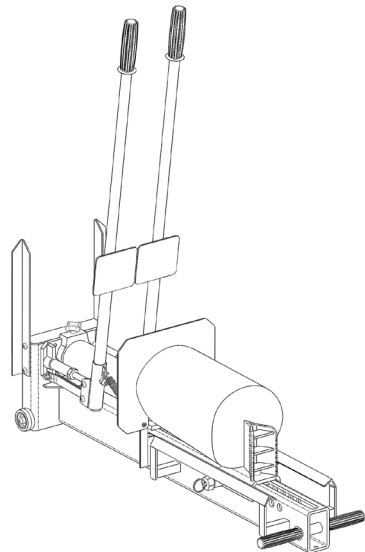
## Step 1

For splitting hardwood, it is recommended to use the machine in the horizontal position using the hand levers.

Stand behind the splitter and use the top handle to lower the splitter onto it's back.

Insert the 2 hand levers into the foot pedal tubes.

Place a log onto the splitter so that it is in contact with the platform then pull the locking pins outward and slide the upper blade so that it touches the log.



Horizontal Operation

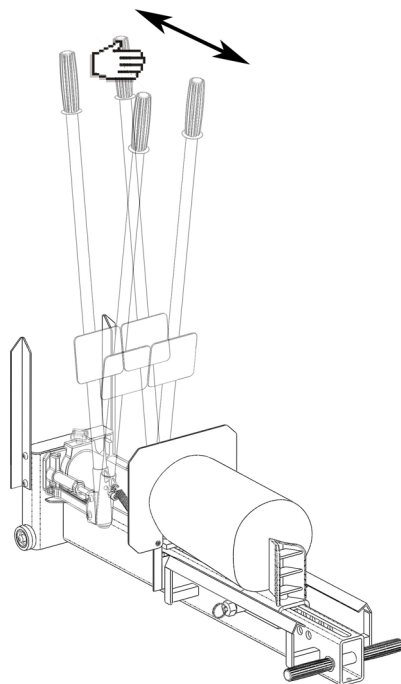
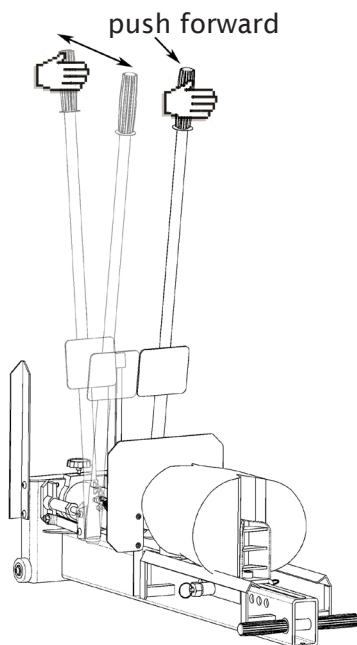


## Step 2

Stand slightly to the left of the splitter and operate the left lever slowly until the locking pins click into place.

**DO NOT** support or steady the log by hand.

Continue to operate the left lever. As resistance is felt to increase the splitter will tend to lift off the ground. At this point you should switch to right lever only operation.



## Step 3

Push forward on the left lever with one hand, this will stop the splitter lifting and pump with the right lever to finish splitting the log.

Once the wood starts to split, it may be possible to switch back to using the left lever to speed up splitting

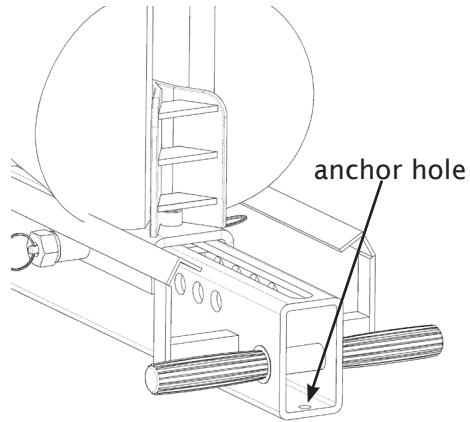
Remove the split log and stack away from the splitter. Clean away any debris from the splitter.

## Step 4

Open the release valve to allow the lower blade to return then close the release valve.

## Anchoring

If the Duocut is being used on suitable ground, the end of the Duocut can be anchored to the ground by pushing a spike or other suitable anchor through the hole in the back of the splitter post.



Depending on the structure of the logs you are splitting, during operation individual logs may split from both ends or only from the top or bottom. However if a knot is encountered at one end the splitter will continue to split the log from the other end.

Wipe down the log splitter to remove tree sap or dirt after each use and tidy the work area ready for the next work session.

When the splitter is not in use, thoroughly clean it and store it in a dry location with the hydraulic pump at it's lowest position to minimise corrosion.

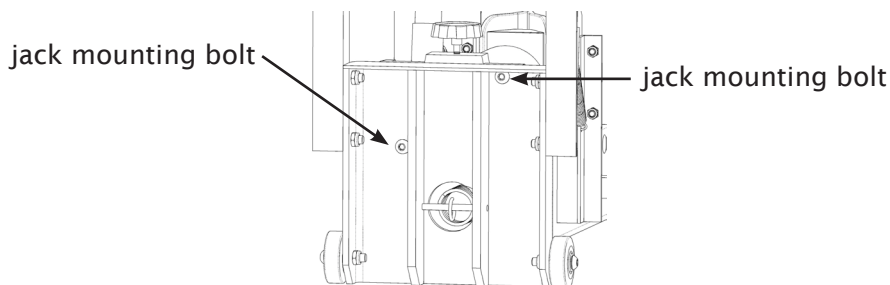


## To add oil to the hydraulic jack

Open the return valve and lower the blade to the stop then apply pressure to the jack's ram so that it is fully returned.

Position the log splitter vertically and remove the round rubber oil plug on the front of the jack unit's housing. Using a bent paper clip or similar, dip into the oil to check it's level. It should be no more than 10 mm below the plug hole. Add hydraulic jack oil if required. It will be easier to fill if the splitter is tipped slightly back or horizontal. Use a small funnel to avoid spilling oil. Use a good quality hydraulic jack oil. Replace the rubber oil plug and close the release valve.

After one year the hydraulic oil should be replaced in order to extend the life of the unit. Use hydraulic jack oil only. It will be necessary to remove the jack to exchange the oil. Place a small spacer in the bottom of the slot in the beam, this is to make it easier to remove and fit the jack. Open the release valve to allow the lower blade to fully return then apply force to the jack ram to ensure it is fully down. The jack is secured from underneath by two bolts. Carefully lie the splitter on it's back. Place some cardboard or other packing between the jack and the main beam, remove the two bolts then lift the jack clear. Fit the new jack and jack it up slightly so that the spacer can be removed.



**WARNING! DO NOT** use brake fluid, or any fluid other than hydraulic jack oil, as this may cause serious damage to the pump and will invalidate the warranty. When draining the oil make sure that no dirt is allowed to enter the hydraulic unit.

Periodically check the hydraulic unit's pistons and ram for signs of corrosion. Clean exposed areas with a clean oiled cloth. **DO NOT** add any lubricant to the ram, it is self lubricating.

### **Lower blade does not return freely**

Clean the front surface of the beam and lightly lubricate it.

### **Hydraulic pump will not lift**

The oil level may be low. Check oil level as described and top up if necessary.

The pump may have air trapped in the system. To eliminate trapped air, ensure the splitter is vertical, remove the rubber oil plug on the front of the hydraulic jack. Open the release valve and pump the foot pedal of the pump through its full stroke, five or six times. Repeat the procedure with the splitter in the horizontal position. Close the release valve and refit the rubber oil plug.

Hydraulic pump's piston 'O' ring seal may have become worn. If this is suspected take the hydraulic jack to a qualified service person for repair.

**IMPORTANT:** Only fully qualified personnel should attempt hydraulic maintenance or repair.



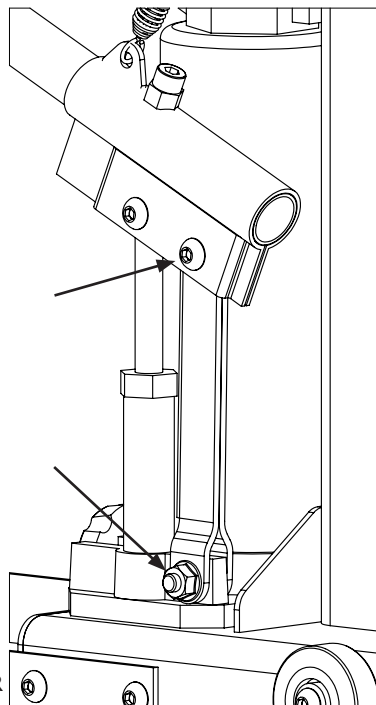
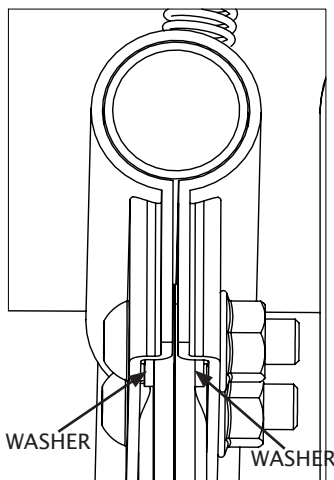
## Adjusting The Foot Pedals

If you find that there is too much side to side play in the foot pedals, this can be adjusted tightening the nuts and bolts securing the link arms. Tighten them fully then back the nuts off 1/4 of a turn.

You can also remove the top bolts and place washers either side of the link arms then replace the bolts.

A similar procedure can be done on the bottom bolts.

Note that the arms need a small amount of slack to function correctly.







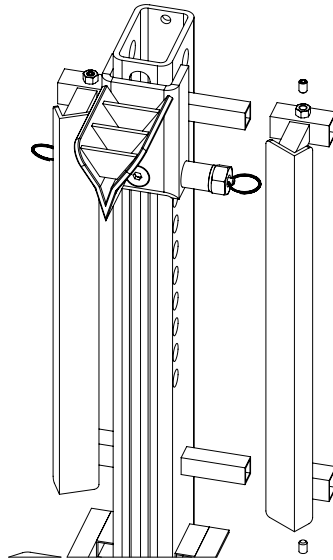
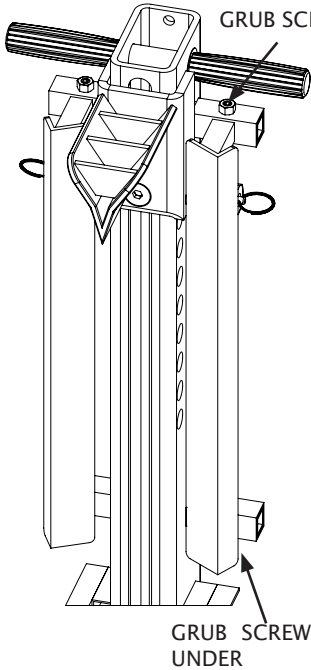
## Replacing A log Rail

If a log rail becomes bent or otherwise damaged, it is possible to replace it. Each log rail is held in place by two grub screws, one on the top mount and one underneath the bottom mount. To access the top grub screw it may be easier to remove the top handle.

Remove the two grub screws and slide the log rail off the mounting tubes.

Slide the new log rail on and secure with the grub screws.

Replace the top handle if this has been removed.





De-commissioning product: Should the product become completely unserviceable and require disposal, draw off the oil into an approved container and dispose of the product and the oil according to local regulations.

This product carries a limited parts warranty for 1 year from the date of purchase. Please keep your proof of purchase as this will be required for any claim.

Should this product become defective, contact the store where it was purchased and either replacement parts will be issued, it will be repaired or it will be replaced free of charge.

**IMPORTANT: NO RESPONSIBILITY IS ACCEPTED FOR INCORRECT USE OF THIS PRODUCT.**

**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

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