6-Inch Woodworking Jointer

Operating Instructions and Parts List



Table of Contents

Table of Contents	2
Warning	3
Identification	5
Specifications	5
Unpacking and Cleanup	6
Unpacking and Cleanup	6
Installing Bed to Stand	7
Installing Handwheels	7
Installing Guard	7
Installing Fance Carriage To Jointer	8
Installing Fence To Fence Carriage	8
Installing V-Belts	9
Installing Cutterhead Guard	10
Setting Outfeed Table Hight	10
Adjustments	12
90° Fence Adjustment	12
45° Fence Adjustment	12
Gib Adjustment	13
Removing and Replacing Knives	14
Replacing or Rotating Knife Inserts	14
Operation	15
Jointing Warped Material	16
Direction of Grain	16
Bevel Cut	16
Taper Cut	17
Rabbet Cut	18
Maintenance	.18
Lubrication	.18
Blade Care	.18
Sharpening the Knives	.18
Cutterhead Removal	.18
Troubleshooting	.19
Jointer Body Diagram and Part List	.20
Cutterhead Diagram and Part List	.21
Fence Diagram and Part List	.22
Stand Diagram and Part List	.23



- 1. Read and understand the entire owners 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.
- 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.
- 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.

Familiarize yourself with the following safety notices used in this manual:

ACAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

This means that if precautions are not heeded, it may result in serious injury or possibly even death.

Identification



A.Outfeed Table B.Infeed Table C.Fence D.Cutterhead Guard E.Fence Carriagel F.Fence Movement Lock G.Fence Tilt Handle H.Infeed Table Handwheel I.Outfeed Table Handwheel J.Outfeed Table Lock K.Infeed Table Lock L.Switch M.Stand N.Dust Port

Specifications

M 3 2"
3
'2"
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8"
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Unpacking and Cleanup

Contents of Shipping Cartons Note: Unit shipped in TWO carton. Cabient Stand with Motor (Not Shown)

Jointer Body

Jointer Body Assembly (Not Shown)

- A Fence
- B Fence Carriage Assembly
- C Cutterhead Guard
- D Handwheels*2
- E Handwheel Handles*2
- F Drive-Belts*1
- G Belt Guard
- H Fence Handle
- I Push Blocks*2
- J Knife Setting Jig

Hardware

- 3 Jointer Mounting Bolts
- 3 10mm Lock Washer
- 28 M8*12 Carriage Bolt
- 42 M8 Hex Nut
- 40 8mm Flat Washer
- 12 M8*12 Phillips Head Screw
- 4 M8*25 Bolt
- 4 8mm Larged Flat Washer
- 4 8mm Lock Washer

Tools

3 Hex Wrenches (5, 6, 8 mm)

Tools Required for Assembly:

- 1 Cross Point Screwdriver
- 1 8/10mm Open End Wrench



Jointer Body Contents



Hardware Contents-1

Installing Bed to Stand

- 1. Use an assistant or hoist mechanism to place bed assembly on top of stand.
- 2. Line up two holes in top of stand with holes in jointer body assembly(Fig. 19)
- 3. Attach bed assembly to stand with two 3/8" lock bolts and lock washers (Fig. 20). 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 19



Figure 20

Installing Handwheels

- 1. Remove screw and washer from shaft.
- 2. Press handwheel onto shaft, aligning the Pin Gap with the Pin. If necessary, use a hammer with a block of wood to tap the handwheel completely onto the shaft.
- 3. Re-install screw and washer.
- 4. Mount handwheel handle onto handwheel.



Figure 21

Installing Belt Guard

- 1. Remove screw and washer from Jointer.
- 2. Put the Belt Guard in place.
- 3. Re-install screw and washer.

NOTE: ONLY INSTALL THE BELT GUARD AFTER THE BELT IS PROPERLY INSTALLED AND ADJUSTED.



Figure 22

Installing Fence Carriage to Jointer

- 1. Lossen the two cap screws attached on the back of the jointer. Note-DO NOT completely remove the cap screws.
- 2. Use an man assistant to hold the fence carriage.
- 3. Line up two open holes on the fence carriage with the two cap screws. (Fig. 23)
- 4. Attach the fence carriage to jointer, make sure the surface of carriage level with jointer table surface, tighten the cap screws.



Figure 23

Installing Fence to Fence Carriage

- 1. Lossen and take off the cap screw attached on the fence holder.(Fig. 24)
- 2. Line up the hole on the fence and thread on fence holder.(Fig. 24)
- 3. Connect these two parts with the cap screw. And tighten it.
- 4. Lossen the two cone screws on the fence carriage (A Fig. 25), line up with the two cone nuts on the fence (B Fig. 25).
- 5. Tighten cone screws while adjusting the flexibility of the fence by tilting th fence. When the fence is secured and also preperly flexibe, tighten the nut on cone screws(C Fig. 25).



Figure 24



Figure 25

Installing V-Belts

- 1. Disconnect the machine from the power source, unplug.
- 2. Remove the belt guard.
- Place v-belts onto cutterhead pulley grooves and through opening in stand.
- In stand, lossen the motor mount bolts. Note-DO NOT completely remove the motor mount bolts(Fig. 26).
- Carefully allow the motor to slide downward place v-belt onto motor pulley grooves,tensioning the v-belt with the weight of the motor.
- Check to make sure that motor pulley and cutterhead pulley are vertically aligned(Fig.27) the v-belt does not contact the sides of the opening in the base. If the pulleys are not aligned, loosen the Set Screw on the Cutterhead Pulley and slide the Pulley until the belt is aligned. Re-tighten set screw(Fig. 28).
- 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 motor mounting bolts (Fig. 26) 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 26



Figure 27



Figure 28

Installing Cutterhead Guard

Assmble the Cutterhead Guard to the jointer by inserting Post down through the hole in the infeed table(Fig. 29).

NOTE: A spring is supplied in knob assembly that returns the guard over the cutterhead after a cut has been made. Turn knob to tension spring before inserting post. Make certain the spring engages in the slot of the post. To adjust spring tension, remove the cutterhead guard, and rotate knob to the desired amount of tension.

NOTE: THE CUTTERHEAD

GUARD MUST BE TENSIONED SO THAT IT WILL RETURN TO COVER THE CUTTERHEAD ONCE THE MATERIAL HAS PASSED.



Figure 29

Setting Outfeed Table Hight

AWARNING 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. However, it may change during the shipment, check the outfeed table hight before use, if it is changed, reset the outfeed table hight as following:

1. Place a strightedge(C Fig. 9) on the outtable so it extends over the cutterhead.



Figure 9

- Rotate the cutterhead by turning the cutterhead pulley until one of the knives is at top-dead-center(TDC), as shown in Fig.10
- Loosen table lock screw (A, Fig. 9) and raise the outfeed table to the height of blade number one by turning handwheel (B, Fig. 9). Counter-clockwise will cause the outfeed table to raise. Clockwise will cause the outfeed table to lower.Set a straight edge (C, Fig. 9) on the outfeed table and across the cutterhead.
- 4. Position of the table and straight edge should look like Figure 11. Use care when handling the straight edge near the blades so as not to damage them.
- 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, it will need no further adjustments to the cutterhead – skip steps 6 through 9 below. It 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 is at the same height at the front of the table as it is at the back of the table.
- If blade is higher or lower at one point, Loosen cutterhead gib bolt (A, Fig. 12) by turning clockwise as viewed from the infeed table.
- 8. Place the knife setting gauge (B, Fig. 12) on the cutterhead over the blade. Find the jack screws through the access holes in the cutterhead(Fig. 13) and rotate the jack screws to raise or lower the knife. When the knife is set correctly, it will bearly touch the middle pad of the knife setting jog. Snug the gib bolts tight enough to just hold the knife in place. Repeat STEP 7&8 with the rest of the knives.



Figure 10



Figure 11



Figure 12



Figure 13

Adjustments

To Set The 90° Fence Stop

Note: whenever making an adjustment to the fence, lift the fence up slightly after releasing the lock handle to avoid scratching the table.

- 1. Using a 90° square, adjust the fence to the 90° position, as shown in Fig. 14
- 2. Flip the 90° swing stop into the position shown in Fig. 15
- 3. Lossen the jam nut on the 90° fence stop bolt Fig. 15
- 4. Adjust the 90° fence stop bolt until it makes contact with the 90° swing stop.
- 5. Retighten the jam nut lossened in STEP 3.



Figure 14



Figure 15

To Set the 45° Inward Fence Stop

Note: Whenever making an adjustment to the fence, lift the fence up slightly after releasing the lock handle to avoid scratching the table.

- 1. Using a 45° square, adjust the fence to the 45° inward position, as shown in Fig. 16
- 2. Lossen the set screw on fence stop block as shown in Fig. 17
- 3. Adjust the fence stop black until it makes contact with the back of the fence bracket.
- 4. Retighten the set screw on the fence stop stop block lossened in STEP 2



Figure 16



Figure 17

To Set the 45° Outward Fence Stop

Note: Whenever making an adjustment to the fence, lift the fence up slightly after releasing the lock handle to avoid scratching the table.

- Using a sliding bevel adjusted to 135[°], adjust the[°] fence to the 135[°](45[°]inward) position. as shown in Fig. 18
- 2. Adjust the 45 outward fence stop set screw until it makes contact with the back of the fence. as shown in Fig. 19



Figure 18



Figure 19



Figure 20

Gib Adjustment

After a period of use, the gibs may become loose and need adjusting:

- 1. Loosen two lock nuts and gib lock screws. As shown in Fig. 20
- 2. Tighten each set screw 1/4 turn starting at the bottom and working up. If a 1/4 turn does not remove all play, take another 1/4 turn. Repeat a 1/4 turn at a time for all three set screws until play is removed.
- 3. Tighten lock screws and lock nuts

Removing and Replacing Knives

(Stright Knife Cutterhead Only)

AWARNING 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. Caution: blades are sharp! Use great care when hands are arround blade area!
- 3. Loosen the lock screws (Fig. 21). Note: Loosen screws by turning in a clockwise direction as viewed from the infeed table. Carefully remove the knife (A, Fig. 22), and the lock bar with screws (B, Fig. 22). 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" found on page 10 of this manual.

Replacing or Rotating Knife Inserts

(Sprial Cutterhead Only)

The knife inserts on the Sprial Cutterhead Jointer are four-sided. When dull, simply remove each insert, rotate it 90° for a fresh edge, and reinstall it.

Use the two provided star point screwdrivers to remove the knife insert screw. See Figure 23. Use one of the screwdrivers to help hold the cutterhead in position, and the other to remove the screw. It is advisable to rotate all inserts at the same time to maintain consistent cutting. However, if one or more knife inserts develops a nick, rotate only those inserts that are affected.



Figure 21



Figure 22



Figure 23

Each knife insert has an etched reference mark so that you can keep track of the rotations.

IMPORTANT: When removing or rotating inserts, clean saw dust from the screw, the insert, and the cutterhead platform. Dust accumulation between these elements can prevent the insert from seating properly, and may affect the quality of the cut.

Before installing each screw, lightly coat the screw threads with machine oil and wipe off any excess.

Securely tighten each screw which holds the knife inserts before operating the planer!

AWARNING Make sure all knife insert screws are tightened securely. Loose inserts can be propelled at high speed from a rotating cutterhead, causing injury.

Operation

AWARNING Keep all guards in place and in adjustment at all times during the cutting procedure! Keep hands away from the cutterhead! Do not pass hands directly over the cutterhead! The use of push sticks and/or handle pads are highly recommended when using the jointer! Failure to comply may cause serious injury!

Jointing cuts or edge jointing are made to square an edge of a workpiece. The workpiece is positioned on the jointer with the narrow edge of the workpiece on the infeed table and the major flat surface of the workpiece against the fence (Fig. 24).

Planing cuts are similar. The major surface of the workpiece is placed on the table with the narrow edge of the workpiece against the fence (Fig. 25).



Figure 24



Figure 25

For jointing and planing cuts pressure is directed three ways; into the fence to ensure a square cut, forward to advance the stock, and downward to avoid chatter and vibration.

For jointing when the material is higher than the fence, the left hand applies pressure into the fence and down toward the table while the right hand pushes forward from behind. Be sure to keep the right hand high up on the material. (Fig. 24)

For jointing material that is lower than the fence, use push sticks to protect the hands. For planing, use push blocks. (Fig. 25) Never place the right hand on the trailing edge of the material. Hand placement on the trailing edge of the material may cause the hand to come into contact with the blade.

Feed work from right to left at a steady, moderate speed. If you feed the material too slowly, the wood will burn in places. If you feed the material too quickly, ridges will appear in the finished surface.

Jointing Warped Material

If the work to be jointed is cupped or warped, take light, repetitive cuts until the surface is flat. Forcing the material flat against the table will still leave a warped piece after the cuts have been made.

AWARNING Never joint any material shorter than eight inches! The material may tip into the jointer's throat and be kicked back! Avoid jointing thin material which could become jammed under the fence or blade guard! Failure to comply may cause serious injury!

Direction of Grain

Feed the material with of the grain to avoid tearout (Fig. 26). If the direction of the grain changes somewhere in the board, try reducing depth of cut and slow the feed speed down to avoid tearout. If results still aren't satisfactory, turn the material around and try feeding through the other way.

Bevel Cut

To cut a bevel, lock the fence at the desired angle and run the material through, pressing the work firmly against the fence and tables (Fig. 27). Several passes may be necessary for the desired result.



Figure 26



Figure 27

Taper Cut

AWARNING Taper cuts require the removal of the cutterhead guard. Use extreme caution when making taper cuts and replace the guard immediately after completion! Failure to comply may cause serious injury!

One of the most useful jointer operations is cutting an edge to a taper. This method can be used on a wide variety of work; tapered legs of furniture is a common example.

Instead of laying the piece down on the infeed table, lower the forward end of the work onto the outfeed table. Use caution, however, as the piece will span the knives, and they will take a "bite" from the work with a tendency to kick back unless the piece is held firmly. Push the work forward as in ordinary jointing. The effect is to plane off all the stock in front of the knives to an increasing depth, leaving a tapered surface.

The ridge left by the knives when starting the taper may be removed by taking a very light cut in the regular jointing procedure, with the infeed table raised to its normal position.

Practice is required in this operation. Beginners are advised to make trial cuts with scrap material.

Rabbet Cut

Rabbeting requires the removal of the cutterhead guard. Use extreme caution when making rabbeting cuts and replace the guard immediately after completion! Failure to comply may cause serious injury!

Note: Rabbet cuts are not applicable with the Model JJ-8HH Jointer with helical head.

- 1. Adjust the fence so that the distance between the end of the knives and fence is equal to the width of the rabbet (Fig. 28).
- 2. Lower the infeed table an amount equal to the depth of the rabbet. If the rabbet is quite deep, it may be necessary to cut in two or more passes.
- 3. In that event, the table is lowered an amount equal to about half the depth of the rabbet for the first pass, then lowered again to proper depth to complete the cut.



Figure 28

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

AWARNING 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 Stright 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. (Fig. 29)



- 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

AWARNING 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. 30) using a hex wrench and remove the cutterhead pulley (B, Fig. 30) and key (C, Fig. 30).
- 5. Remove nuts (D, Fig. 30) and lock washers (E, Fig. 30).



Figure 30

- 6. Lift assembly straight up. Studs (F, Fig. 30) 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.

Trouble	Probable Cause	Remedy
Finished stock is concave on the end.	Knife tip is higher than outfeed table.	Raise 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. (Stright Knife)	Readjust blades (Stright Knife).
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 wire sizes, or reduce length of wiring.
	Voltage too low.	Request voltage check from the power company.
	Fuses or circuit breakers do not have sufficient capacity.	Have a qualified electrician install proper size fuses or circuit breakers.
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.
	Bad start capacitor.	Replace start capacitor.

Troubleshooting