

# SNB J16 16" JOINTER



# MANUAL

## WARNING!

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This jointer is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a jointer, do not use until proper training and knowledge have been obtained.
5. Do not use this jointer for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this jointer. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this jointer, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead based paint.
  - Crystalline silica from bricks, cement and other masonry products.
  - Arsenic and chromium from chemically treated lumber.Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
10. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.

11. Make certain the switch is in the **OFF** position before connecting the machine to the power supply.
12. Make certain the machine is properly grounded.
13. Make all machine adjustments or maintenance with the machine unplugged from the power source.
14. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
15. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
16. Make sure the jointer is firmly secured to the stand or a bench before use.

**WARNING!**

17. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
18. Provide for adequate space surrounding work area and non-glare, overhead lighting.
19. Keep the floor around the machine clean and free of scrap material, oil and grease.
20. Keep visitors a safe distance from the work area. **Keep children away.**
21. Make your workshop child proof with padlocks, master switches or by removing starter keys.
22. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
23. Maintain a balanced stance at all times so that you do not fall or lean against the knives or other moving parts. Do not overreach or use excessive force to perform any machine operation.

24. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
25. Use recommended accessories; improper accessories may be hazardous.
26. Maintain tools with care. Keep knives sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
27. Turn off the machine and disconnect from power before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
28. Do not stand on the machine. Serious injury could occur if the machine tips over.
29. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
30. Remove loose items and unnecessary work pieces from the area before starting the machine.

## **Specifications**

- Table measures 17" x 76"
- 4 cam adjustment on infeed table provides perfect alignment without feed table
- Height (from floor to table): 32"
- Overall depth: 36"
- Fence: 38 1/2" x 4"
- Cutterhead diameter: 4"
- Cutterhead knives: 4
- Bevel jointing: 0° - 45°
- Maximum depth of cut: 1/8"
- Maximum width of cut: 16"
- Motor: 220V, 3 phase

- Cutterhead speed: 6000 RPM
- Cuts per minute: 20,000
- Blade Size 173 inches (14 ft 5 in)
- Shipping weight approx. 1200 lbs.

Features:

- Fence is center mounted with positive stops at 45° and 90°
- Independently adjustable, handwheel-controlled precision table movement
- Heat treated infeed and outfeed tables
- Cast iron table
- Integral 6" dust port

## Introduction

This manual is provided by SKETCHNBUILD covering the safe operation and maintenance procedures for the SNBJ series Woodworking Jointers. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This machine has been designed and constructed to provide years of trouble free operation if used in accordance with instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or SKETCHNBUILD at our web site: [www.sketchnbuild.com](http://www.sketchnbuild.com)

## Levers and Controls

1. Handwheel for Outfeed Table
2. Outfeed Table
3. Fence
4. Fence Adjustment Handle
5. Cutter Guard
6. Infeed Table
7. Handwheel for Infeed Table
  
8. On/Off Switch
9. Rabbeting Ledge
10. Table Lock Knob
11. Fence Tilt Lock Handle
12. Fence Control Handle

- 13. Belt Guard
- 14. Dust Chute

## Unpacking and Cleanup

### Contents of Shipping Cartons

Note: Unit shipped in two cartons.

#### Stand Carton

- 1 Stand with Motor
- 1 Stand Door
- 1 Dust Chute with Mounting Hardware
- 1 Pedestal Switch with Mounting Hardware

#### Main Unit Carton

- 1 Bed Assembly
- 1 Fence Assembly
- 1 Cutterhead Guard
- 1 Belt Guard
- 2 V-Belts
- 2 Handwheels with handle
- 1 Fence Handle
- 1 Operating Instructions and Parts Manual

## Unpacking and Cleanup

1. Carefully finish removing all contents from both shipping cartons. Compare contents of the shipping cartons with the list of contents above. Place parts on a protected surface.
2. Set packing material and shipping cartons to the side. Do not discard until machine has been set up and is running properly.
3. Clean all rust protected surfaces (bed, fence, etc.) with kerosene or diesel oil. Do not use gasoline, paint thinner, mineral spirits, etc. These may damage painted surfaces.

## WARNING!

**Cutterhead knives are dangerously sharp! Use extreme caution when cleaning.**

4. Apply a thin layer of paste wax to the bright surfaces of the fence and tables to prevent rust.

## Installing Bed to Stand

1. Use an assistant or hoist mechanism to place bed assembly on top of stand. Be sure identification label on the bed faces the same direction as the label on the stand (Fig. 1).
2. Line up two holes in top of stand with holes in bed assembly by viewing through access door in stand.
3. Attach bed assembly to stand with two 3/8" lock bolts and lock washers (Fig. 2). Hand tighten only at this time.
4. Line up third hole in stand with hole in bed assembly by viewing through dust chute.
5. Install third 3/8" lock bolt and lock washer through dust chute to secure bed to stand.
6. Tighten all three mounting bolts with 14mm wrench.

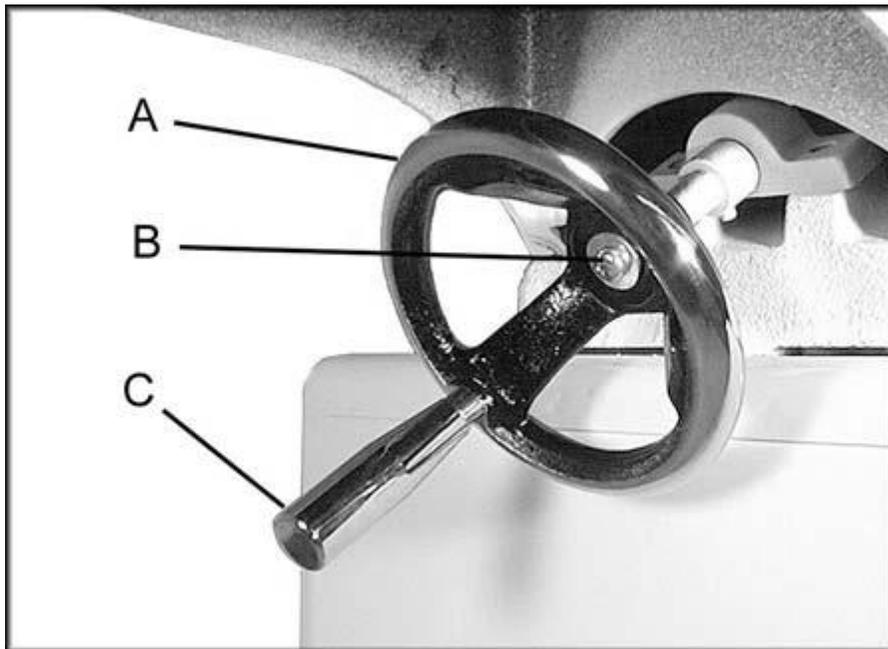


FIGURE 4

## Installing Handwheels

1. Remove protective tape from shaft, and remove screw and washer.
2. Press handwheel (A, Fig. 4) onto shaft, aligning the keyway with the key. If necessary, use a hammer with a block of wood to tap the handwheel completely onto the shaft.
3. Re-install screw and washer (B, Fig. 4).
4. Mount handle (C, Fig. 4) onto handwheel.

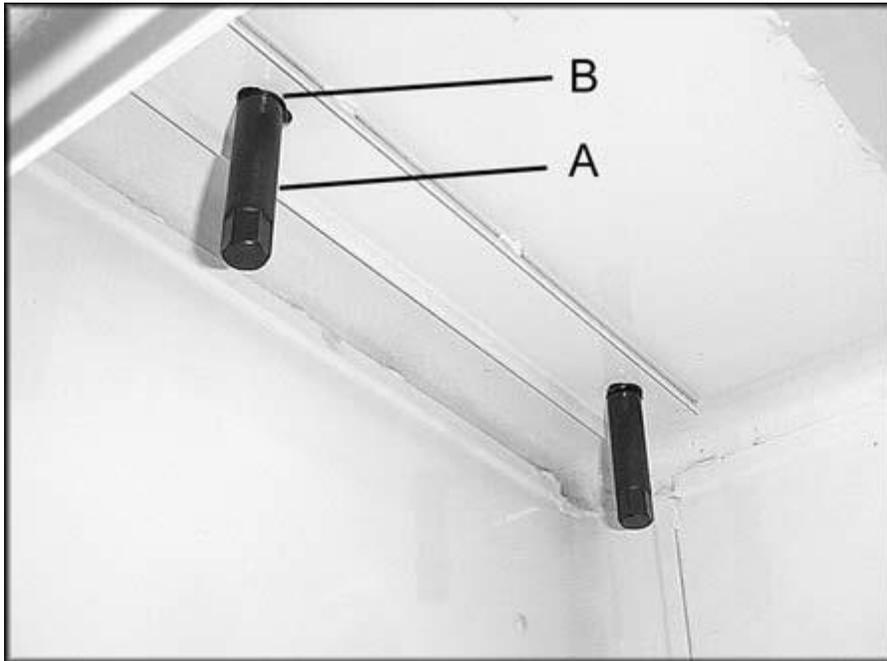


FIGURE 5

## Assembling Knife-Setting Gauge

Place the two bases (A, Fig. 5) onto each end of the bar (B, Fig. 5). Snap the four E-rings (C, Fig. 4) into the grooves on the bar as shown, one E-ring on each side of a base.

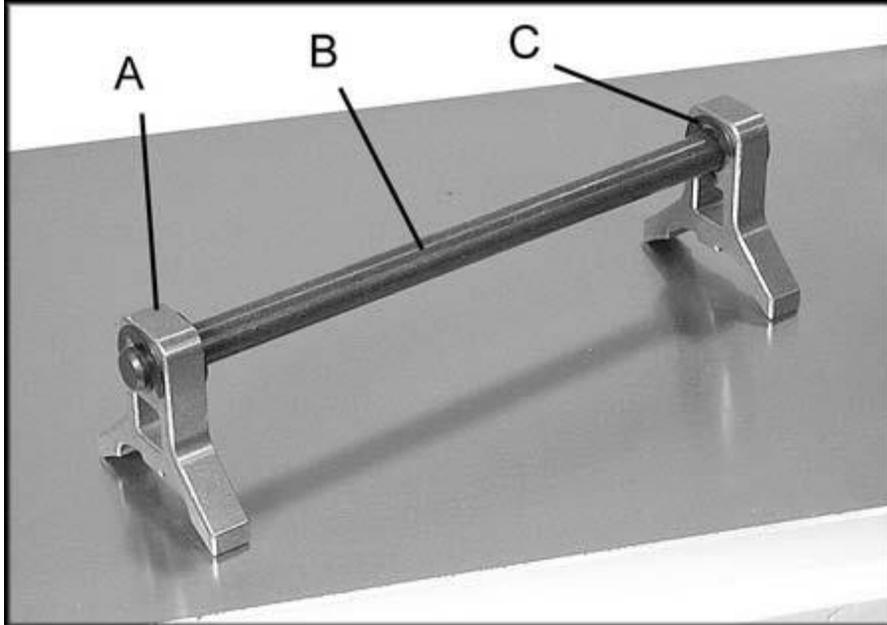


FIGURE 5

### Installing V-Belts

1. Disconnect the machine from the power source, unplug.
2. Remove the lock knob (A, Fig. 6) and belt guard (B, Fig. 6).
3. Place v-belts onto cutterhead pulley grooves and through opening in stand.
4. Pull v-belts down and place onto motor pulley (Fig. 7). If necessary, loosen the mounting screws (A, Fig. 7) and slightly lift motor. Re-tighten the screws when belt is placed.
5. Check to make sure that motor pulley and cutterhead pulley are vertically aligned and the v-belt does not contact the sides of the opening in the base. If the pulleys are not aligned, loosen the screws (A, Fig. 7) on the motor base and slide the motor until the belt is aligned. Re-tighten screws.
6. The v-belt is properly tensioned when finger pressure on the belt half way between the two pulleys causes 1/2" deflection. If the belt is too loose, loosen the lower screws (B, Fig. 7) on the mounting plate and push down on the plate. When belt tension is correct, re-tighten screws.
7. After two hours of operation, check belt tension again. Re-tension if necessary.
8. Re-install belt guard and lock knob.

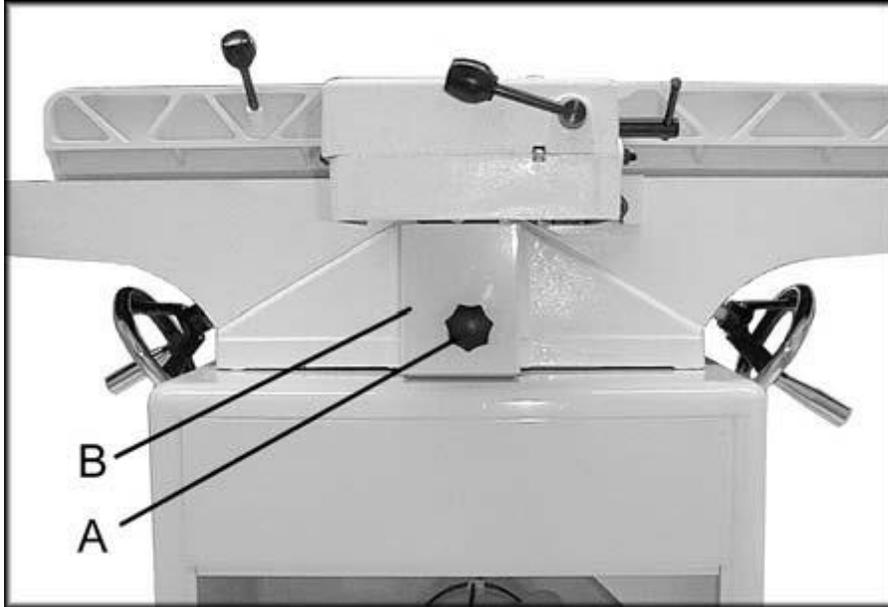


FIGURE 6

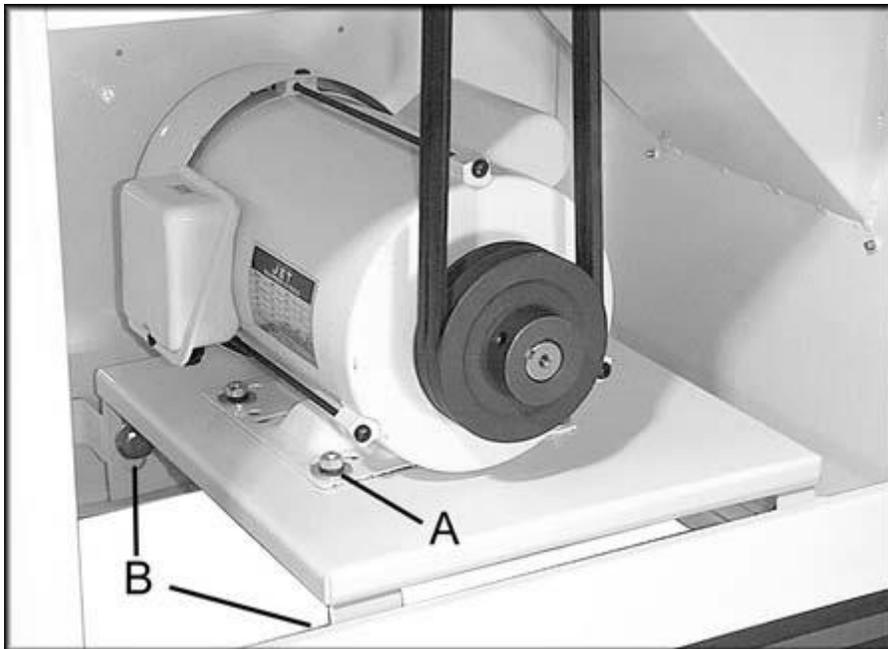


FIGURE 7

**Electrical Connections**

Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

The SNBJ series jointers are rated at

230V, three phase only. Confirm that the power at the source is compatible with the jointer before inserting plug into the outlet. The jointer is designed to be used with a plug and outlet.

**Important: Make certain the receptacle in question is properly grounded. If you are not sure, have a registered electrician check the receptacle.**

## **Leveling Outfeed Table to Cutterhead Knives**

**Machine should be disconnected from power source at this time! Cutterhead blades are extremely sharp! Use caution when hands are near the cutterhead!**

For most jointing operations, the surface of the outfeed table must be level with the knife tips of the cutterhead at their highest point of revolution. The knife tips must project equally from the cutterhead.

The outfeed table and cutterhead are adjusted at the factory and should not require adjustment.

1. On the SNBJ series Jointer, carefully number each blade with a magic marker to make them easier to differentiate.
2. Rotate the cutterhead by turning the cutterhead pulley and determine the 12 o'clock position of knife number one (or a knife insert on the JJ-8HH model). The 12 o'clock position is the highest point a blade will reach in the cutting arc.
3. Loosen table lock screw (A, Fig. 17) and raise the outfeed table to the height of blade number one by turning handwheel (B, Fig. 17). Counter-clockwise will cause the outfeed table to raise. Clockwise will cause the outfeed table to lower. Set a straight edge (C, Fig. 17) on the outfeed table and across the cutterhead.
4. Position of the table and straight edge should look like Figure 18. Use care when handling the straight edge near the blades so as not to damage them.

*Figure 16*

*Figure 17*

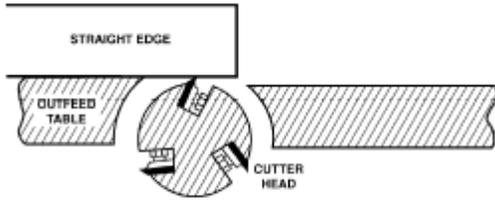


Figure 18

Figure 18

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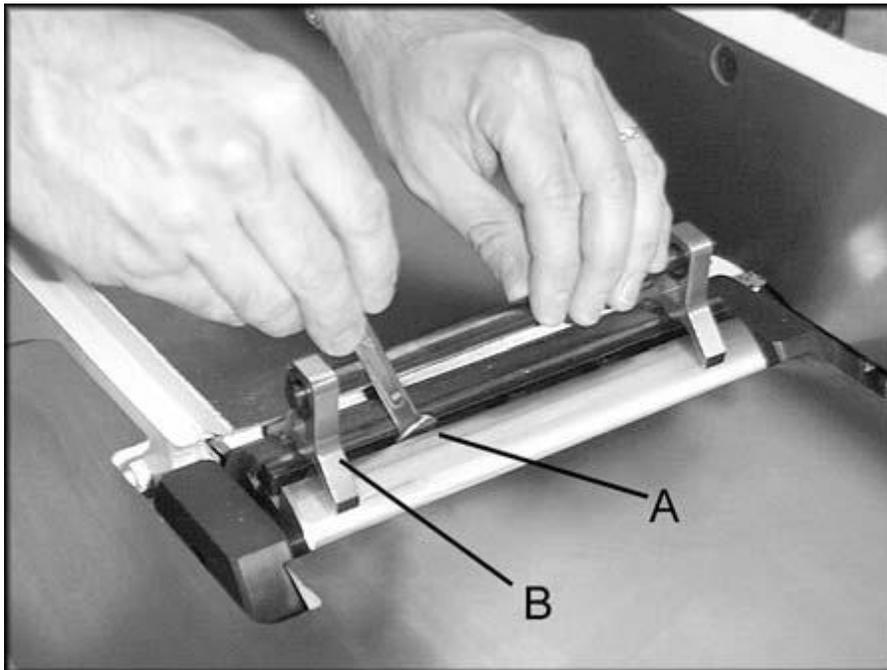
5. When the outfeed table and blade number one (or knife insert) are the same height, tighten table lock screw.

After the outfeed table has been set, the *JJ-8HH* will need no further adjustments to the cutterhead – skip steps 6 through 9 below.

The *JJ-8CS* must have its knives parallel with the outfeed table. Proceed as follows:

6. Bring the straight edge forward to the front of the outfeed table and confirm that blade number one is at the same height at the front of the table as it is at the back of the table.

7. If blade is higher or lower at one point, slightly loosen five screws (A, Fig. 19) by turning clockwise as viewed from the infeed table.



8. Place the knife setting gauge (B, Fig. 19) on the cutterhead over the blade. Continue loosening the five screws until the springs push the knife up into contact with the gauge. Alternately tighten the five screws to hold each blade in place.

9. Repeat this process with blades two and three. The outfeed table and cutterhead knives are correctly adjusted when all three blades are parallel to the outfeed table and all three blades are set at the same height in the cutterhead.

After the outfeed table has been set at the correct height, do not change it except for special operations or after replacing the knives. If the outfeed table is set too high, a curved finished surface results. (Fig. 20)

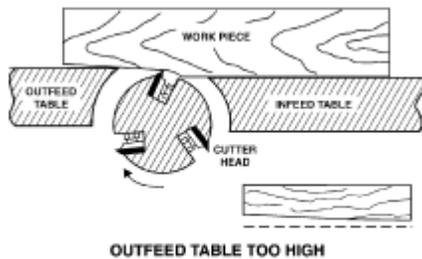


Figure 20

If the outfeed table is set too low, gouging results at the end of the cut. (Fig. 21)

Figure 22 illustrates the outfeed table at the correct height.

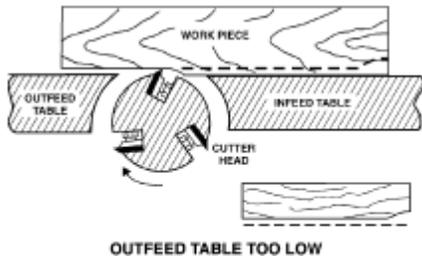


Figure 21

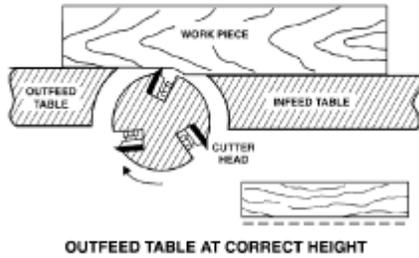


Figure 22

## Removing and Replacing Knives

Disconnect the machine from the power source before making any adjustment or repair. All knife lock bolts must be firmly tightened or risk ejection of the knife(s) and lock bar from the cutterhead! Failure to comply may cause serious injury!

1. Disconnect machine from power source.
2. Remove blade guard by loosening lock screw (A, Fig. 23) and lifting up on blade guard. **Caution: blades are sharp! Use great care when hands are around blade area!**

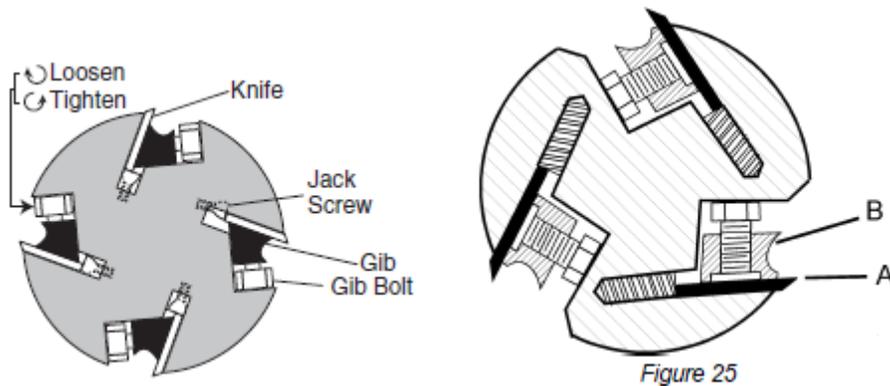


Figure 25



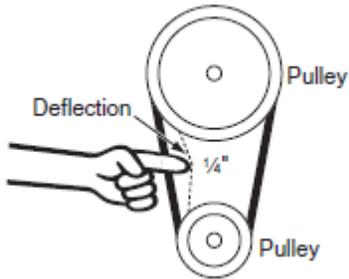
3. Loosen the five lock screws (Fig. 24). Note: Loosen screws by turning in a clockwise direction as viewed from the infeed table. Carefully remove the knife (A, Fig. 25), and the lock bar with screws (B, Fig. 25). Repeat for the other two blades.
4. Before assembly, clean all parts thoroughly and clear cutterhead knife slots of any dust or debris.
5. Insert knife into the cutterhead channel making sure it faces the proper direction.
6. Insert lock bar and screws and tighten to hold in place. Blades are set at the proper height when the top of the blade is 1/16" above the cutterhead.
7. Repeat for other two blades.
8. To set the knives to the outfeed table and to the same height in the cutterhead, see section titled "Leveling Outfeed Table to Cutterhead Knives".

## **BELT REPLACEMENT/ BELT TENSIONING**

To ensure optimum power transmission from the motor to the cutterhead, the belt must be in good condition (free from cracks, fraying and wear) and properly tensioned. After the first 16 hours of belt life, re-tension the belt, as it will stretch and seat during this time.

Tensioning Belt

1. DISCONNECT MACHINE FROM POWER!
2. Remove cabinet rear access panel.
3. Loosen motor mount bracket fasteners shown.  
Note: *DO NOT completely remove motor mount bracket fasteners.*
4. Press down on motor to keep tension on belt.
5. Press belt with moderate pressure in center to check belt tension. Belt is correctly tensioned when there is approximately 1/4" deflection when pushed, as shown below.



#### Checking belt tension

If there is more than 1/4" deflection when you check belt tension, repeat the tensioning procedure until it is correct.

6. Tighten motor mount bracket fasteners and replace cabinet rear access panel.



#### Replacing Belt

1. DISCONNECT MACHINE FROM POWER!
2. Remove cabinet rear access panel.

3. Loosen motor mount bracket fasteners shown.
4. Have another person lift motor as you remove belt and replace it with a new one. It may help to use a 2x4 as a lever to raise motor. Make sure belt is seated in pulley groove.
5. Follow Steps 4–5 in Tensioning Belt procedure to set correct belt tension.
6. Tighten motor mount bracket fasteners and replace cabinet rear access panel.

## Maintenance

### Lubrication

1. Use a good grade of light grease on the steel adjusting screws located in the raising and lowering mechanisms of the work tables.
2. Occasionally, apply a few drops of light machine oil to the gibs. This permits the tables to slide freely.
3. The cutterhead ball bearings are lifetime lubricated and need no further care.

### Blade Care

**Blades are extremely sharp!**

**Use caution when cleaning or changing.**

**Failure to comply may cause serious injury!**

When gum and pitch collect on the blades, carefully remove with a strong solvent. Failure to remove gum and pitch build-up may result in excessive friction and overheating.

### Sharpening the Knives

When blades become dull, touch up blades.

1. Disconnect the machine from the power source.
2. Remove the fence, blade guard and belt cover.
3. To protect the infeed table from scratches, partially cover the sharpening stone with paper.
4. Lay the stone on the infeed table.
5. Lower the infeed table and turn the cutterhead by turning the cutterhead pulley. The infeed table height is set properly when the stone's surface is flush with the knife bevel.
6. Keep the cutterhead from rotating by grasping the cutterhead pulley while sliding the stone back and forth across the table.
7. Take the same amount of passes for all three blades.

When the blades have been sharpened, if they still are not cutting efficiently, trying to touch up the blades further will only cause the formation of a second beveled edge. When this starts to happen, it is time to replace blades with another

set.

It is recommended to keep a second set of blades on hand so that they may be installed while the first set is being professionally sharpened.

## Cutterhead Removal

**Blades in the cutterhead are sharp! Use extreme caution when handling the removal of the cutterhead. Failure to comply may cause serious injury!**

The entire cutterhead assembly may be removed for cleaning or for bearing and blade replacement. Some woodworkers keep a spare cutterhead with replacement blades should the original cutterhead have to be repaired.

To remove the cutterhead (including bearings, studs, and housing) from the base casting:

1. Disconnect the machine from the power source.
2. Remove the fence assembly, cutterhead guard, and belt guard.
3. Remove the v-belt from the cutterhead pulley.
4. Loosen set screw (A, Fig. 34) using a hex wrench and remove the cutterhead pulley (B, Fig. 34) and key (C, Fig. 34).
5. Remove nuts (D, Fig. 34) and lock washers (E, Fig. 34).

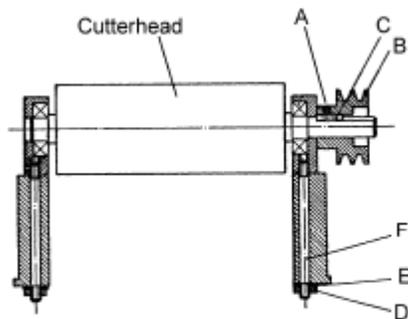


Figure 34

6. Lift assembly straight up. Studs (F, Fig. 34) will still be attached to the bearing housings.
7. Before replacing the cutterhead back into the casting, thoroughly clean the “saddle” and the bearing housings of saw dust and grease so that they seat properly.
8. To re-install the cutterhead, reverse the above steps.

## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Finished stock is concave on the end	Knife tip is higher than outfeed table.	Raised outfeed table so it is level with knife tip.
Back side of finished stock is thicker than the front side.	Outfeed table is higher than knife tip.	Adjust outfeed table so it is level with knife tip.
Stock is concave in the middle.	Table Flatness should be checked with a machinist's square.	Adjust the screws below the table to raise the table ends.
Both ends of finished stock are cut deeper than the middle.	Ends of tables are higher than middle.	Raise table ends with adjustment screws below tables.
Infeed or outfeed tables are loose	Loose gib.	Tighten gibs.
Ripples on planed surface. (Kickbacks)	One blade set higher than the others.	Readjust blades.
	Feeding wood too fast.	Feed wood more slowly.
	Cutting blades are set too high above outfeed table, or they may not be level with outfeed table.	Re-adjust blades.
Excessive motor noise.	Motor	Have motor checked by a qualified repair station.
	Pulley set screw is loose.	Tighten set screw.

Motor fails to develop full power or stalls.	Circuit overloaded with lights, tools, etc.	Do not share the circuit.
	Undersize wires or circuit too long.	Increase wires sizes, or reduce length of wiring.
	Fuses or circuit breakers do not have sufficient capacity.	Have a qualified electrician install proper size fuses or circuit breakers.
	Voltage too low.	Request voltage check from the power company.
Motor starts slowly or fails to come to full speed.	Motor	Have motor checked by a qualified repair station.
	Belt tension too tight.	Adjust belt tension.