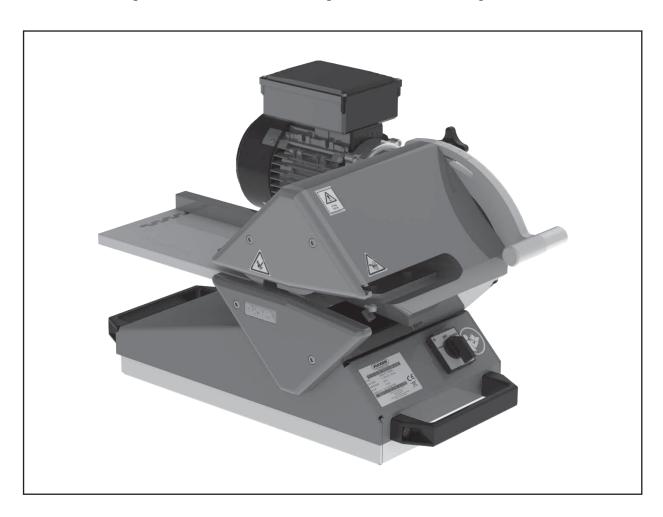


# Novitool® Ply 130™ Separator Ply Blade Safety and Operation Manual

Separate between the plies of a conveyor belt.





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.

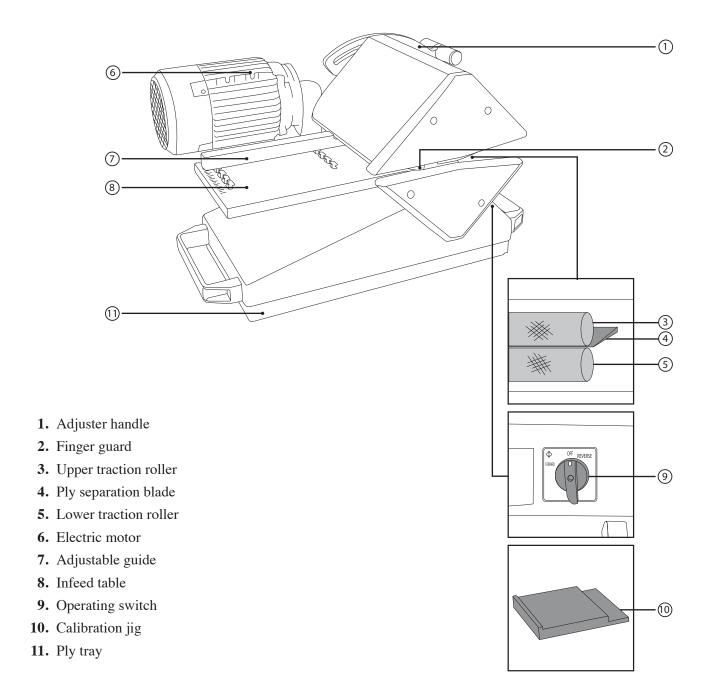


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**Disclaimer** The Ply 130<sup>™</sup> ply separator has been tested successfully with different belt types. However this is no guarantee for good results. Fabricating belts does require the operator to master skills and have a certain level of craftsmanship. 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™





## **Description**

The Ply 130™ is used to separate between the plies of a thermoplastic conveyor belt, PVC or polyurethane. This splitting 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 130 mm (5") in one pass.

### **Tool Specifications**

Ply 130™ Tool Specifications				
Specifications	Minimum	Maximum		
Splitting Depth	40 mm (1.5")	5.1" (130 mm)		
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	10 mm (.4")		
Tool dimensions	560 x 480 x 360 mm (22" x 19" x 14")			
Tool weight	57 kgs (125 lbs)			

The robust construction of the Ply 130™ allows for precise separating of thermoplastic belts – both thin and thick between plies as little as 0.35 mm (0.014") can be separated. Foil/film may be created dependent upon belting and top cover thickness.

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

Ply 130™	Ordering Information		
Item Code	Ordering Number	Mark	Plug
Ply 130™			
08800	PLY130-230V+N1PH50HZ-SCHUKO	C€	•••
08801	PLY130-400V+NV3PH50HZ-IEC60309	C€	
08802	PLY130-115V1PH60HZ-NEMA-5-15	cETL	w I
08803	PLY130-230V1PH60HZ-NEMA-L6-20	cETL	
08804	PLY130-230V1PH60HZ-NEMA-L6-30	cETL	
08805	PLY130-230V1PH60HZ-NEMA-L6-15	cETL	(3)
08806	PLY130-230V1PH60HZ-NEMA-6-15	cETL	0.5
08807	PLY130-230V1PH60HZ-NEMA-6-20	cETL	(i-)
08808	PLY130-230V1PH60HZ-NEMA-6-30	cETL	0.8
08809	PLY130-230V3PH60HZ-NEMA-L15-20	cETL	
08810	PLY130-230V3PH60HZ-NEMA-L15-30	cETL	
08811	PLY130-460V3PH60HZ-NEMA-L16-20	cETL	(1)
08812	PLY130-460V3PH60HZ-NEMA-L16-30	cETL	(1)
08832	PLY130-230V1PH50HZ-IEC60309-16	CE	<b>(</b>
08833	PLY130-230V1PH50HZ+N-BS1363-13	CE	
08834	PLY130-230V3PH60HZ-NEMA-18-20		(I,I)
Cart			
08100	PLY130-CART		N/A
Replaceme	nt Blades		
08014	PLY-BL-BLADE-&-JIG-KIT		N/A
08490	PLY130-BLADE		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

#### **ACAUTION**

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

#### **ADANGER**

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.

#### ACAUTION

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

#### **AWARNING**

Never leave tool until it comes to a complete stop.

#### AWARNING

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. The machine is provided with an electrical plug to ensure connection to the proper supply power.

#### AWARNING

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

#### **AWARNING**

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.



#### **ADANGER**

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.

#### **AWARNING**

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

#### AWARNING

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.

Disconnect machine from supply circuit before servicing. Ensure all protective ground connections are in place after service. Replace fuses only with those of the same current rating, interrupt rating, voltage rating and construction.

#### 3. PERSONAL SAFETY

#### **AWARNING**

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.

#### AWARNING

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.

#### AWARNING

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.

#### AWARNING

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

#### **ACAUTION**

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

#### **AWARNING**

Never alter or remove safety devices.

#### **AWARNING**

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

#### **AWARNING**

Engage caster locks on cart when not transporting

#### **AWARNING**

Machine is heavy. Use lifting aids.

# 4 TOOL USE AND CARE AWARNING

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

#### **ACAUTION**

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

#### AWARNING

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.

#### AWARNING

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.

#### **AWARNING**

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

#### **ACAUTION**

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.

#### **ACAUTION**

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.

#### **AWARNING**

Stow foot switch when not in use.

#### **AWARNING**

Disconnect and stow cables before moving.

#### **5. SERVICE AND MAINTENANCE**

#### **AWARNING**

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

#### AWARNING

Disconnect electrical plug from the power supply before opening/servicing the machine.

#### **ACAUTION**

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.

#### **ADANGER**

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.

#### **ACAUTION**

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 throughly.

#### **AWARNING**

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, disconnect from power supply and arrange for repairs.

#### **ACAUTION**

Maintain tools with care. Keep blades sharp and clean. Properly serviced tools and knifes with sharp edges are less likely to bind or create debris and are easier to control.

#### **6. PLY CUTTER SAFETY**

#### **AWARNING**

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

#### **AWARNING**

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



#### AWARNING

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.

#### **ACAUTION**

Do not use dull or damaged blades/ knives.

# 7. PLY CART SAFETY AWARNING

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.

#### 8. REPLACING THE BLADE

#### **AWARNING**

Disconnect power.

#### **ACAUTION**

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

#### AWARNING

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

#### **AWARNING**

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

#### **AWARNING**

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

#### **AWARNING**

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

#### AWARNING

Stow spare blades safely.

# A

## **Ply 130™ Maintenance – Blade Replacement**

#### Prior to blade replacement ensure:

- The power cable is disconnected from the power supply.
- The replacement Flexco blade, calibration jig and clearance shims are readily available.
- The operator is wearing cut-proof safety gloves and safety glasses.

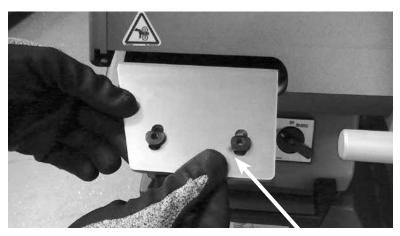


Release blade by unscrewing two bolts at bottom of blade with a 5 mm hex key.









Remove blade carefully. Remove blade nuts and set aside for future use. Retain brass spacers should they release with the bolts.

**Warning:** Do not touch blade edge.







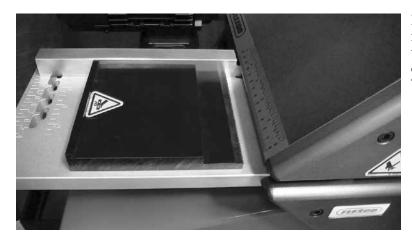
Lock adjusting handle in position 4.0 to 4.5.





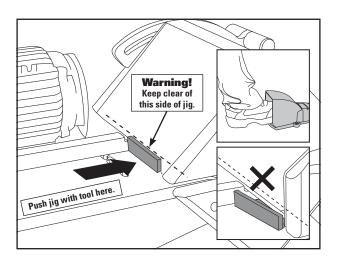
Lock adjusting guide to 120 mm.





Place calibration jig on feed table with thin edge toward rollers. Plug in power connection. Turn switch to 'FORWARD'.





With moderate force, push calibration jig into Ply 130 using a block of wood or tool simultaneously turning on Ply with foot switch. When lip of jig is tight up against the Ply frame, release the foot switch and toggle operating switch to "OFF". Disconnect power.

**Note:** Calibration jig must be parallel to frame.



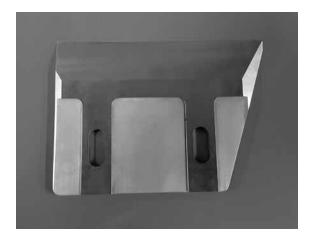
**Caution:** Note pinch point as jig enters the ply separator frame.







Install new ply separation blade with bevel side down. **Warning:** Do not touch blade edge.

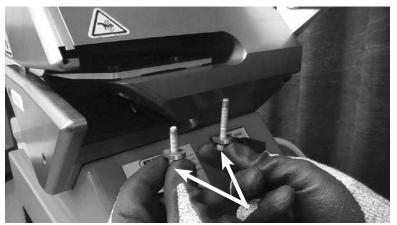






Insert nuts so that bevels are facing toward traction rollers.

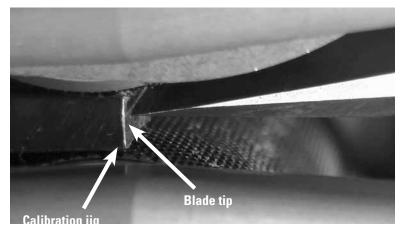




Ensure brass spacers are present either in the Ply frame or on bolt. Finger tighten bolts only so that the blade can still shift (long bolt in rear and short bolt in front).

**Note:** Bolts don't extend above the top of the nut once installed.





Apply pressure to the back side of blade so that the blade tip squarely rests against the calibration jig.





Tighten bolts firmly while keeping pressure of blade against the jig.





Reconnect power cable to electrical power supply. Rotate switch to 'REVERSE' to release calibration jig from between traction rollers.





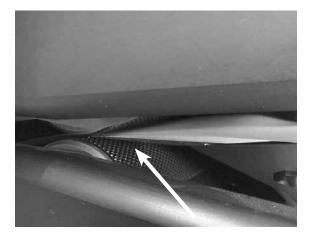
# Ply 130™ Maintenance — Measure and Adjust Blade/Roller Clearance As Necessary

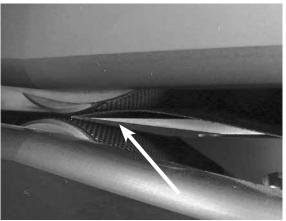
#### Verify Blade/Roller Clearance:

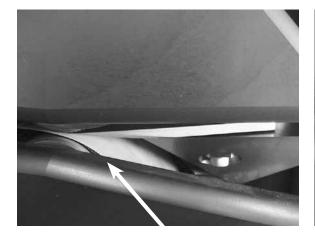
- Disconnect power cable from the power supply.
- After replacing the ply separation blade, it may be necessary to adjust traction roller height.

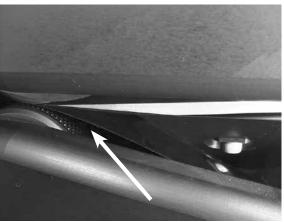


To evaluate clearance between the upper traction roller and top of blade, begin by positioning the adjustment handle to 0. Insert the white thickness clearance shim between the ply separation blade and the top traction roller. The shim should move freely with little resistance. The black clearance thickness shim should not fit between the ply separation blade and the top traction roller. Repeat the same process to evaluate clearance between bottom of blade to lower traction roller.







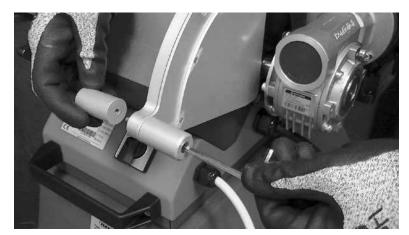






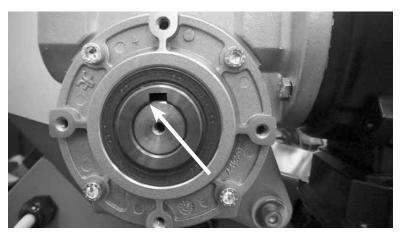
If adjustment is needed, unscrew clamp nut on adjustment guard plate.





Using a 5 mm hex key, remove the handle.





For easier removal of motor ensure keyway is positioned at top of drive shaft.







Remove the electric motor to gain sufficient access for adjustment of traction rollers by first removing the torque arm bolt using a 6 mm hex wrench.





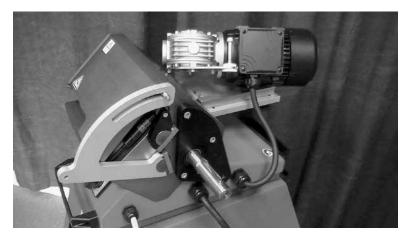
After removal of torque arm bolt set spacer aside.





Slide motor off shaft.





Carefully rest motor on infeed tray.

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**Caution:** Do not allow motor to slide off of tray surface.

#### Adjustments to Increase or Decrease the Distance Between the Upper Roller and Blade





For upper roller adjustment loosen and remove gas spring fixation screw.

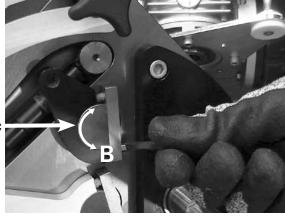


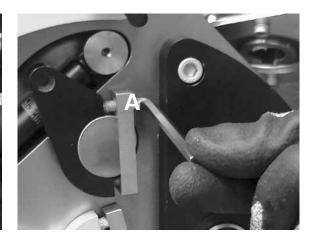
#### Ply 130™ Maintenance – Measure and Adjust Blade/Roller Clearance As Necessary

The purpose of the adjustment is to turn the eccentric shaft. It is important to turn, for both A and B, a recommended one quarter turn or less prior to rechecking with shims.



For increasing the clearance between the top roller and blade: using a 5 mm hex key to engage screws, loosen screw B counterclockwise one quarter turn and tighten screw A clockwise one quarter turn or until moderately tight.

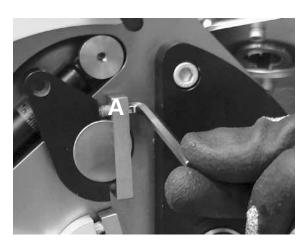


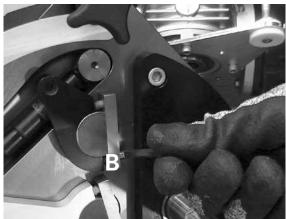


Eccentric Shaft



To decrease the clearance between the top roller and blade: loosen screw A counterclockwise one quarter of a turn and tighten screw B clockwise one quarter turn or until moderately tight.









Reinstall gas spring screw.



Check for clearance between the top traction roller and blade by inserting the clearance shims. There should be little resistance as the operator slides the white shim between the top traction roller and blade and the black shim should not pass through between the top traction roller and the blade. Repeat steps B9-B13 as necessary.

#### Adjustments to Increase or Decrease the Distance Between the Lower Roller and Blade





Position and lock adjusting handle so that adjusting screws are accessible.

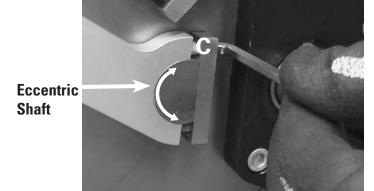


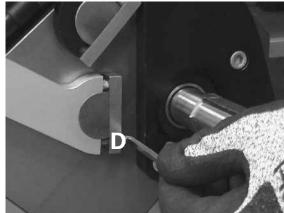
#### Ply 130™ Maintenance – Measure and Adjust Blade/Roller Clearance As Necessary

The purpose of the adjustment is to turn the eccentric shaft. It is important to turn, for both A and B, a recommended one quarter turn or less prior to rechecking with shims.



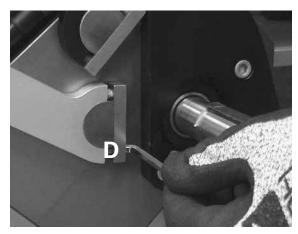
For increasing the clearance between the blade and the lower traction roller: using a 5 mm hex key to engage screws, loosen screw C counterclockwise one quarter turn and tighten screw D clockwise one quarter turn or until moderately tight.

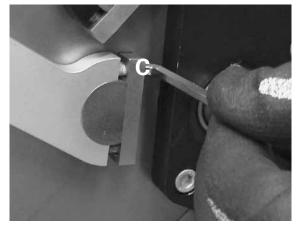




B16

To decrease the clearance between the blade and the lower traction roller: loosen screw D counter-clockwise one quarter of a turn and tighten screw C clockwise one quarter turn or until moderately tight.

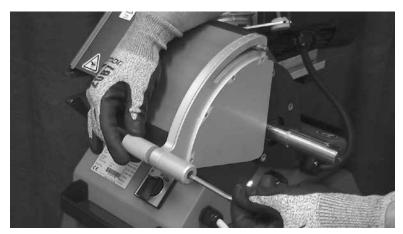






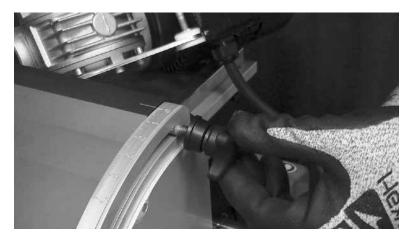
Lock the adjusting handle back to 0. Check for clearance between the blade and lower traction roller by inserting the clearance shims. There should be little resistance as the operator slides the white shim between the blade and the lower traction roller and the black shim should not pass through between the blade and the lower traction roller. Repeat steps B14-B17 as necessary.





Once adjustments have been made, reinstall the guard plate. Start by reinstalling the handle.





Then reinstall the clamp nut.





Reinstall motor. Align shaft key with key slot.







Reassemble the motor to the frame placing the spacer between the motor torque arm and ply base. Insert 8 mm hex bolt with washer and tighten.







**ote:** Ensure rubber grommet is in place rior to reassembly.

## **Parts Lists**

Ply 130 <sup>™</sup> Ordering Information				
Item Code	Ordering Number			
08014	PLY-BL-BLADE-&-JIG-KIT			
08490	PLY130-BLADE			
08823	FUSE-GLASS-1.6-AMP			
08824	FUSE-6.3-AMP			
08826	SELECTOR-SWITCH-CH10			
08831	PLY-F00T-SWITCH			
08846	FUSE-SIBA-189140-1.6-AMP			
08836	FUSE-1.0-AMP			
08837	FUSE-10-AMP			
08838	FUSE-15-AMP			
08839	TRANSFORMER-PLY130-115/230-24			
08840	TRANSFORMER-PLY130-230/460-24			
08841	REVERSE-CONTACTOR-KIT-1PH			

Ply 130 <sup>™</sup> Step Cutter Ordering Information				
Low Volume		High Volume		
Ordering Number	Item Code	Ordering Number	Item Code	
PLY130-STEPCUT-RETROFIT	08499	PLY130-SNGL-STEPCUT-BLADE-KIT	08778	
PLY130-STEPCUT	08501	PLY130-SNGL-STEPCUT-BLADE	08791	
Optional Items				
PLY130-STEPCUT-BLADES (5)	08497			
PLY130-STEPCUT-GUIDE-EXT	08498			
PLY130-STEPCUT-TWRENCH	08500			



# D

## **Technical Assistance**

Contact Flexco's Customer Service if technical assistance or repair is needed: www.flexco.com

