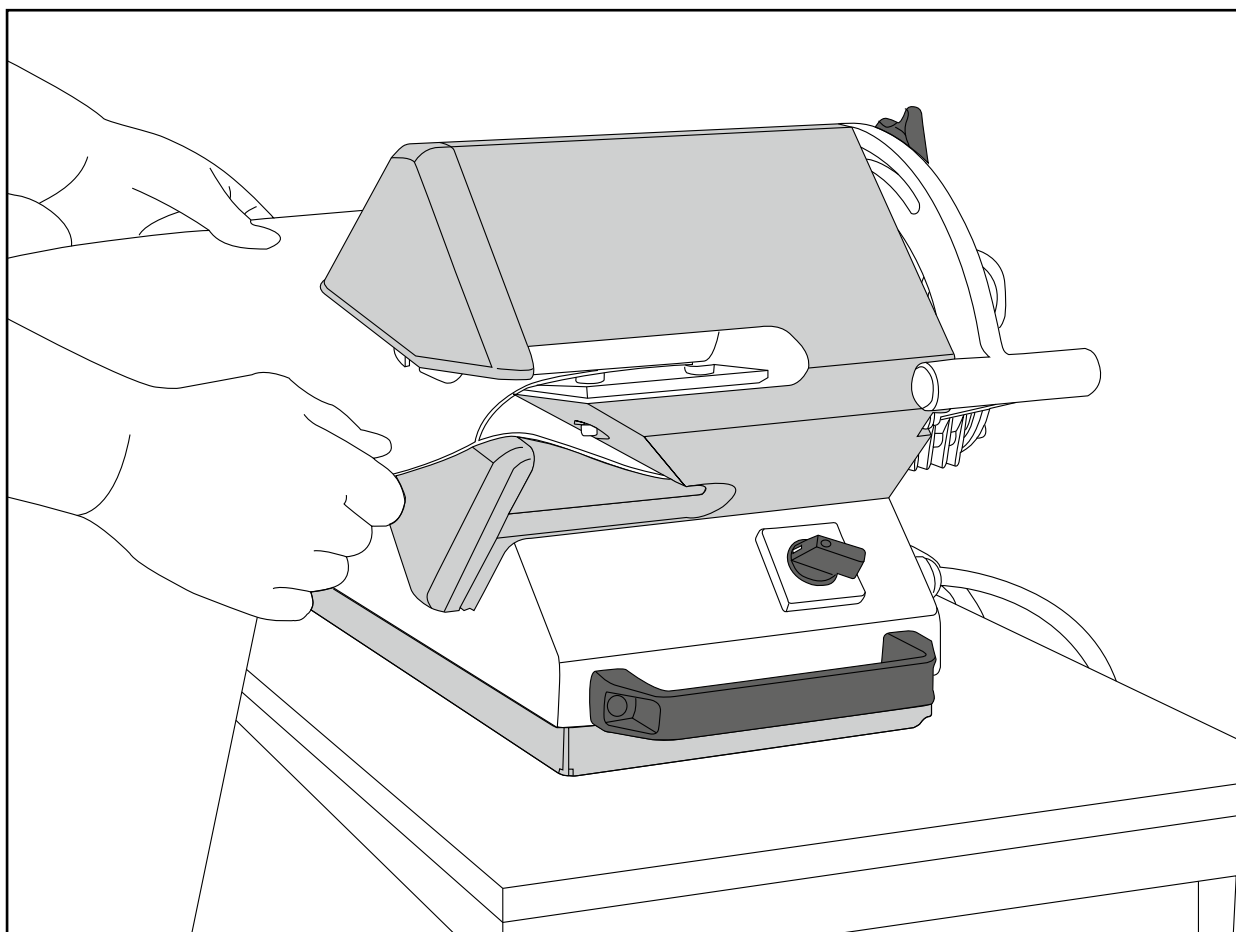

Ply Separator

PLY 130 WB + Optional Workshop Cart

Safety and Operation Manual

Separate between the plies of a conveyor belt.



! WARNING

IMPROPER OR UNSAFE use of this tool can result in serious bodily injury! This manual contains important information about product function and safety. Please read and understand this manual BEFORE operating the tool. Please keep this manual available for other users and owners before they use the tool. This manual should be stored in a safe place.

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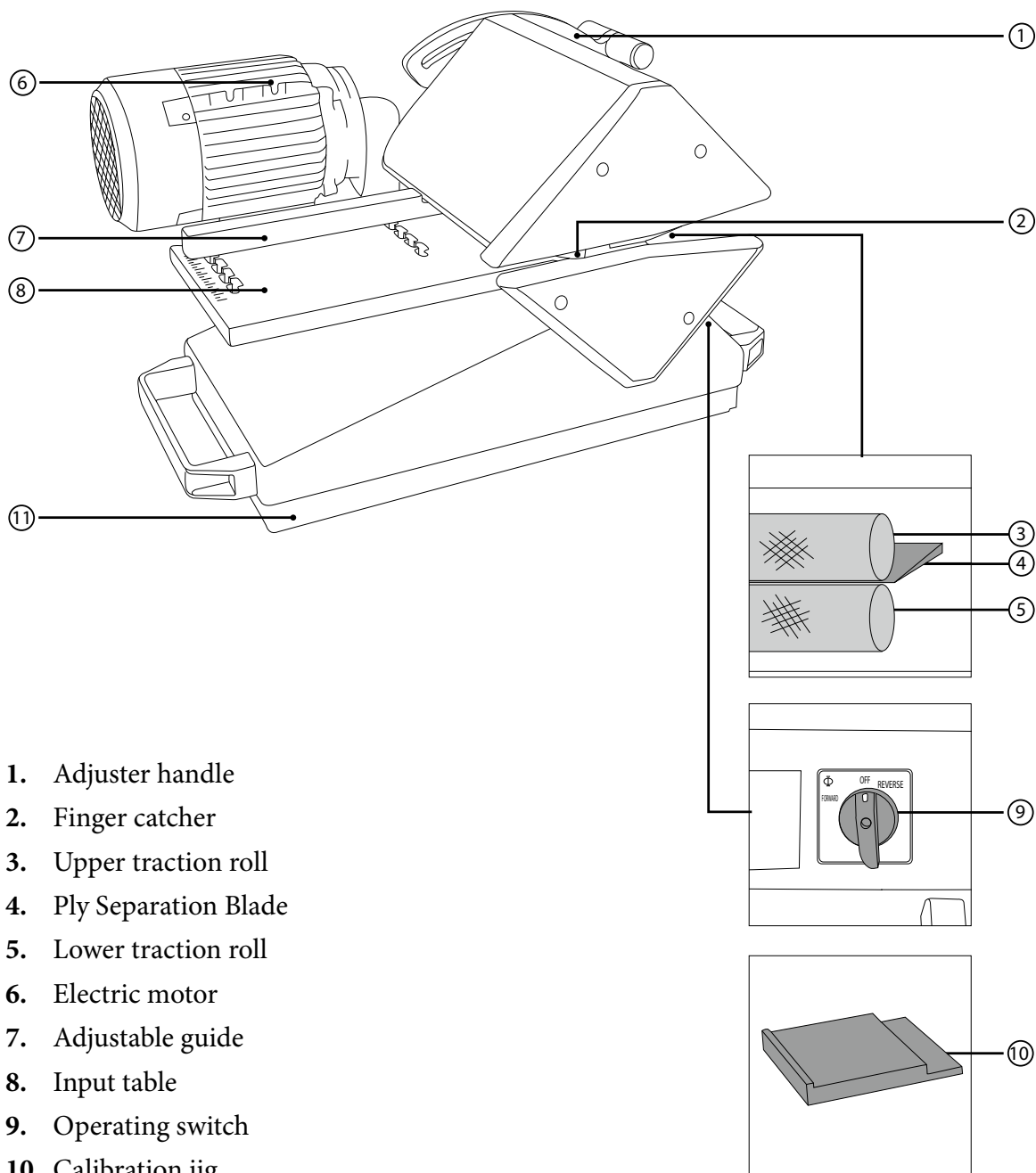
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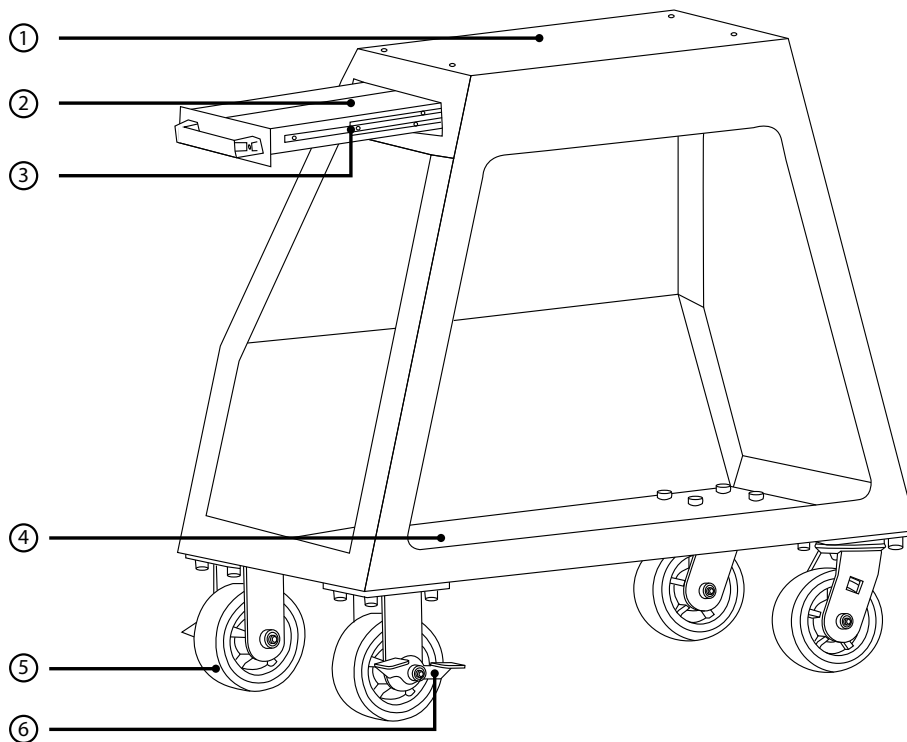
Disclaimer The Ply 130 ply separator has been tested successfully with different belt types. However this is no guarantee for good results. Fabricating belts does require the operator to master skills and have a certain level of craftsmanship. Results also depend on good practice, material composition and sharpness of blade. If results are not as expected, please contact Flexco.



Main Components Ply 130™



Main Components Ply Cart™



1. Support Deck
2. Drawer
3. Drawer Slides
4. Housing
5. Casters
6. Locking Brake

Description

The Ply 130™ is used to separate between the plies of a conveyor belt. This cutting action is often required in preparation before splicing a belt with a splice press. A great advantage of this ply separator is that it can split as deep as 5" (130 mm) in one action. This is especially helpful when splitting very thin belts which are difficult to cut, such as thin polyurethane belts.

The robust construction of the Ply 130™ allows for precise splitting of thermoplastic belts - both thin and thick. As little as 0.35 mm (0.014") can be separated - allowing for users to create film from the belt used in the splicing process.

The Ply 130™ can be used to prepare finger over finger splices and stepped splices. With only one handle you determine the depth you want to split the belt. It may be possible to split between every layer of the belt and in this way generate two or three separations within one belt.

Tool Specifications

Ply 130™ Tool Specifications		
Specifications	Minimum	Maximum
Splitting Depth	40 mm (1.5")	130 mm (5.1")
Belt thickness above cut	0.35 mm (.014")	8 mm (.3")
Belt thickness below cut	0.35 mm (.014")	5 mm (.2")
Maximum belt thickness	N/A	5 mm (.4")
Tool dimensions	550 x 420 x 420 mm (22" x 17" x 17")	
Tool weight	55kgs (121 lbs)	

Ply 130™ Ordering Information		
Ordering Number	Item Code	Plug
Work Bench Model		
PLY130WB-460V3PH60HZ	08013	no plug
PLY130WB-230V3PH60HZ	08046	no plug
PLY130WB-460V3PH60HZ-L16-20	08053	L16-20
PLY130WB-460V3PH60HZ-L16-30	08054	L16-30
PLY130WB-230V3PH60HZ-L15-20	08055	L15-20
PLY130WB-230V3PH60HZ-L15-30	08056	L15-30
PLY130WB-400V3PH50HZ	08102	no plug
PLY130WB-3X230-60HZ-IEC60309	08151	IEC60309
PLY130WB-460V3PH60HZ-IEC60309	08152	IEC60309
PLY130WB-230V3PH50HZ-IEC60309	08246	IEC60309
PLY130WB-200V3PH60HZ	08457	no plug
PLY130WB-200V3PH60HZ-N18-20	08462	N18-20
PLY130WB-200V3PH50HZ	08527	no plug
PLY130WB-200V3PH50HZ-N18-20	08528	N18-20
PLY130WB-460V3PH50HZ	08613	no plug
Cart Model		
PLY130-CART	08100	no plug
Replacement Parts		
PLY130-BLADE	08490	N/A
PLY-JG Jig Only	08015	N/A

General Safety Rules –Save These Instructions–

Signal words:

“DANGER” indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The signal word is limited to the most extreme situations.

“WARNING” indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

“CAUTION” indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Safety Symbol



This international safety symbol is used to identify and call attention to specific safety matters.

Safety Information

To Avoid Severe Personal Injury or Property Damage, read carefully and understand the following Safety Precautions.

1. WORK AREA

CAUTION

Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.

DANGER

Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.

CAUTION

Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

WARNING

Never leave tool until it comes to a complete stop.

WARNING

Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

2. ELECTRICAL SAFETY

DANGER

The Ply Separator is a single insulated tool and needs a multiple wire grounded power cord and grounded power supply system. Contact a qualified electrical installation company to connect the right plug.

WARNING

Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock.

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General Safety Rules -Save These Instructions-

WARNING

Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock and will damage the tool.

DANGER

Do not abuse the cord. Never use the cord to carry the tool or pull the plug from a receptacle. Keep cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

WARNING

Do not use outdoors. This power tool is designed for indoor use only.

WARNING

Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

3. PERSONAL SAFETY

WARNING

Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

WARNING

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

WARNING

Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

WARNING

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

CAUTION

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

WARNING

Never alter or remove safety devices.

WARNING

Keep your hands and fingers away from all moving and sharp parts, e.g. rolls and blade, at all times.

WARNING

Engage caster locks on cart when not transporting

4. TOOL USE AND CARE

WARNING

Always use the ply separator on a level, firm surface. Splitting should be performed operating the machine with two hands on the material.

General Safety Rules -Save These Instructions-

CAUTION

Do not force tool when the belt material blocks or jams and do not continue feeding the material through tool. When jammed put the operating direction in reverse to remove the material.

WARNING

Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

WARNING

Disconnect the plug from the power source before making any adjustments, changing accessories, or storing or transporting the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

WARNING

Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

CAUTION

The Ply Separator should not be used to split other materials than thermoplastic belting materials. The thickness of the belting material should never exceed 10 mm.

CAUTION

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

WARNING

Stow foot pedal when not in use.

WARNING

Disconnect and stow cables before moving.

5. SERVICE AND MAINTENANCE

WARNING

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

CAUTION

When servicing a tool, use only identical replacement parts. Use of unauthorized parts or failure to follow Maintenance Instruction may create a risk of electric shock or injury.

DANGER

Do not use power tools if the housing is damaged or not closed. Damaged or (partially) open housing can lead to electric shock. Such tools should not be used until repaired or closed.

CAUTION

Do not wipe plastic parts with solvent. Solvents such as gasoline, thinner, benzene, carbon tetrachloride, and alcohol may damage and crack plastic parts. Do not wipe them with such solvents. Wipe plastic parts with a soft cloth lightly dampened with soapy water and dry thoroughly.

WARNING

NEVER use a tool which is defective or operating abnormally. If the tool appears to be operating unusually, making strange noises, or otherwise appears defective, stop using it immediately and arrange for repairs.

CAUTION

Maintain tools with care. Keep blades sharp and clean. Properly serviced tools and knives with sharp edges are less likely to bind or clutter material and are easier to control.



General Safety Rules -Save These Instructions-

6. PLY CUTTER SAFETY

⚠️ WARNING

Make sure that the power cable is not near the material entrance opening.

⚠️ WARNING

Keep your body positioned perpendicular to the material feeding direction on the opposite side of the electric motor.

⚠️ WARNING

Keep your hands away from the feeding rolls and splitting area. Always guide the material in a way that your hands have a minimum distance of 3.94" (10 cm) from this area.

⚠️ CAUTION

Do not use dull or damaged blades/ knives.

7. PLY CART SAFETY

⚠️ WARNING

Install casters onto Ply Cart before installing Ply 130 WB.

⚠️ WARNING

Casters must be locked, and cart blocked from moving during Ply 130 WB installation.

⚠️ WARNING

Installing Ply 130 WB onto Ply Cart requires two persons. Ensure Ply 130WB is tightly secured to Ply Cart using mounting bolts provided.

⚠️ WARNING

Do not push or tow the Ply Cart with a driven machine.

⚠️ WARNING

Avoid inclines, declines and floor obstructions when pushing cart. Only push cart in directions permitted by fixed casters, never pull or attempt to slide sideways.

⚠️ WARNING

Ensure Ply 130 WB plug is disconnected and cables are stored before transporting cart.

⚠️ WARNING

Ply cart is for Ply 130 WB installation only.

8. REPLACING THE BLADE

⚠️ CAUTION

Do not attempt to sharpen blades. This will affect splitting completely through belt.

⚠️ WARNING

Always wear cut-proof safety gloves and safety glasses when replacing blade. Blade is razor sharp, treat it accordingly.

⚠️ WARNING

Before performing a blade replacement, follow all procedures stated in manual.

⚠️ WARNING

Only authorized and trained technicians should work on the ply separator.

⚠️ WARNING

Test the splitter after blade / knife replacements to make sure that it can be used safely.

⚠️ WARNING

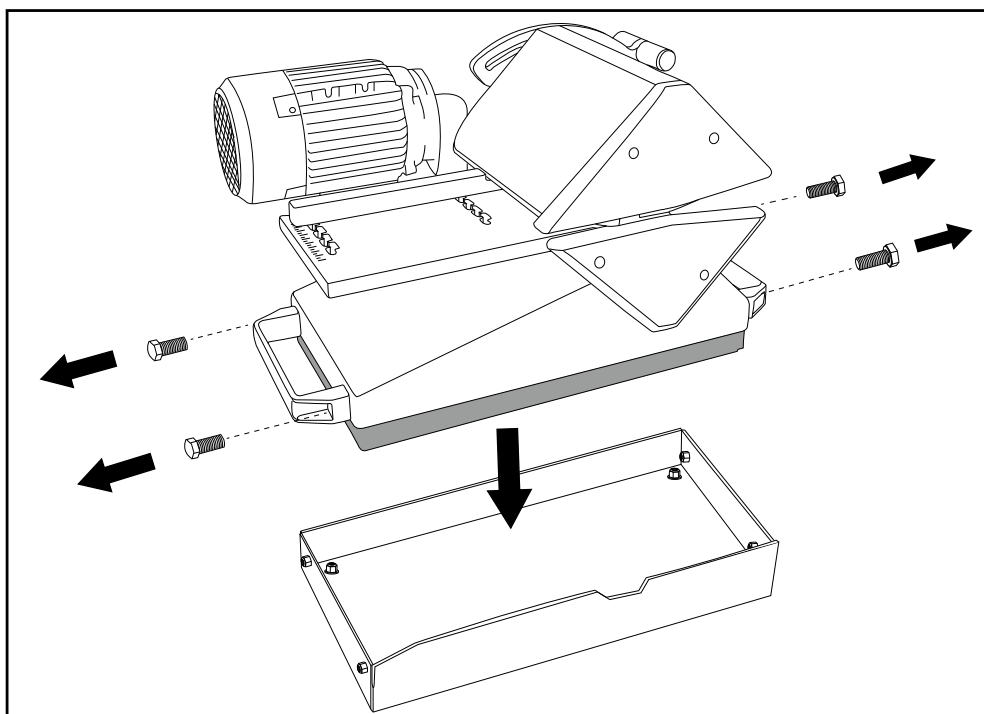
Stow spare blades safely.

Retrofit Tray



To mount an earlier model Ply 130 WB on a new model Ply 130 Cart (item code 08100) the Ply tray on the earlier ply 130 WB, must be replaced with retrofit Ply 130 Tray (item 08233).

A1



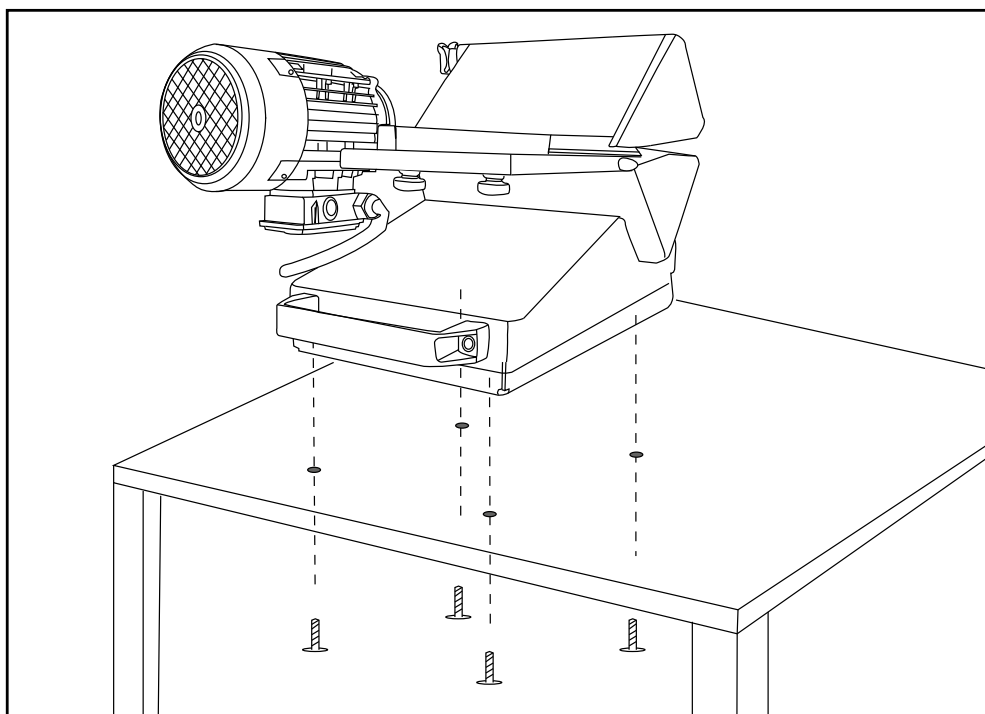
To remove existing tray from the Ply 130, remove fasteners from handles and remove handles. The tray can now be removed. Then install new tray (item code 08233) oriented as shown in above illustration and reinstall handles.

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Workbench Installation

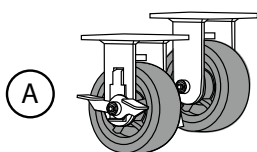
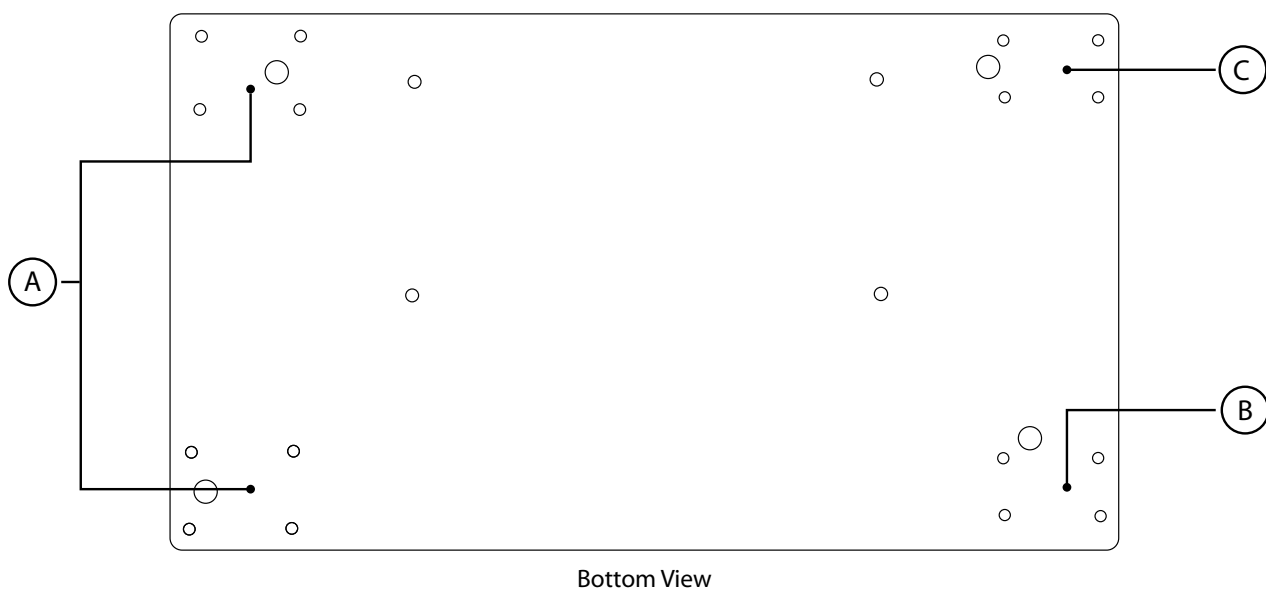


The Workbench version should for safety reasons be mounted on a firm and level workbench (A1).

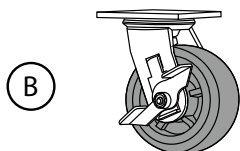
B1

Tighten 4 bolts in holes on bottom of machine.

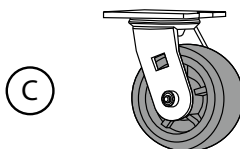
Cart Installation



A 2x Fixed casters with brake



B 1x Swivel caster with brake



C 1x Swivel caster



16x Bolt M10x25



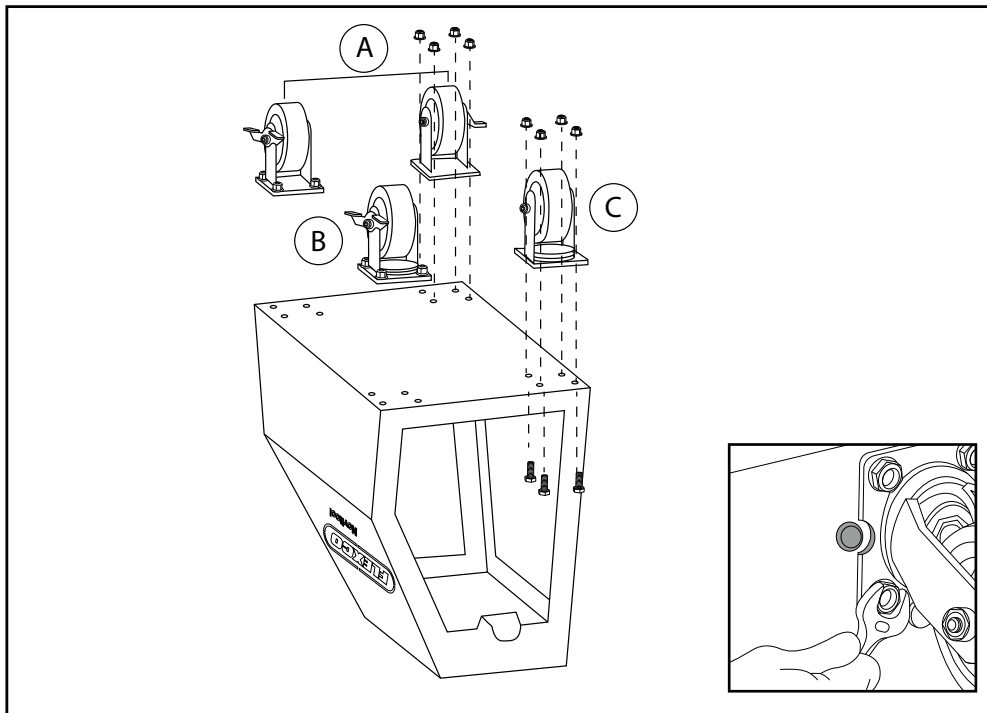
16x M10 Nylok flanged



4x Bolt M8x20

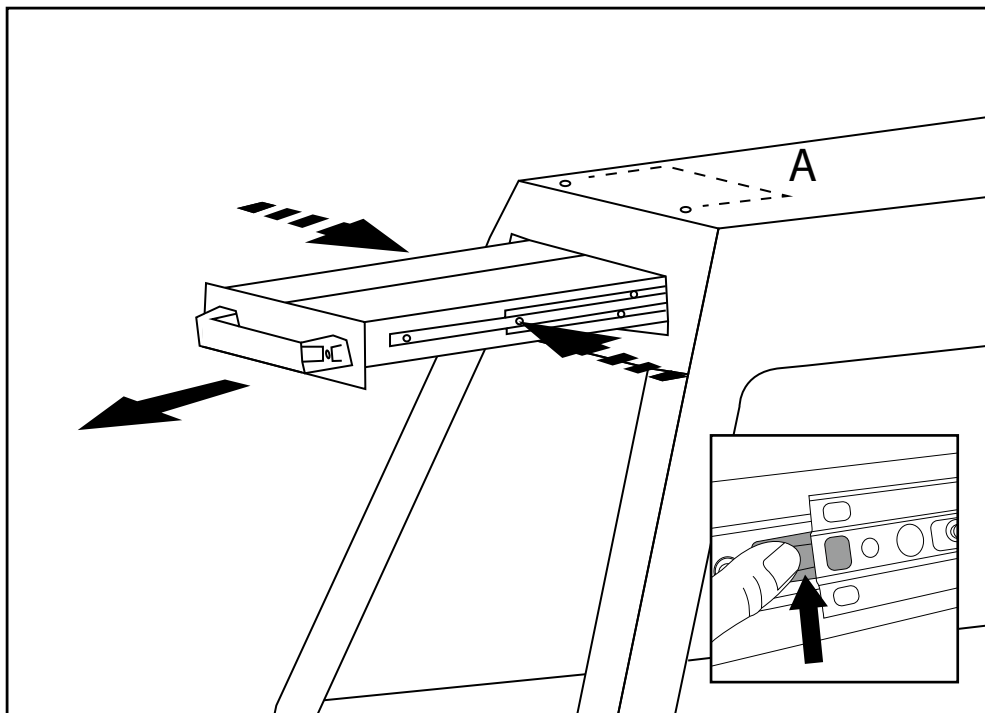
Cart Installation

C1



Mount wheels. For position and materials refer to drawing on page 15.

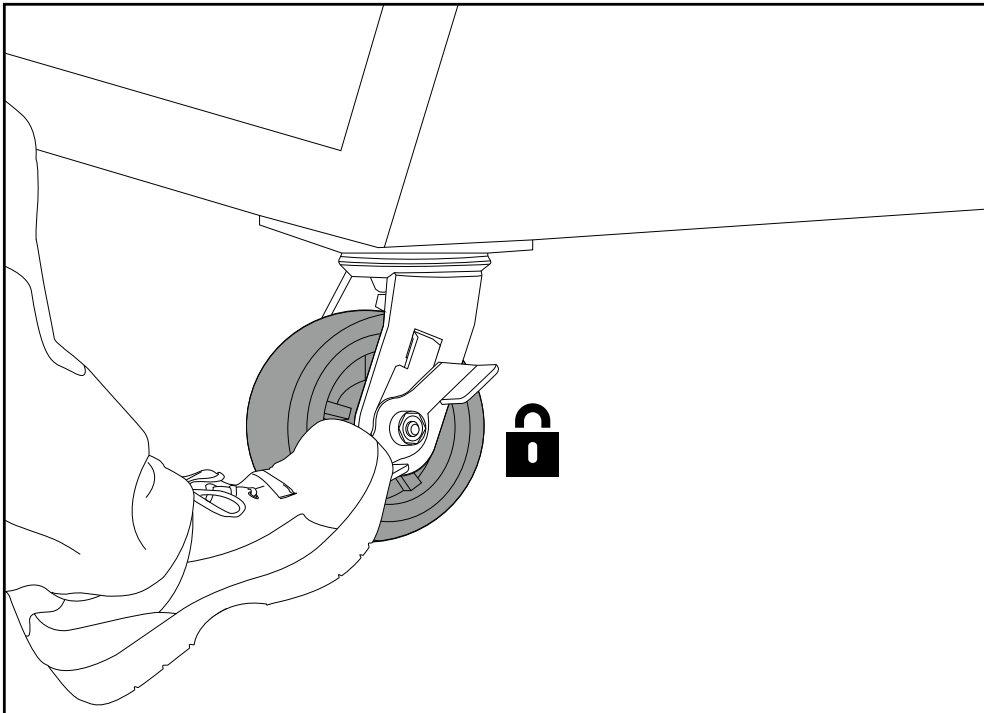
C2



For access to Ply 130WB mounting bolt hole positions (A), remove drawer by pushing the drawer latch on two sides.

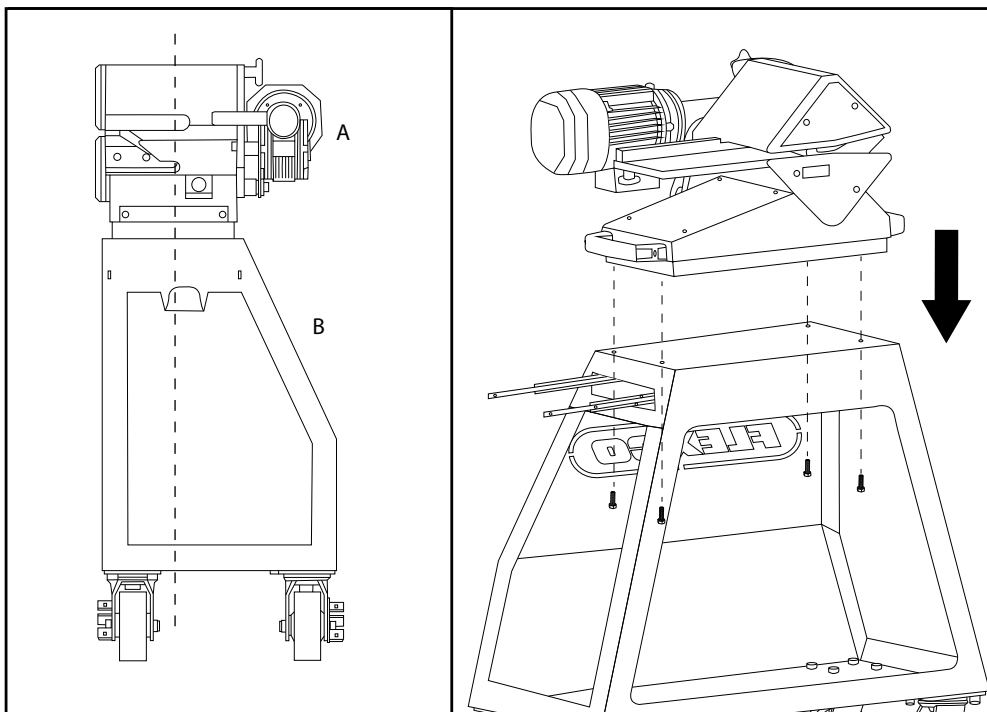
Cart Installation

C3



Lock casters and block cart before installing Ply 130.

C4

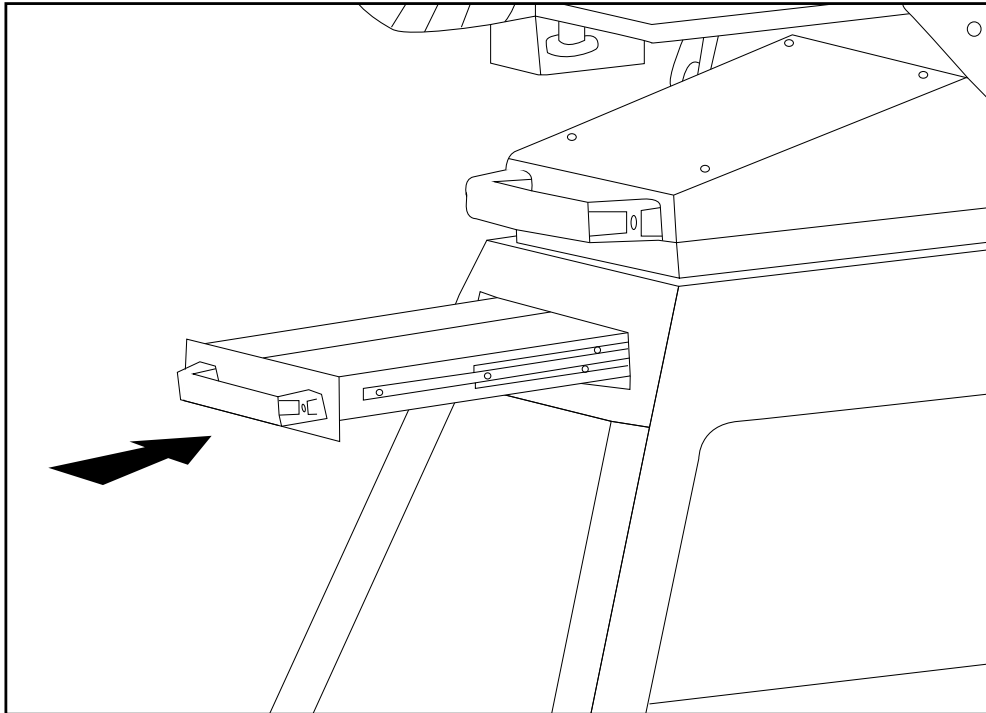


Center Ply 130 onto cart with motor (A) toward the logo side (B). Mount Ply 130 on cart. Ensure keyed patterns of cart and Ply tray fit properly. Tighten M8x20 bolts (included with Ply 130 Cart) firmly.



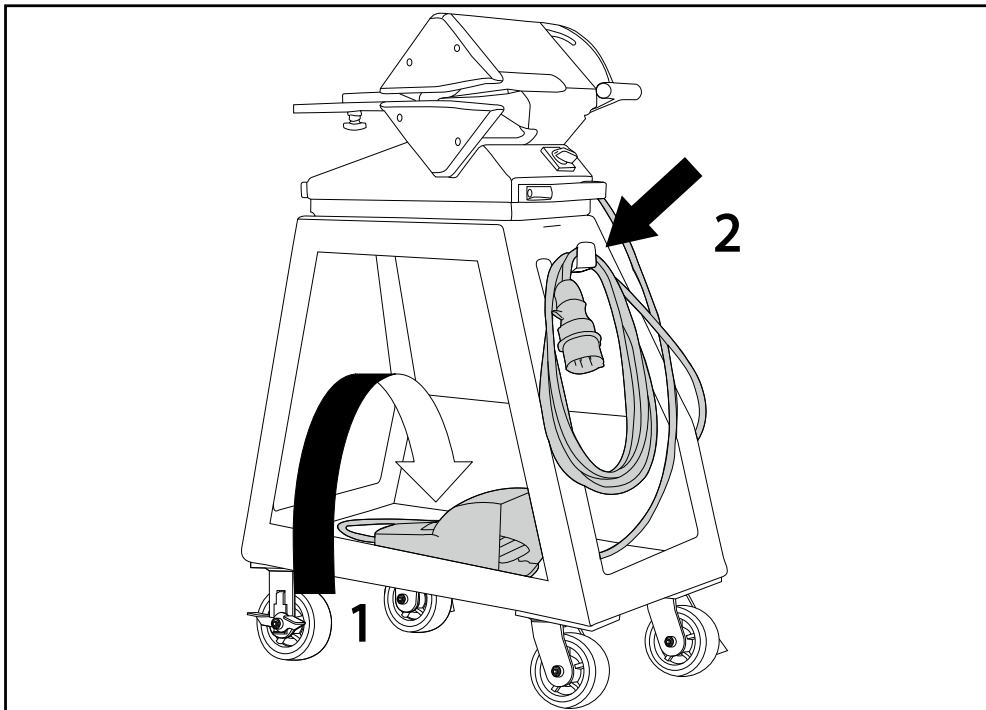
Cart Installation

C5



Reinstall drawer by pushing it fully into the cart.

C6



For moving cart; 1. Put foot pedal in cart. 2. Hang power cord on cart.

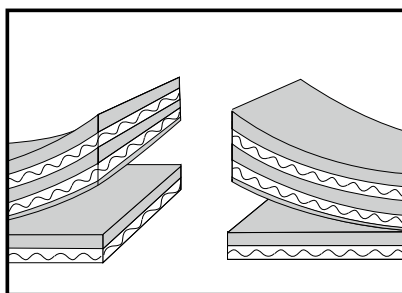
Separating for Finger over Finger Joints



Prior to splitting ensure:

- The Ply 130 is mounted properly (B-C).
- When using the Ply 130 in combination with the Ply Cart; always lock three casters before starting to work with the Ply 130.

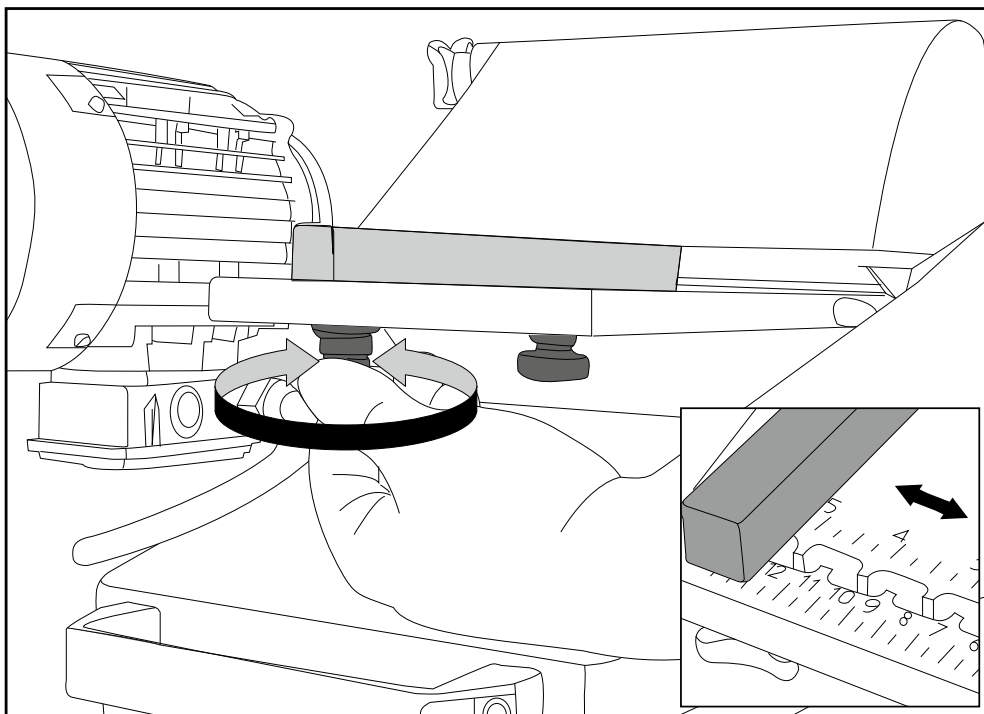
i



To prepare for a finger over finger splice the material is separated between the plies . The point of separation should be determined by the operator since it will depend on belt material, number of plies and desired splice.

The stepped pattern and fingers are created with a finger punching tool after the separation.

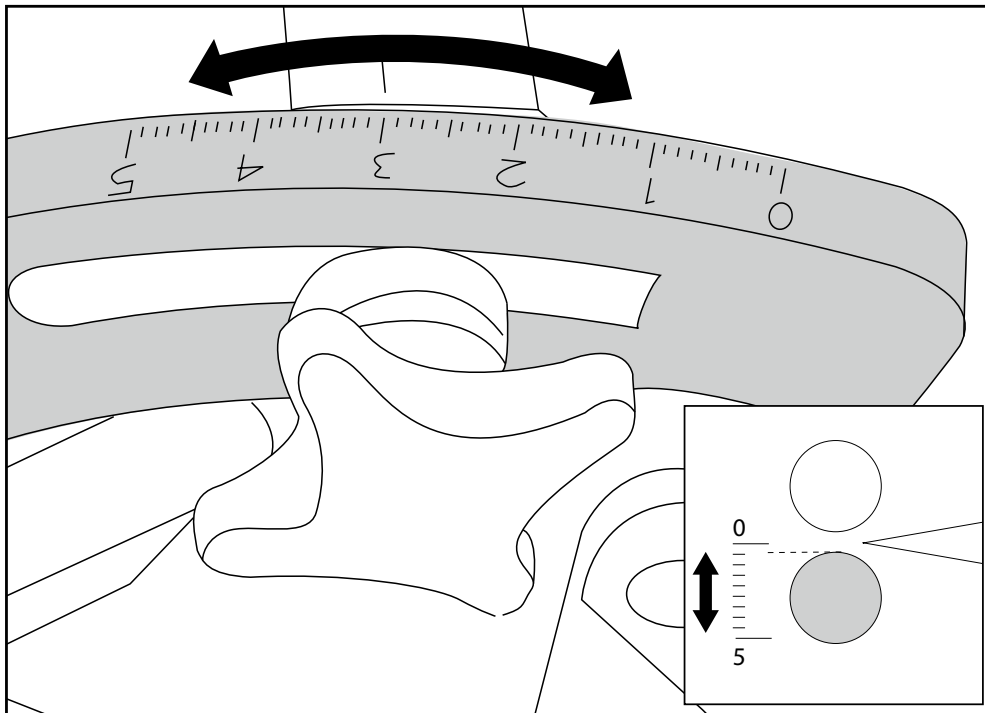
D1



Release side guide and move to set to desired splitting depth. Setting is performed in steps of 5 mm. Lock guide.

Separating for Finger over Finger Joints

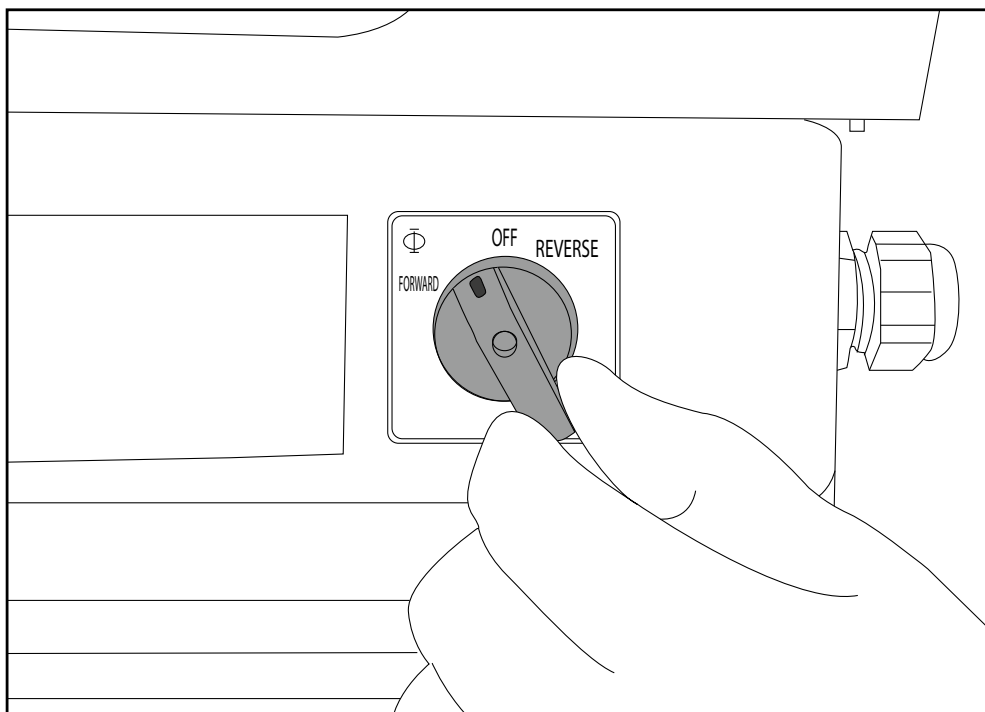
D2



Set the belt thickness point of separation using the adjuster handle to position the lower traction roller.

NOTE: Scale is for reference only and not a linear dimension.

D3

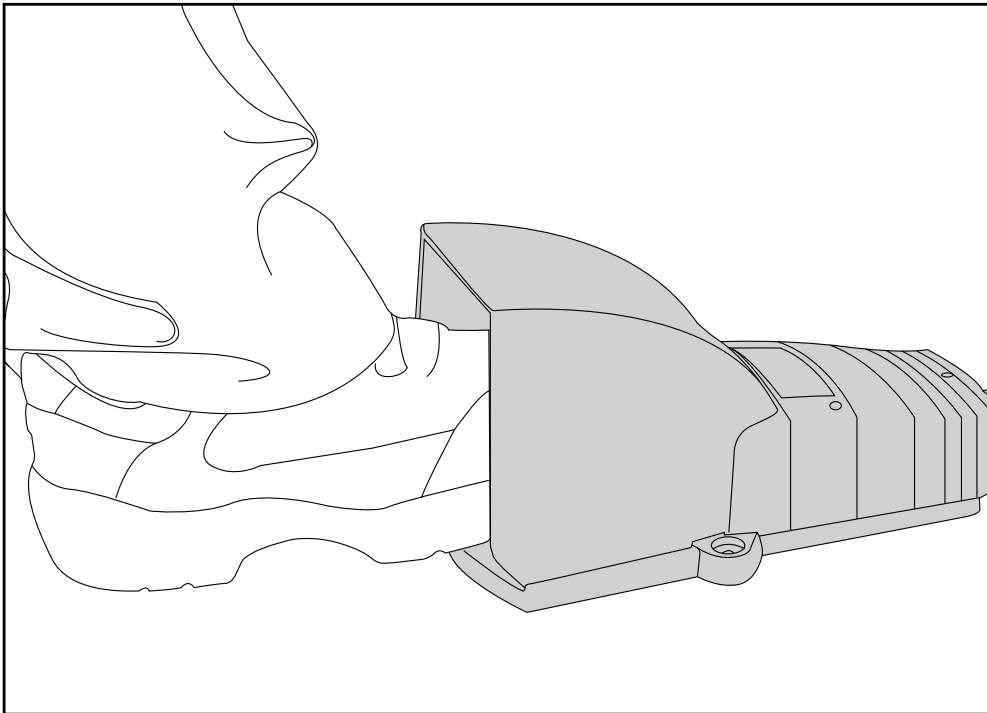


Set switch to forward.

CAUTION: When engaging in “REVERSE”, traction rollers are immediately powered.

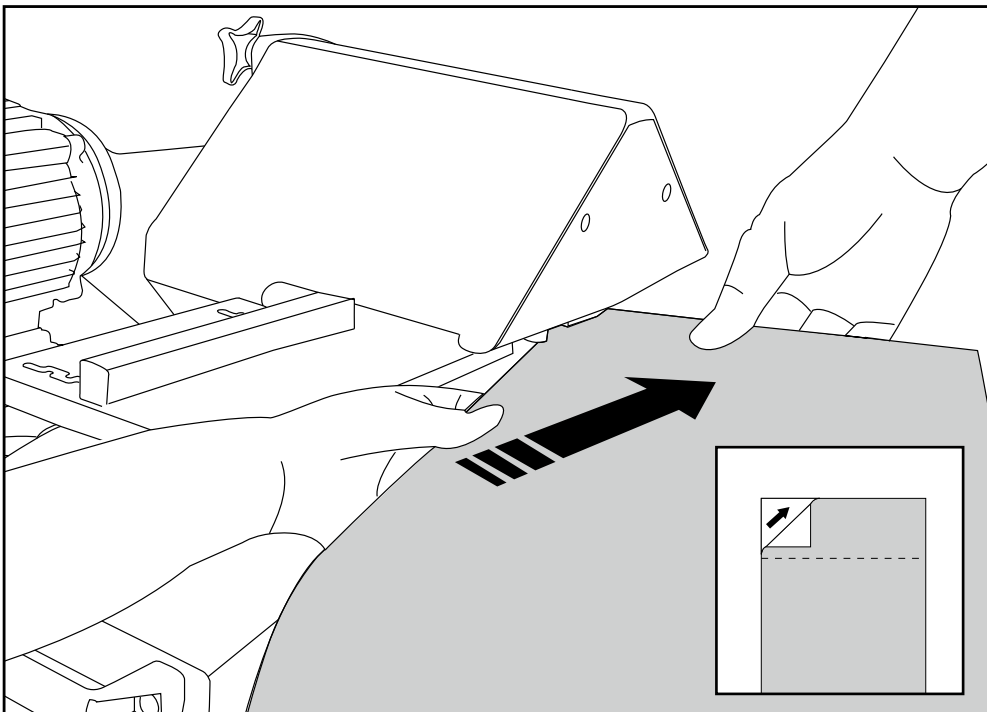
Separating for Finger over Finger Joints

D4



Operate traction rolls in the forward direction by pressing footpedal.

D5

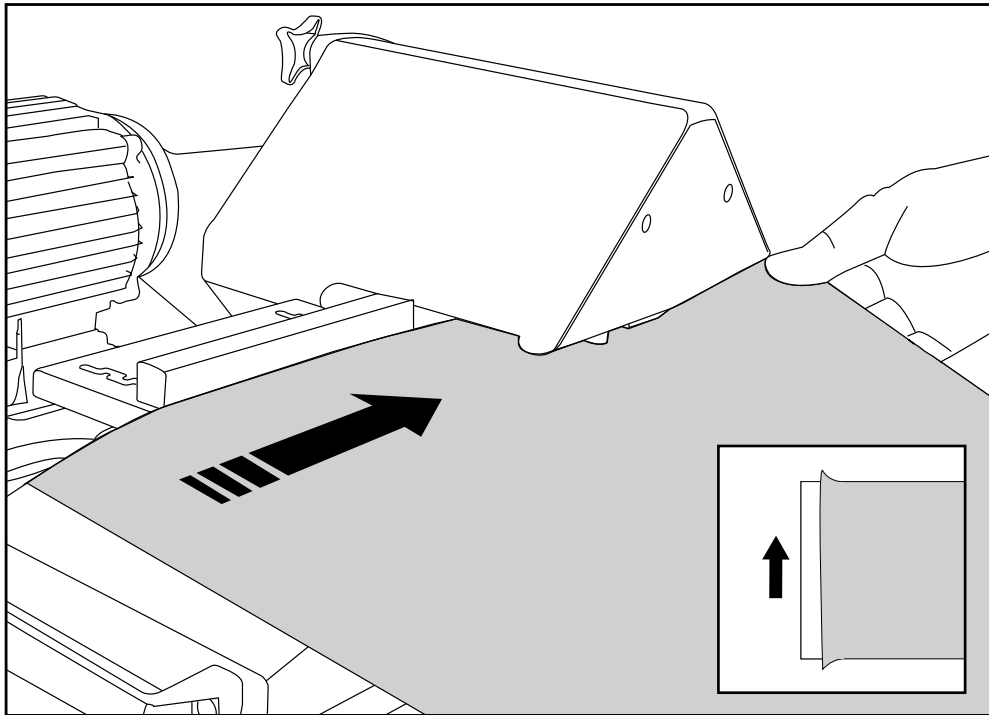


Use sample piece to verify the thick point of separation, adjusting position (D2) as needed. When required, separate trailing corner (as illustrated) to prepare sample for full width ply separation.

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Separating for Finger over Finger Joints

D6



Feed belt material through machine.

TIP! make your own logbook of belting material and settings for future reference. Set operating switch to off when separation is complete.

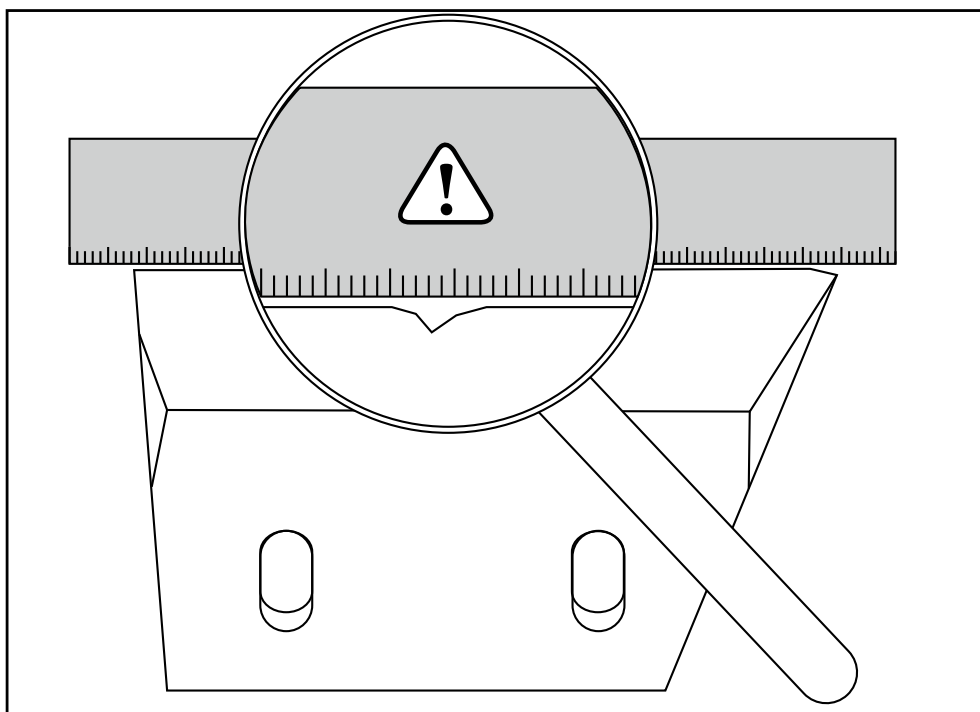
Maintenance Ply Separation Blade Replacement



Prior to the replacement ensure:

- DISCONNECT THE POWER CABLE FROM THE POWER SUPPLY
- Acquire official Flexco replacement set PLY BL Blade & Jig (item code 08014).
- When replacing Ply Separation Blade always wear cut-proof safety gloves and safety glasses as mentioned in chapter General Safety Rules.

E1

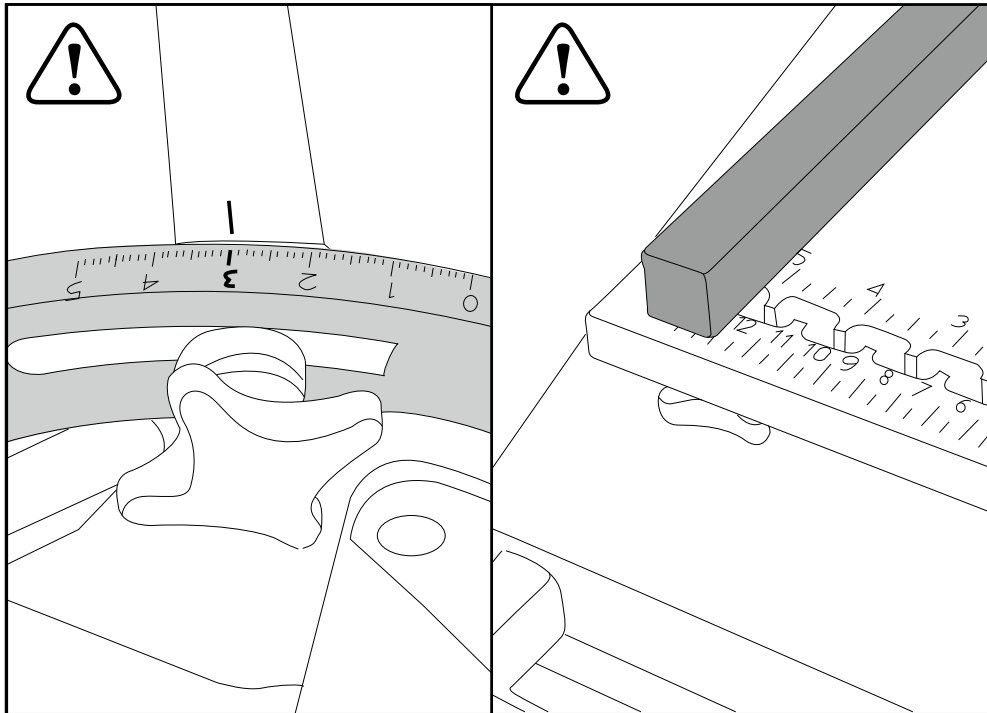


Before replacing Ply Separation Blade, check for burs, straightness and flatness. **WARNING: DO NOT TOUCH EDGE OF BLADE**

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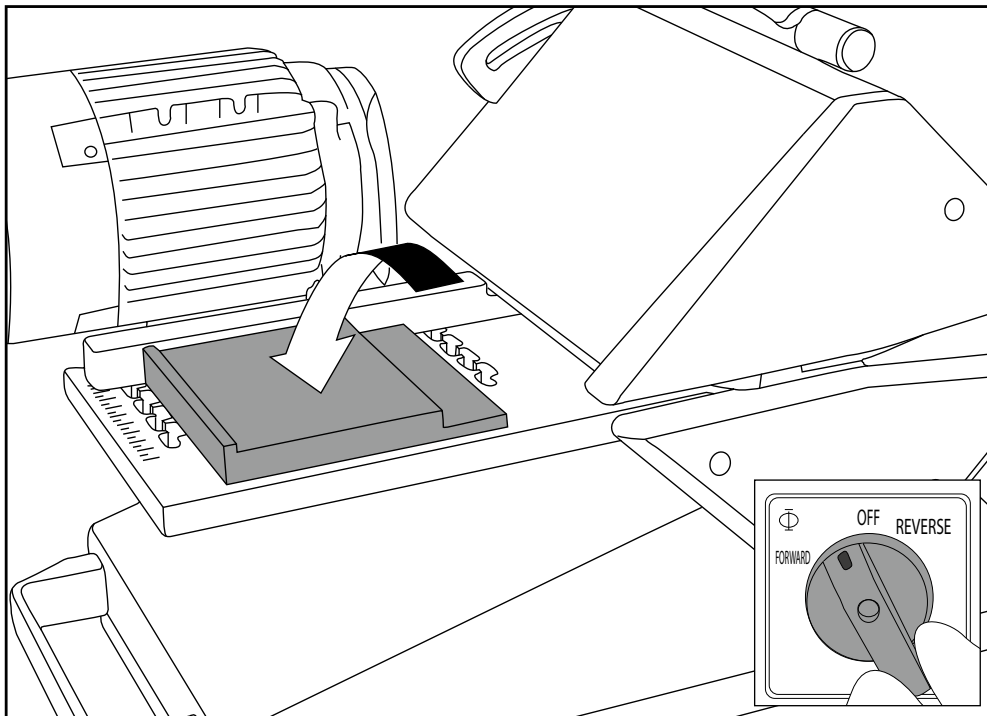
Maintenance Ply Separation Blade Replacement

E2



Put handle in position 3 and guide at 125 mm.

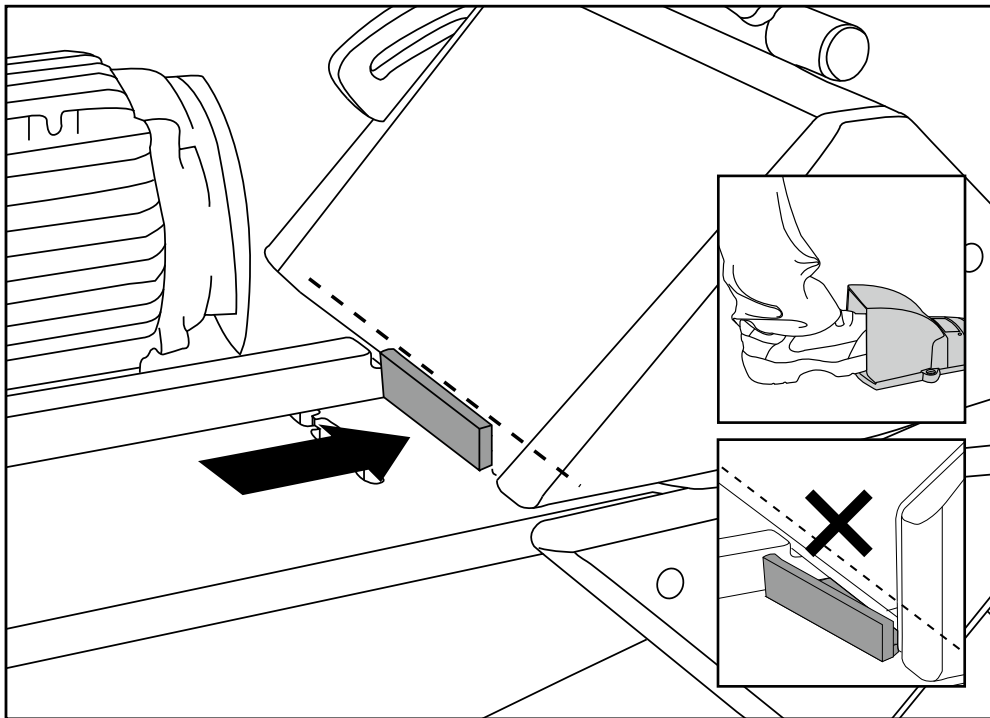
E3



Put calibration jig on feed table with thin edge toward rollers and turn switch to **FORWARD**.

Maintenance Ply Separation Blade Replacement

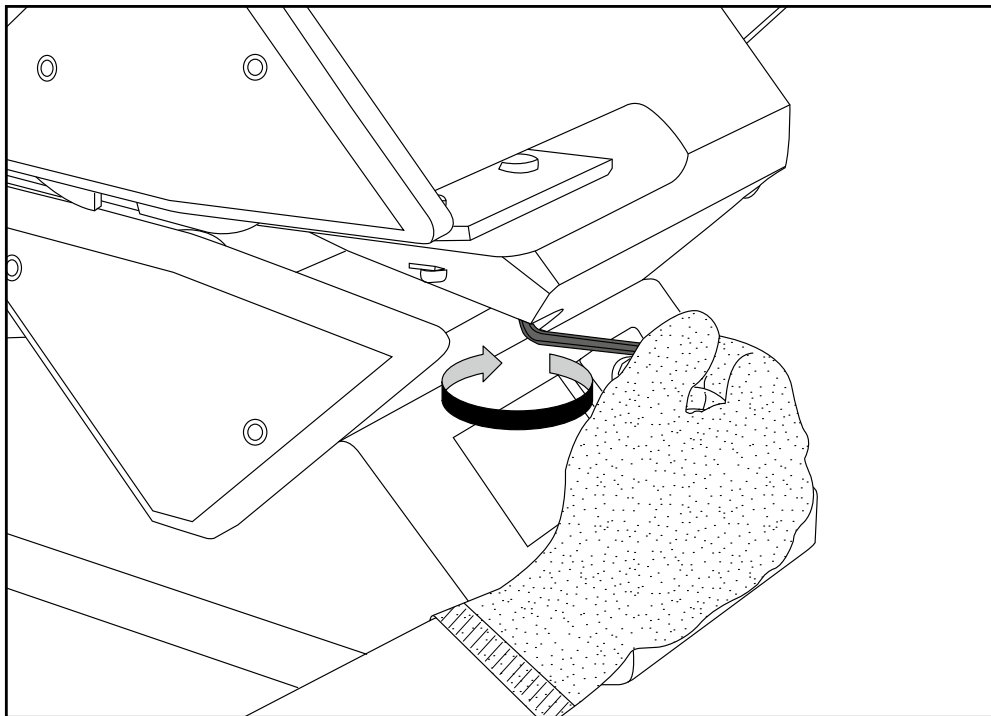
E4



Push block into machine and simultaneously turn on machine with foot pedal.
When jig stops, stop machine.

NOTE: calibration jig must be parallel to frame!

E5



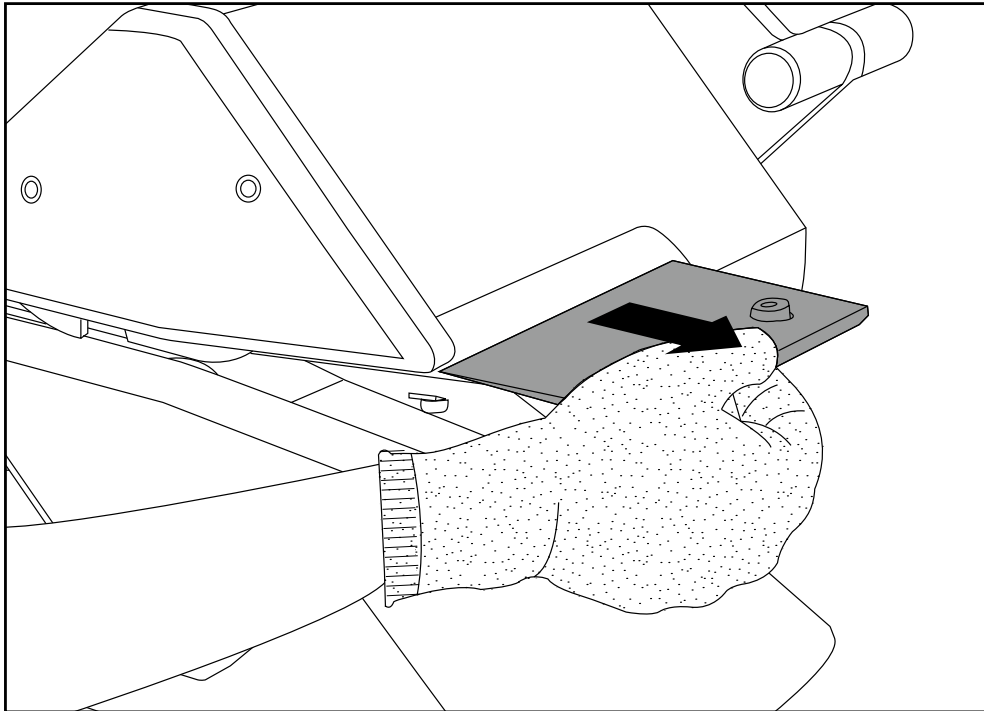
Release blade by unscrewing two bolts at bottom of blade with an allen key.
Carefully remove blade nuts.

DISCONNECT POWER CABLE FROM ELECTRICAL POWER SOURCE.

FLEXCO

Maintenance Ply Separation Blade Replacement

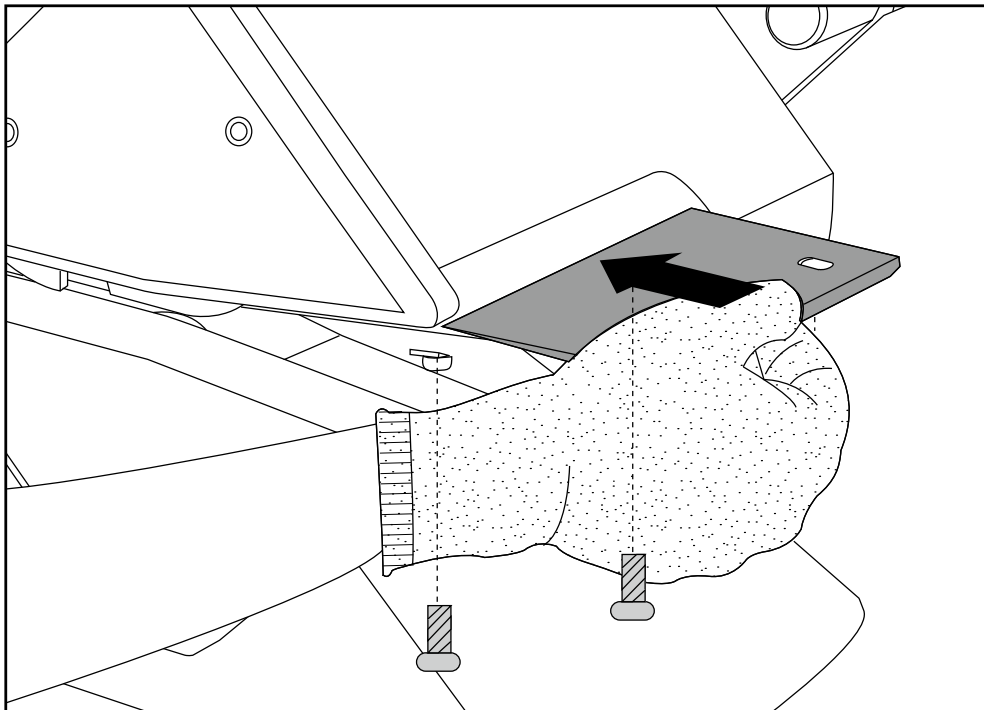
E6



Remove blade carefully.

WARNING: DO NOT TOUCH EDGE OF BLADE

E7

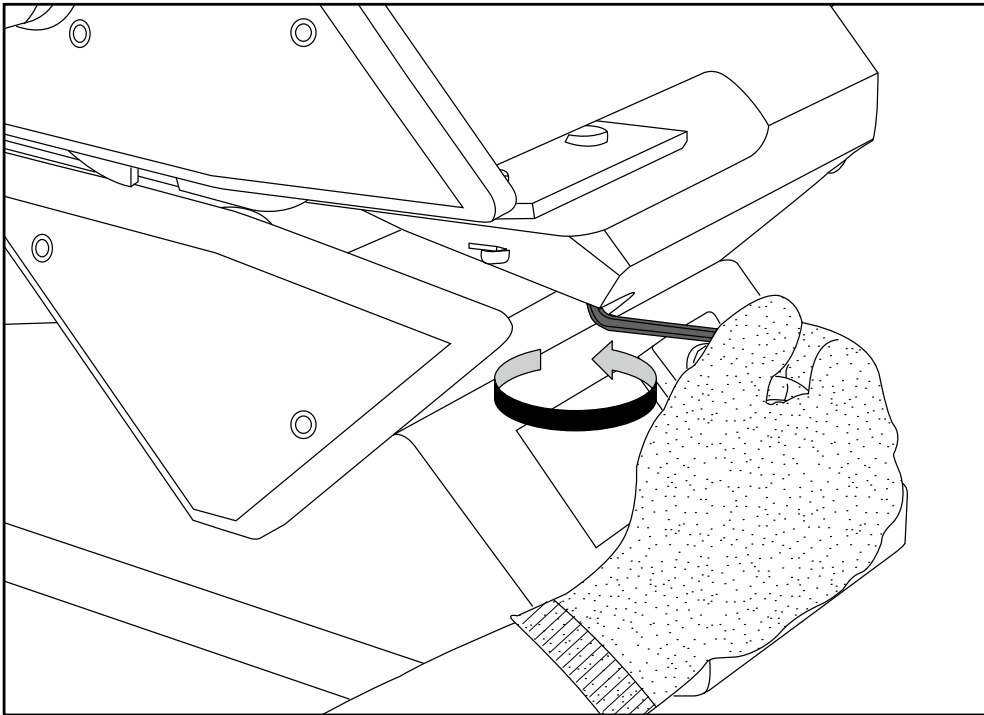


Install new Ply Separation Blade with bevel side down. Mount bolts and blade nuts.

WARNING: DO NOT TOUCH EDGE OF BLADE

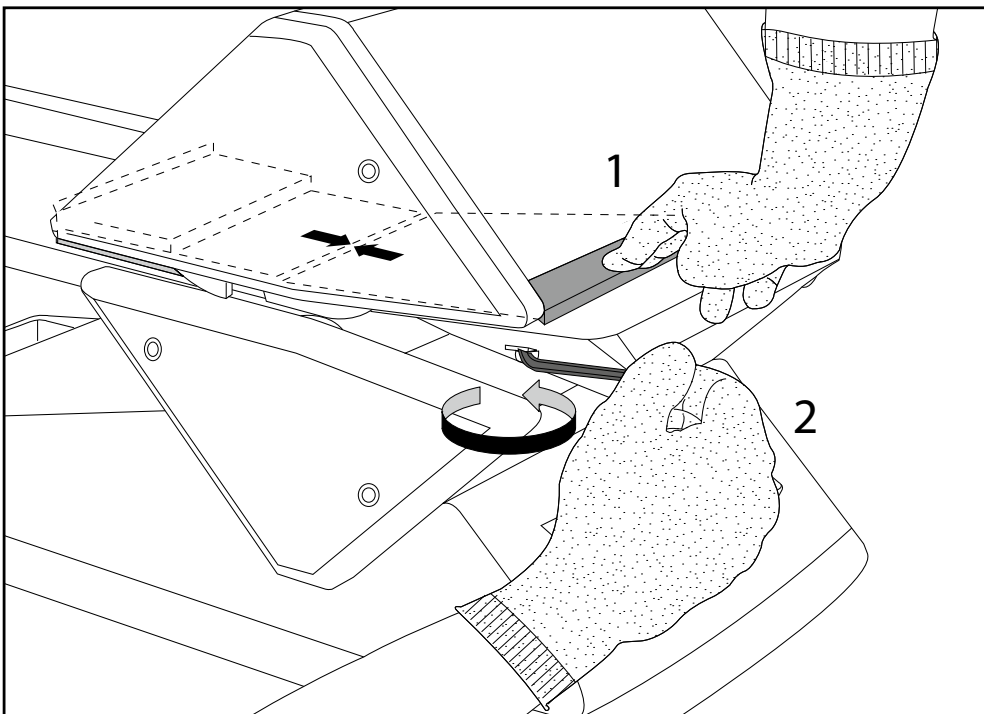
Maintenance Ply Separation Blade Replacement

E8



Tighten bolts sufficiently to allow blade to slide but not lift.

E9

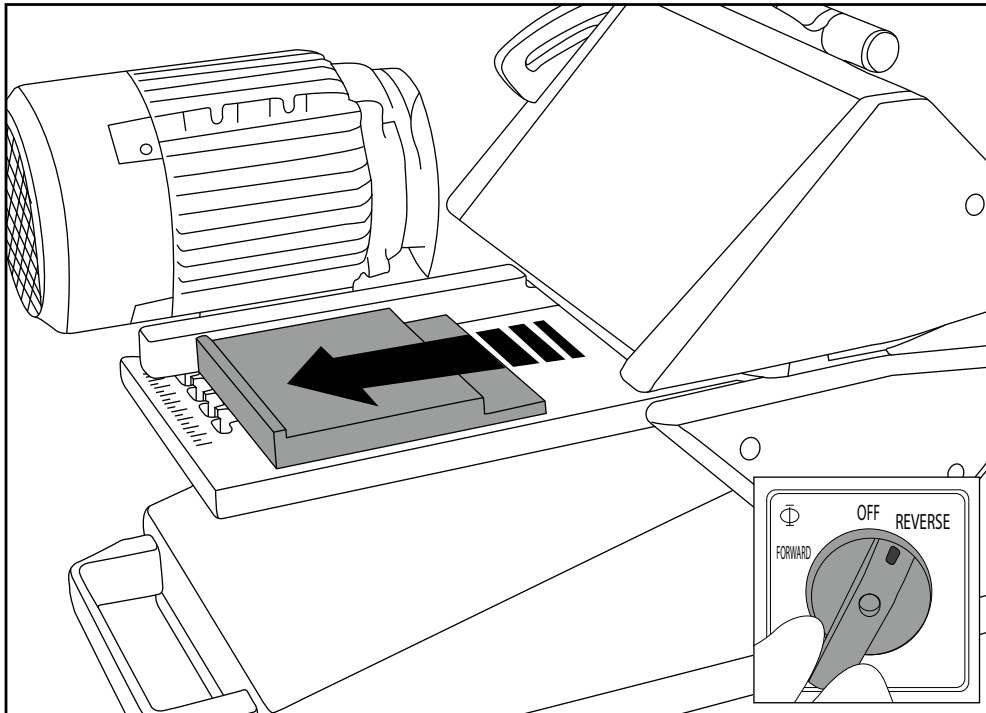


1. Push Ply Separation Blade by hand so it presses against calibration block.
2. Tighten bolts firmly.

FLEXCO

Maintenance Ply Separation Blade Replacement

E10



Reconnect power cable to electrical power supply. Rotate switch to **REVERSE** to release calibration block from machine.

Adjustment of clearance between rollers and blade

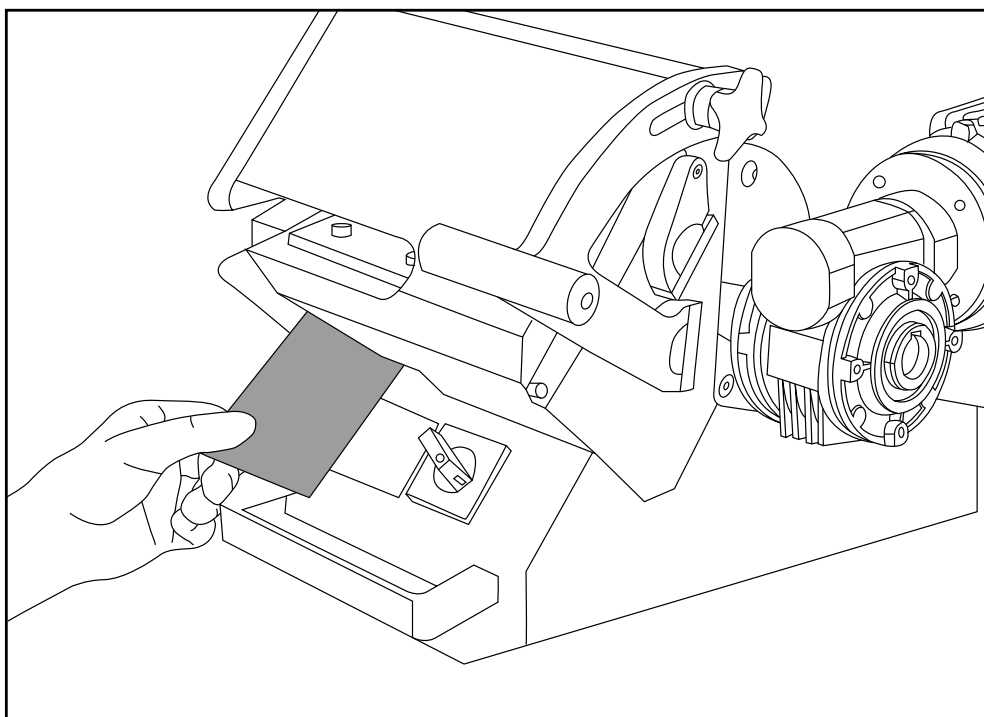


DISCONNECT THE POWER CABLE FROM THE POWER SUPPLY

After replacing the Ply Separation Blade, it may be necessary to adjust the traction rolls.

The recommended traction roller clearance is 0.2mm (0.008”).

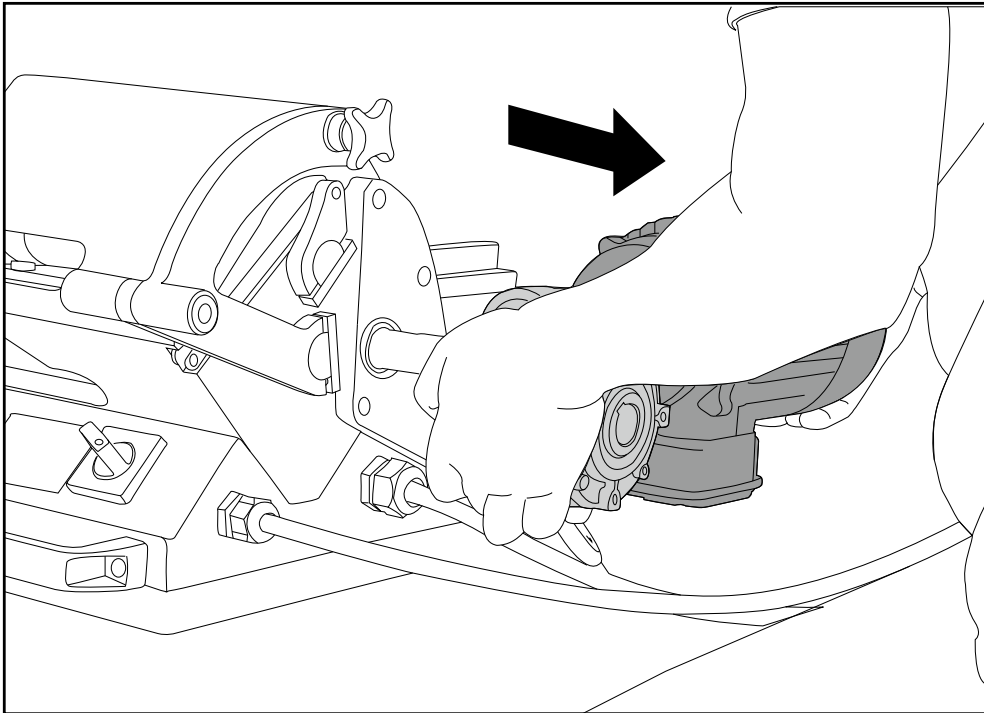
F1



To evaluate clearance, begin by positioning the adjustment handle to 0. Insert the white clearance shim between the ply separation blade and the traction rolls. The shim should move freely. The black clearance shim should not fit between the ply separation blade and the traction rolls.

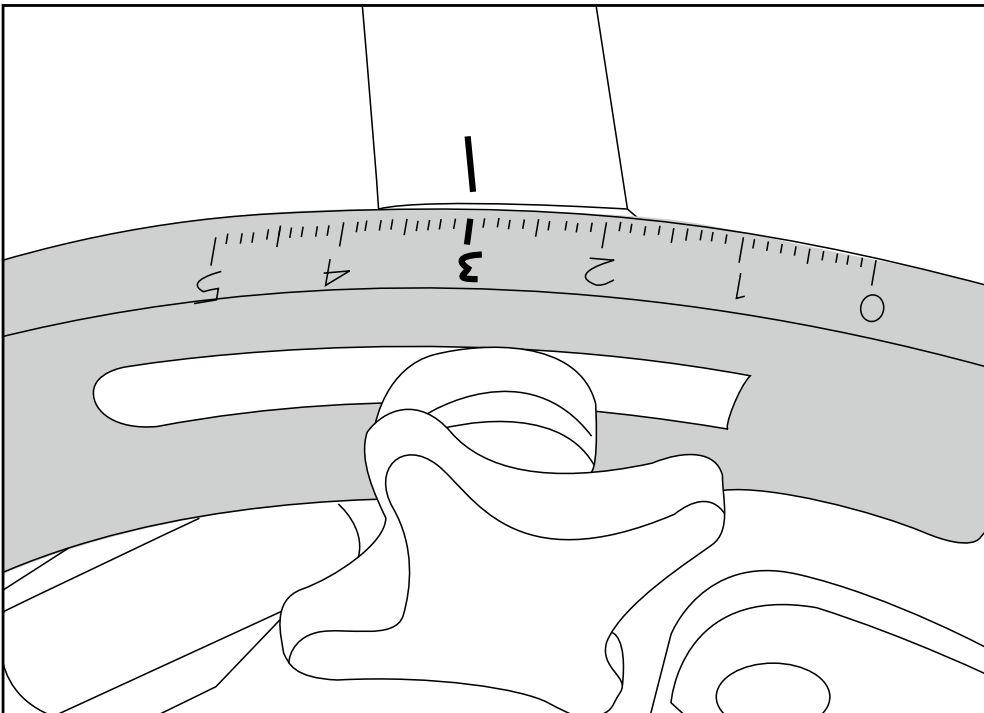
FLEXCO

F2



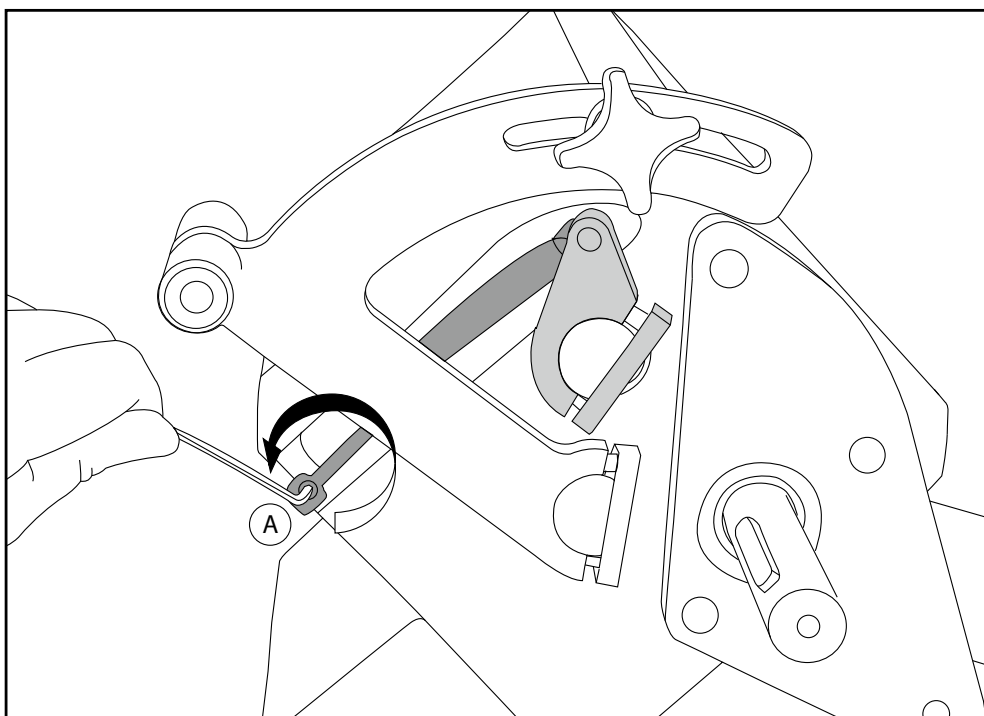
If adjustment is needed, unscrew electric motor to gain sufficient access for adjustment of traction rolls.

F3



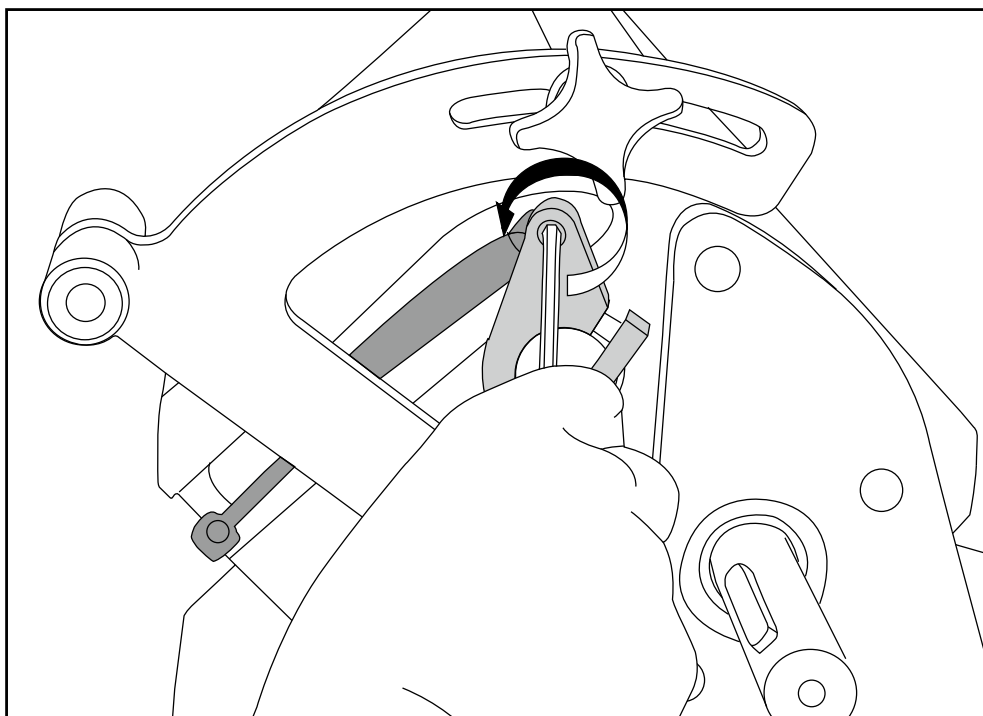
Put handle in position 3.

F4



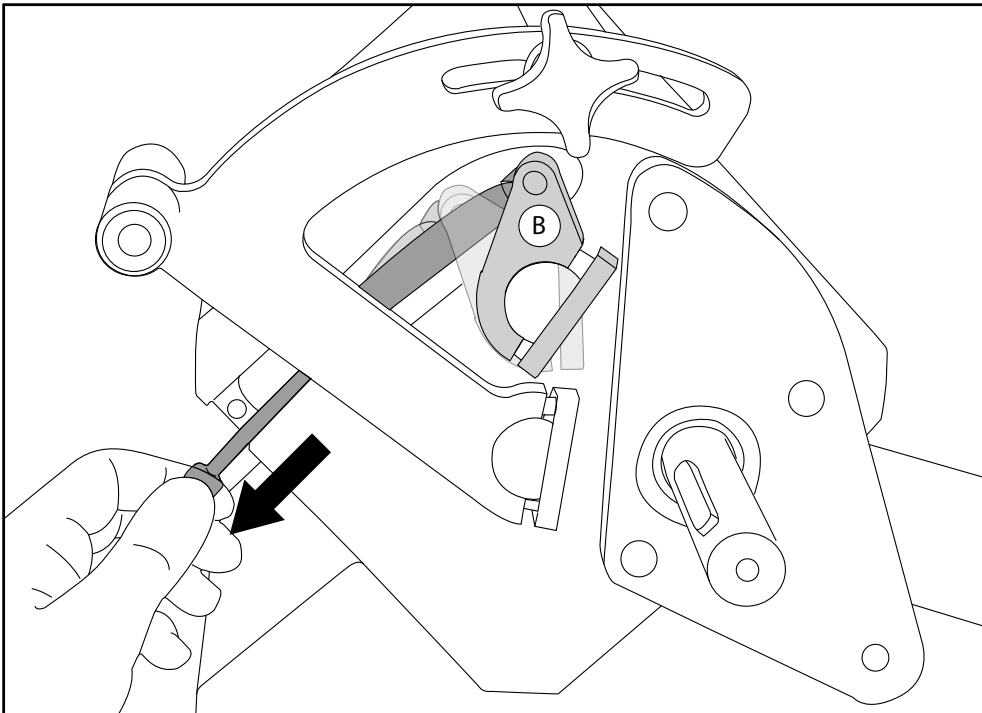
Unscrew (A) and take out fitting bolt of the air spring.

F5



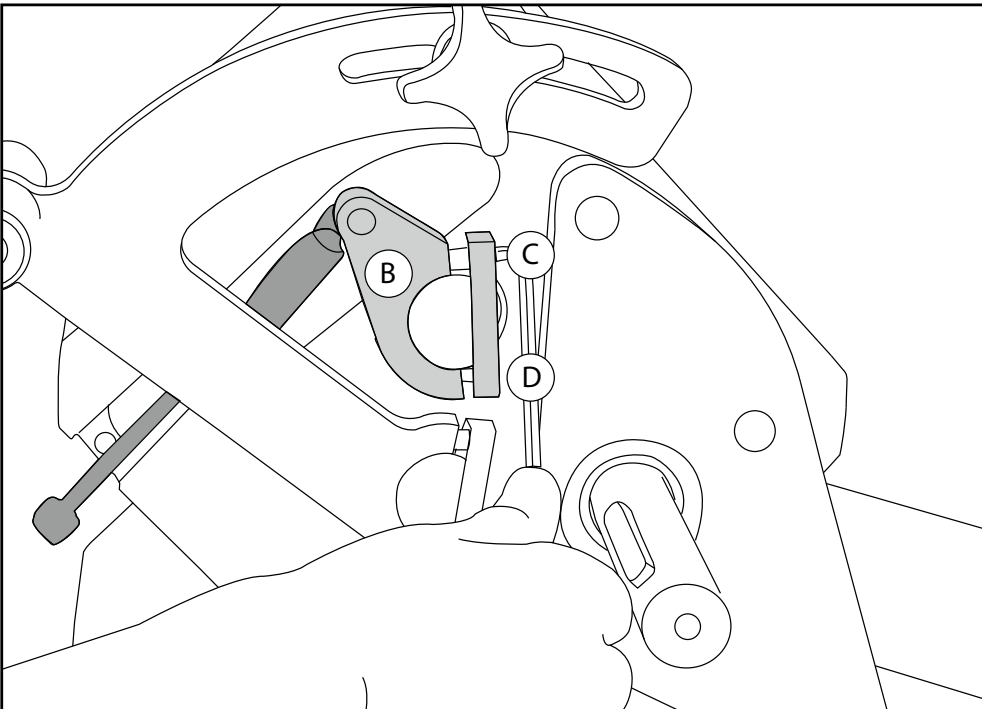
Loosen fixation screw of air spring.

F6



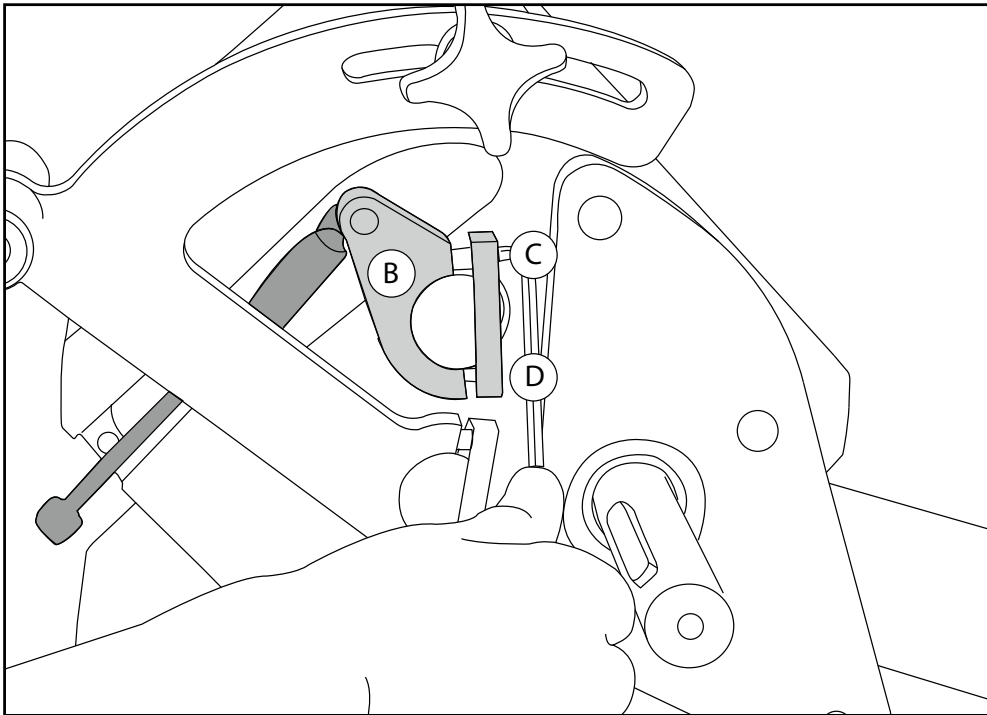
Pull air spring down slightly to rotate the black arm (B).

F7



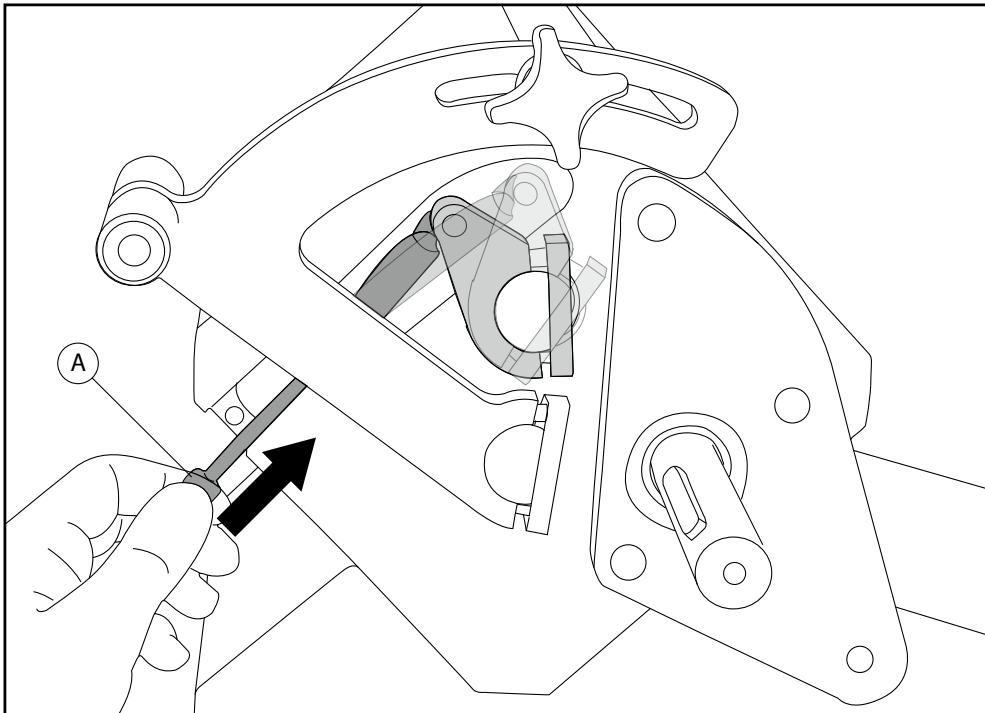
For increasing the clearance: Loosen the screw (D) a small amount and tighten screw (C). This rotates the shaft counterclockwise, related to lever (B). A short 5 mm Hex wrench is required to reach the screws.

F8



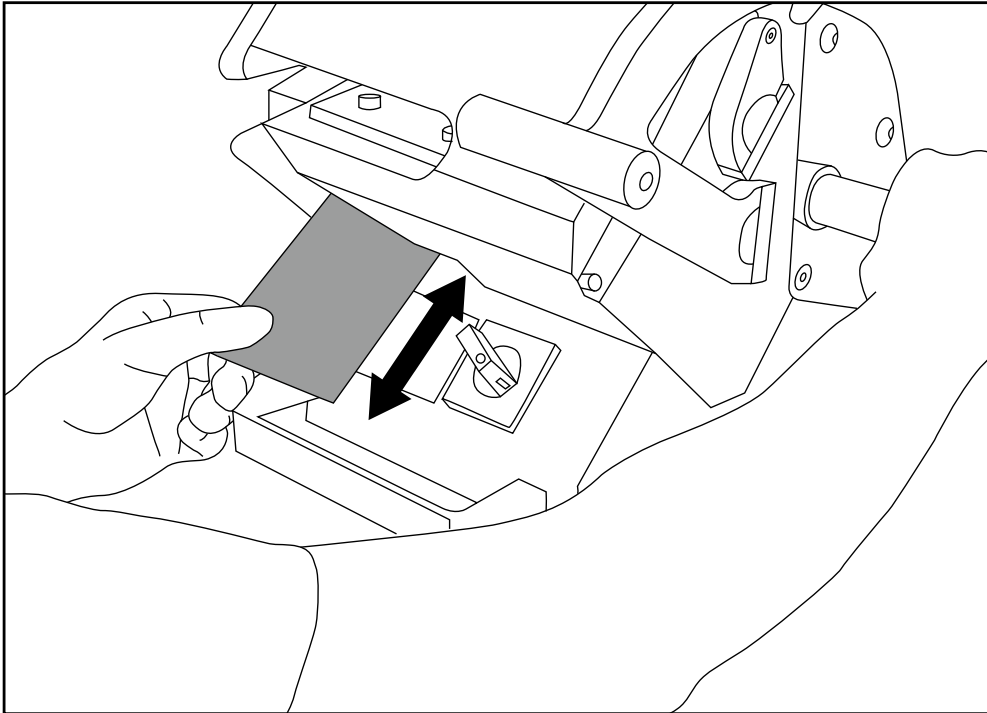
For decreasing the clearance: Loosen screw (C) a small amount and tighten screw (D). This rotates the shaft clockwise, relative to lever (B).

F9



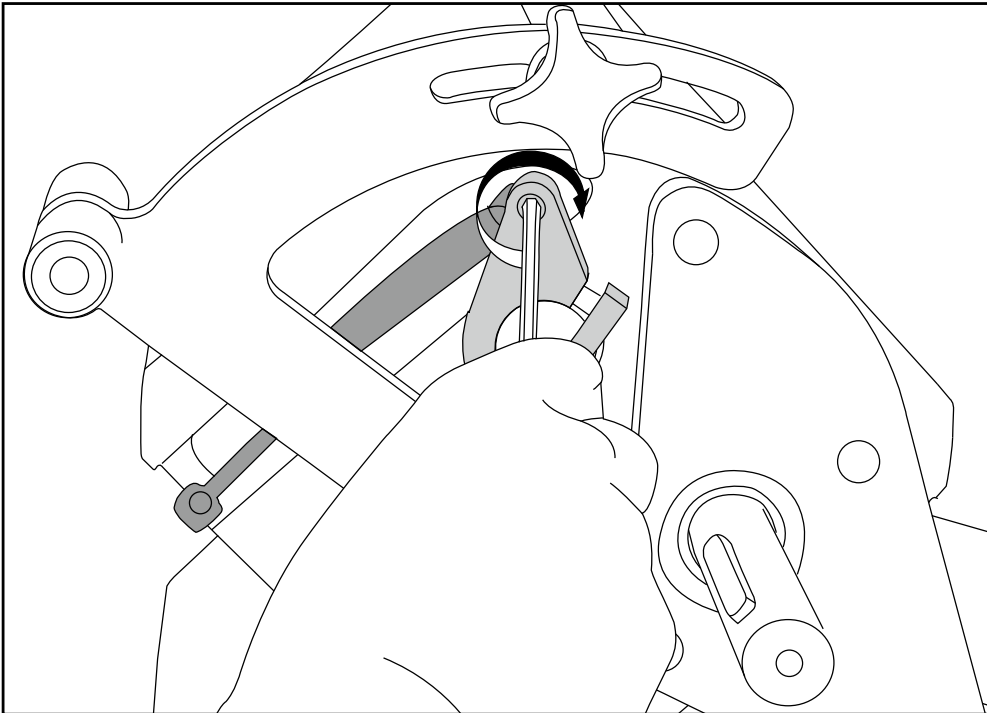
Put air spring in its original position and reinstall bolt (A). See item F3.

F10



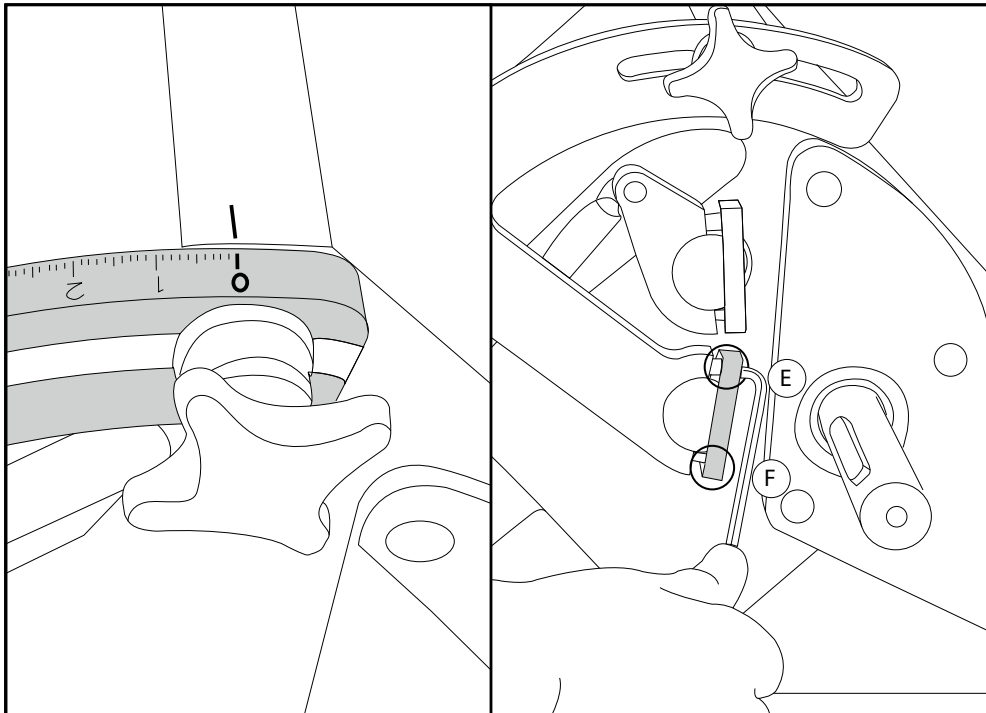
Check for the clearance between the top roller and the blade by inserting the clearance shims. There should be no/little pressure on the white shim, but the black shim should not pass through.

F11



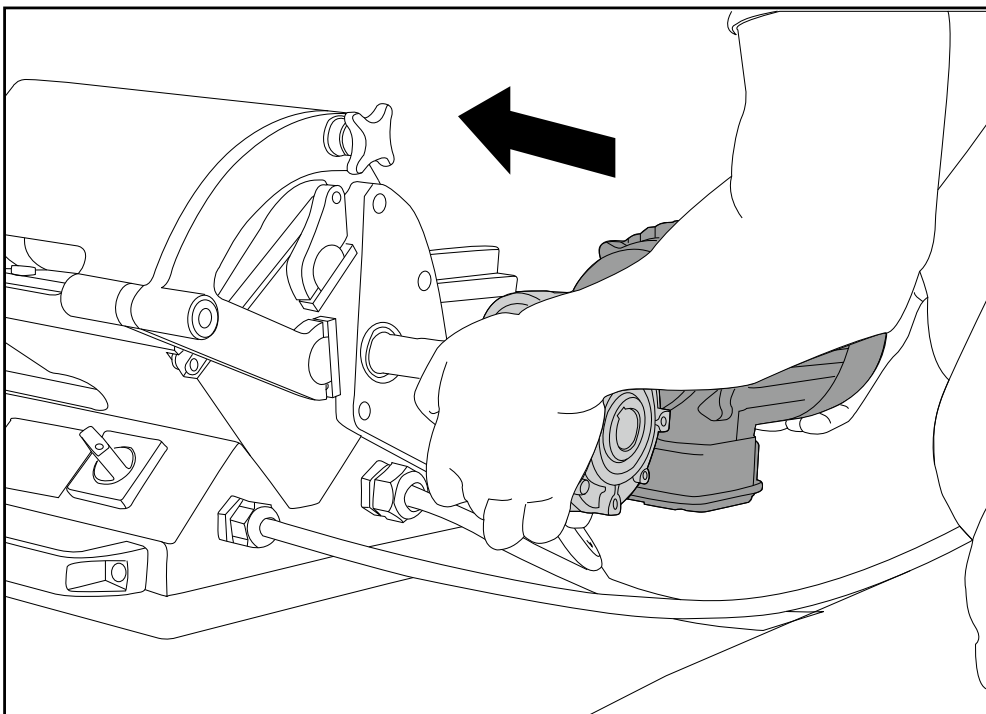
Lock the air spring.

F12



Repeat operation for bottom roll with screws (E) and (F) but move handle to position 0. Use clearance shims to achieve a clearance of 0.2 mm (0.008").

F13



Reinstall motor after adjustments are complete.

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