# 12” INDUSTRIAL JOINTER/PLANER WITH SPIRAL CUTTERHEAD


MODEL: KC-12HJPC

# INSTRUCTION MANUAL

# WARRANTY INFORMATION

| | |
|---|---|
| **2-YEAR<br>LIMITED WARRANTY<br>FOR THIS 12” INDUSTRIAL JOINTER/PLANER** | **KING CANADA TOOLS<br>OFFERS A 2-YEAR LIMITED WARRANTY<br>INTENDED FOR NON COMMERCIAL USE** |

## PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

## PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.

## LIMITED TOOL WARRANTY

King Canada makes every effort to ensure that this product meets high quality and durability standards. King Canada warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, normal wear and tear, negligence or accidents, repairs done by an unauthorized service centre, alterations and lack of maintenance. King Canada shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products.

To take advantage of this limited warranty, return the product at your expense together with your dated proof of purshase to an authorized King Canada service centre. Contact your retailer or visit our web site at www.kingcanada.com for an updated listing of our authorized service centres. In cooperation with our authorized serviced centre, King Canada will either repair or replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during the warranty period.

## NOTE TO USER

This instruction manual is meant to serve as a guide only. Specifications and references are subject to change without prior notice.

**KING CANADA INC. DORVAL, QUÉBEC, CANADA H9P 2Y4**

**www.kingcanada.com**

# GENERAL & SPECIFIC SAFETY RULES

**1. KNOW YOUR TOOL**
Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

**2. GROUND THE TOOL.**
This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. **NEVER** connect the green wire to a live terminal.

**3. KEEP GUARDS IN PLACE.**
Keep in good working order, properly adjusted and aligned.

**4. REMOVE ADJUSTING KEYS AND WRENCHES.**
Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

**5. KEEP WORK AREA CLEAN.**
Cluttered areas and benches invite accidents. Make sure the floor is clean and not slippery.

**6. AVOID DANGEROUS ENVIRONMENT.**
Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

**7. KEEP CHILDREN AWAY.**
All visitors should be kept a safe distance from work area.

**8. MAKE WORKSHOP CHILD-PROOF.**
-with padlocks, master switches or by removing starter keys.

**9. USE PROPER SPEED.**
A tool will do a better and safer job when operated at the proper speed.

**10. USE RIGHT TOOL.**
Don't force the tool or the attachment to do a job for which it was not designed.

**11. WEAR PROPER APPAREL.**
Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

**12. ALWAYS WEAR SAFETY GLASSES.**
Always wear safety glasses (ANSI Z87.1). Everyday eye-glasses only have impact resistant lenses, thet are **NOT** safety glasses. Also use a face or dust mask if cutting operation is dusty.

**13. DON'T OVERREACH.**
Keep proper footing and balance at all times.

**14. MAINTAIN TOOL WITH CARE.**
Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

**15. DISCONNECT TOOLS.**
Before servicing, when changing accessories or attachments.

**16. AVOID ACCIDENTAL STARTING.**
Make sure the swich is in the ''OFF'' position before plugging in.

**17. USE RECOMMENDED ACCESSORIES.**
Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

**18. NEVER STAND ON TOOL.**
Serious injury could occur if the tool tips over. Do not store materials such that it is necessary to stand on the tool to reach them.

**19. CHECK DAMAGED PARTS.**
Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure that they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts that are damaged should be properly repaired or replaced.

**20. NEVER LEAVE MACHINE RUNNING UNATTENDED.**
Turn power ''OFF''. Don't leave any tool running until it comes to a complete stop.

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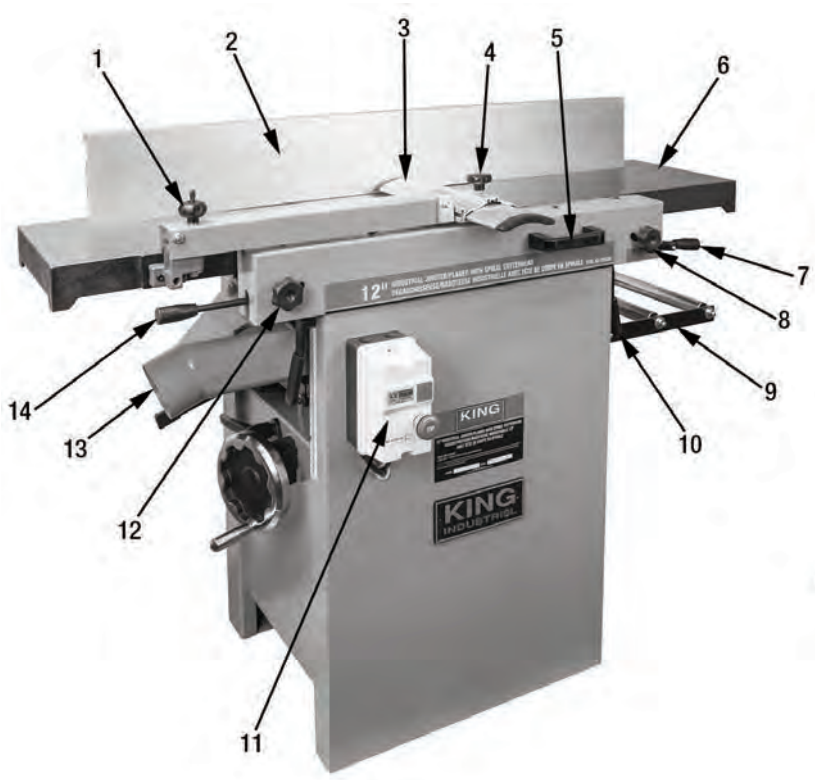
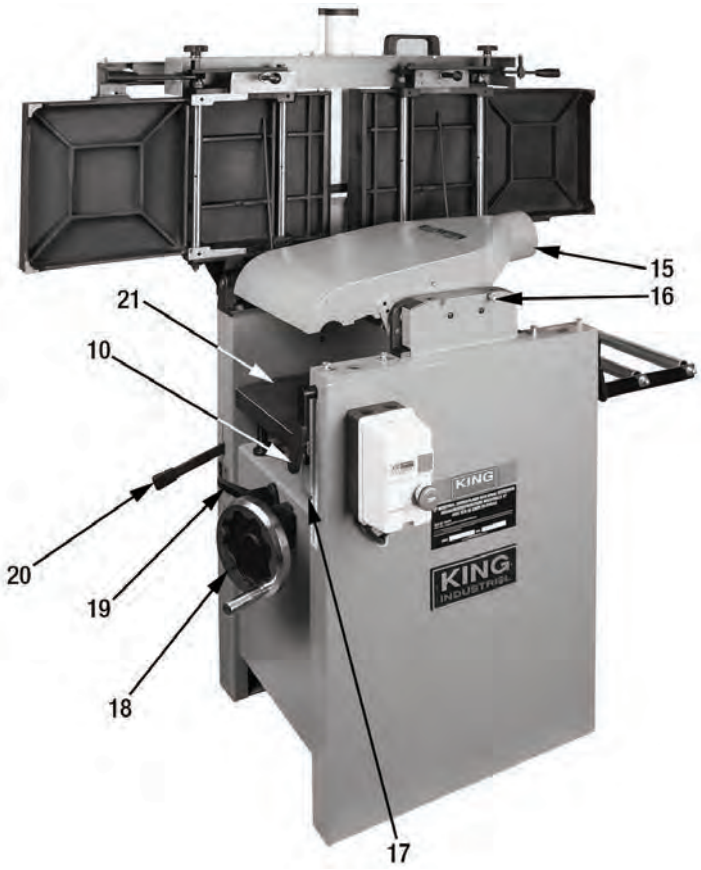
**SPECIFIC SAFETY RULES FOR MACHINES WITH A SPIRAL CUTTERHEAD**

Safety is a combination of common sense, staying alert and knowing how your machine works. Read and understand the following safety rules before operating.

1. For your own safety, read the entire instruction manual before operating the planer.
2. Be sure that the cutterhead inserts are securely installed in the cutterhead.
3. Always use clean, properly sharpened inserts. Dirty or dull inserts are unsafe and can lead to accidents.
4. Do not force stock into the cutterhead. The machine will perform better and more safely when working at the rate for which it was designed.
5. Be sure that the cutterhead has gained full operating speed before starting to joint/plane a workpiece.
6. Inspect stock and remove all foreign objects before jointing/planing. Make sure that all stock is clean and free of any dirt, nails, staples, tiny rocks or any other foreign objects that may damage the inserts. Only process natural solid wood boards. Never joint/plane MDF, particle board, plywood, laminates or other synthetic materials.
7. Do not operate this machine when tired, distracted, or under the effects of drugs, alcohol or any medication that impairs reflexes or alertness.
8. Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning be sure it is properly re-attached before using the machine again.
9. Kickback is when the workpiece is ejected at high speeds by the force of the cutterhead. To minimize the risk of injury from kickback, use proper feeding technique and stand to one side, out of the path of a potential kickback.
10. Place stock firmly against the table and use suitable in-feed and out-feed support if stock is too long.
11. Always use push blocks for jointing material less than 3" in height.
12. Do not perform planing operations on material shorter than 6", narrower than 3/4" or less than 1/2" thick.
13. Never make jointing or planing cuts, deeper than 1/8". On cuts more than 1-1/2" wide, adjust depth of cut to 1/16" or less to avoid overloading machine and to minimize chance of kick-back (work thrown back toward you).

# GETTING TO KNOW YOUR 12” JOINTER/PLANER




**Getting to know your 12” Jointer/Planer**

1) Cutterhead guard height adjustment knob
2) Adjustable fence
3) Cutterhead guard
4) Cutterhead guard lock knob
5) Table raising handle
6) Jointer infeed table
7) Infeed table adjustment lever
8) Infeed table adjustment lock knob
9) Planer outfeed roller support
10) Jointer table lock levers (1 of 2)
11) Magnetic switch (On/Off)
12) Outfeed table adjustment lock knob
13) 4” dust chute (Jointer mode)
14) Outfeed table adjustment lever
15) 4” dust chute (Planer mode)
16) 4” dust chute release pin
17) Planing thickness scale & indicator
18) Planer table raising/lowering handwheel
19) Planer table lock handle
20) Planer power feed lever
21) Planer table (infeed side)

**Specifications**

| MODEL | KC-12HJPC |
|---|---|
| Maximum jointing/planing width | 12” |
| Maximum depth of cut | 1/8” |
| Spiral cutterhead speed | 6,500 RPM |
| Spiral cutterhead diameter | 2-3/4” |
| Number of cutter inserts | 60 (15mm x 15mm x 2.5mm) |
| Maximum planing thickness | 8-3/4” |
| Planing feed rate | 22 FPM |
| Table sizes (jointer/planer) | 51” x 12-1/4” / 21-3/4” x 12-1/4” |
| Motor | 10 Amp. |
| Voltage | 220V, 1 phase, 60 Hz |
| Assembled dimensions (LxWxH)/weight | 51” x 32” x 39-1/2” / 465 lbs |
| Package dimensions (LxWxH)/weight | 52” x 22-1/2” x 38-1/2” / 540 lbs |

# ELECTRICAL INFORMATION

**WARNING!**

ALL ELECTRICAL CONNECTIONS MUST BE DONE BY A QUALIFIED ELECTRICIAN. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY! ALL ADJUSTMENTS OR REPAIRS MUST BE DONE WITH THE MACHINE DISCONNECTED FROM THE POWER SOURCE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY!

**POWER SUPPLY**

**WARNING:** YOUR JOINTER/PLANER MUST BE CONNECTED TO A 220V, 15 AMP. BRANCH CIRCUIT AND USE A 15 AMP. TIME DELAY FUSE OR CIRCUIT BREAKER. FAILURE TO CONNECT IN THIS WAY CAN RESULT IN INJURY FROM SHOCK OR FIRE.

Your Jointer/Planer must be properly grounded. Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician.

**WARNING:** IF NOT PROPERLY GROUNDED, THIS JOINTER/PLANER CAN CAUSE ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS. TO AVOID SHOCK OR FIRE, IF THE POWER CORD IS WORN OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.

**GROUNDING**

This Jointer/Planer must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock. This Jointer/Planer is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**WARNING:** TO MAINTAIN PROPER GROUNDING OF YOUR JOINTER/PLANER, DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER.

**220V OPERATION**

As received from the factory, your Jointer/Planer is ready to operate on 220V circuit. This Jointer/Planer is intended for use on a circuit that has an outlet and a plug which looks like the one illustrated in Fig.1.

**WARNING:** DO NOT USE A TWO-PRONG ADAPTER FOR THEY ARE NOT IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES. NEVER USE IN CANADA.

**EXTENSION CORDS**

The use of any extension cord will cause some loss of power. Use the following table to determine the minimum wire size (A.W.G-American Wire Gauge) extension cord. Use only 3-wire extension cords which have 3-prong grounding type plugs and 3-hole receptacles which accept the tool's plug.

For circuits that are further away from the electrical circuit box, the wire size must be increased proportionately in order to deliver ample voltage to the motor. Refer to Fig.2 for wire length and size.

**MAGNETIC SWITCH AND EMERGENCY STOP BUTTON**

**Starting and stopping the machine**

The magnetic switch (A) Fig.3 which activates the cutterhead is located on the front left side of the Jointer/Planer. To turn the Jointer/Planer "On" press the green button (B). To stop the Planer, simply press the red "EMERGENCY STOP" button (C). When pressed, this switch is equipped with a safety feature that ensures the machine remains "OFF" until the red stop switch is twisted and released.

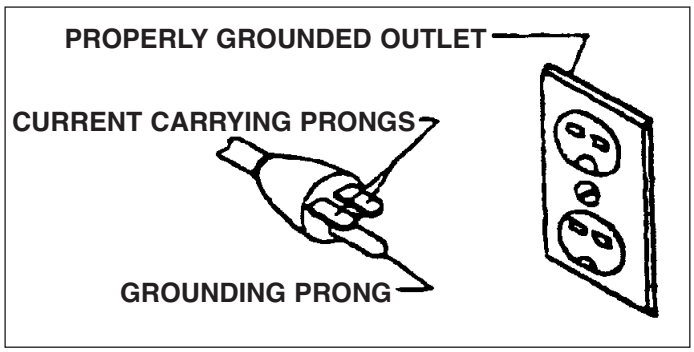



**FIGURE 1**

| LENGTH OF CONDUCTOR | WIRE SIZES REQUIRED (AMERICAN WIRE GAUGE) 220V LINES |
|---|---|
| 0-25 FEET | NO.14 |
| 26-50 FEET | NO.12 |
| 51-100 FEET | NO.10 |

**FIGURE 2**

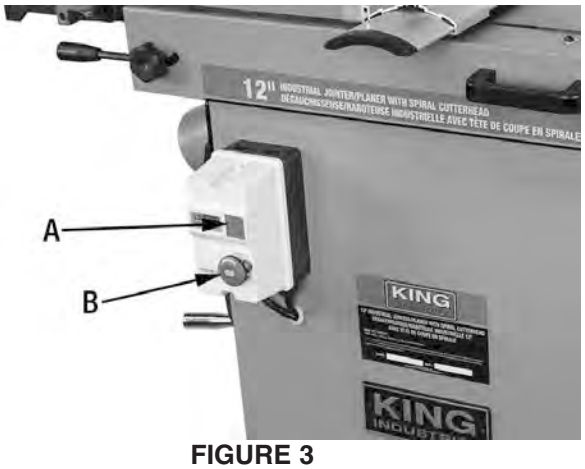



**FIGURE 3**

# UNPACKING, ASSEMBLY & ADJUSTMENTS

**UNPACKING AND CLEANUP**

**WARNING!** TO REDUCE THE POTENTIAL FOR PERSONAL INJURY AND/OR DAMAGE TO THE MACHINE, BEFORE ASSEMBLING MAKE SURE THE MACHINE IS TURNED OFF. DO NOT TURN ON THE MACHINE UNTIL INSTRUCTED TO DO SO AFTER ALL ASSEMBLY STEPS IN THIS MANUAL HAVE BEEN COMPLETED.

To ensure maximum performance from your machine, clean it properly and install it accurately before use. As soon as you receive the machine, we recommend you follow these procedures:

1. Inspect packing crate for damage in transit. Record damage and report it immediately to shipper.
2. Open crate and check that machine arrived in good condition. If not, let your dealer know immediately.
3. Before lifting machine, remove all bolts locking it to its shipping base.
4. Transport machine to location with a pallet truck, sling or dolly.
5. Remove the protective coating from the tables, rollers, and loose items packed with the machine.
6. The protective coating may be removed with a soft cloth moistened with Kerosene.

**NOTE:** Do not use acetone, gasoline, or lacquer thinner for this purpose.

**INSTALLING MAGNETIC SWITCH**

The magnetic switch comes unattached to avoid damage during shipping. To install the magnetic switch to the cabinet stand:

1. Using a Phillips screwdriver, remove the 2 mounting pan head screws installed on the left side of the cabinet stand.
2. Using a Phillips screwdriver, remove the 2 white plastic screws (A) Fig.4 which secure the switch cover (B) to the main switch housing (C).
3. Using the mounting screws removed in step 1, secure the main switch housing (C) to the cabinet stand by installing the 2 mounting pan head screws through the two holes (D) in the main switch housing, as shown in Fig.4.
4. Reinstall the switch cover (B) using the 2 white plastic screws (A).

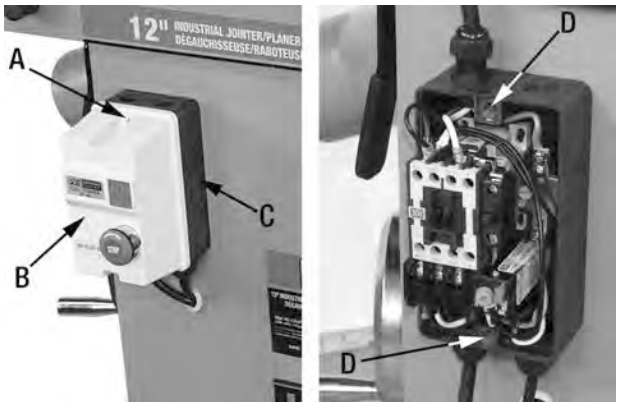



**FIGURE 4**

**SWITCHING FROM JOINTER MODE TO PLANER MODE**

This machine is in Jointer mode by default. To change the machine from Jointer mode to Planer mode:

1. Loosen both table lock levers (A) Fig.5 by lifting them toward the front of the machine.
2. Lift up the table assembly using the table lifting handle (B) Fig.5. Use caution when lifting, as the table is heavy.
3. When the table is in the fully vertical position, a safety latch (A) Fig.6 will prevent the table from moving. Make sure the latch is engaged before continuing or operating the machine.
4. Lift the dust chute (B) Fig.6 up and rotate to the right. Pull on the dust chute release knob (C) and lower the dust chute into position. Release the dust chute locking knob. Connect a hose (not supplied) to a dust collector for optimal results.


**FIGURE 5**

**NOTE:** The Planer table may need to be lowered so that the dust chute has enough clearance to rotate freely into Planer mode position. There is a limit switch to prevent the machine from starting unless the dust hood is secured in the proper position.

**SWITCHING FROM PLANER MODE TO JOINTER MODE**

To change the machine from Planer mode to Jointer mode:

1. Pull the dust chute release knob (C) Fig.6 and rotate the dust chute (B) Fig.6 to the left. The planer table may need to be lowered so that the dust chute has enough clearance to rotate freely.
2. Lift the table safety latch (A) Fig.6 to unlock table, and lower the table using the table lifting handle (B) Fig.5. Use caution when lowing the table assembly, as the table is heavy.
3. Lock the table, push the table lock levers (A) Fig.5 towards the center of the machine and then lower them to lock the table.

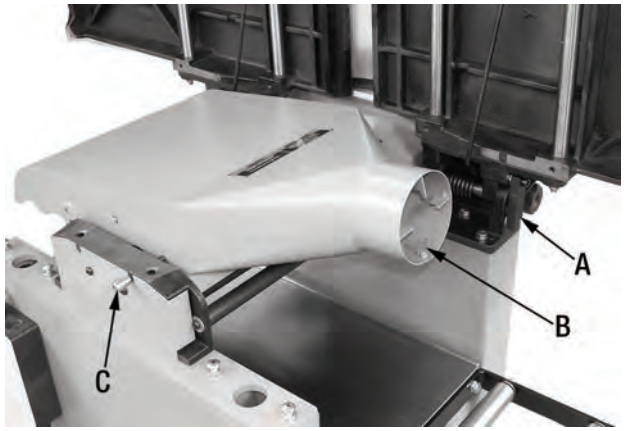



**FIGURE 6**

# ADJUSTMENTS & OPERATION

**PLANER MODE**

1. **Using the Power Feed Handle**: The power feed handle (A) Fig.7 in the downward position is set to “OFF” (Jointer mode). To turn the power feed “ON” for Planer mode, pull the power feed handle to the left and then lift it up as shown.
2. **Using the Planer Table Lock**: Turn the planer table lock handle (B) Fig.7 counterclockwise to unlock the table to allow the table height to be adjusted, turn the planer table lock handle clockwise to lock the table in place.
3. **Table Height Adjustment**: To adjust the table height, first unlock the planer table handle (B) Fig.7. The table height adjustment handwheel (C) Fig.7 can be rotated clockwise to raise the table, and counterclockwise to lower the table. Each full revolution of the handwheel will move the table 5/32”. The depth of cut is indicated on the scale by the pointer (D), and by the value (millimeters) on the handwheel depth of cut display (E), located behind the handwheel.

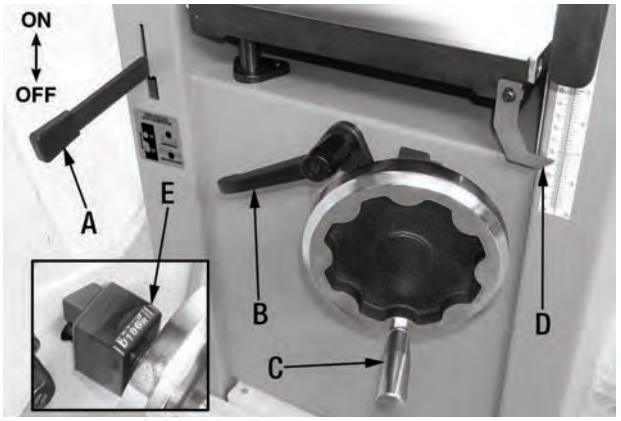


**FIGURE 7**

**JOINTER MODE**

1. **Infeed and Outfeed Table Height Adjustment**: The infeed and outfeed tables are adjusted at the factory, and should not need to be adjusted. There is a lock knob (A) Fig.8 and adjustment lever (B) on both the infeed and outfeed sides of the front of the machine. To adjust the height of the infeed or outfeed table:

a. Loosen infeed table lock knob (A) Fig.8.
b. Raise or lower the infeed table using the adjustment lever (B).
c. Retighten table lock knob when adjustment has been made.

**NOTE:** The infeed table at its lowest position will result in a depth of cut of 5/32”. A depth of cut of 1/16” or less is recommended.

**NOTE:** The outfeed table needs to be set coplanar to the top of the cutterhead “cutting circle”, and then locked into position. It should not be adjusted further in the jointing operation.

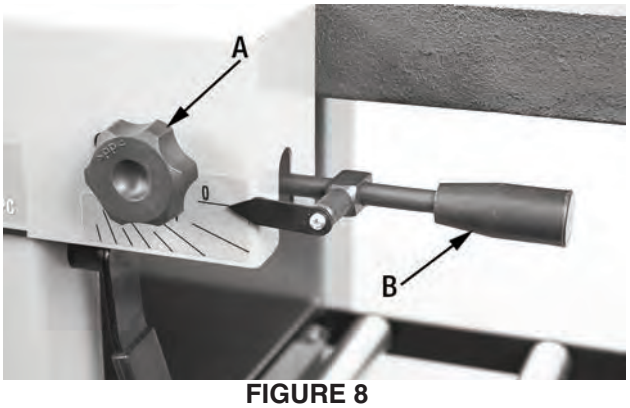


**FIGURE 8**

2. **Using The Cutterhead Guard**: The cutterhead guard (A) Fig.9 should be properly positioned so that it rests against the fence, when material is thin enough to pass under it. For edge jointing or for larger stock, the cutterhead guard must be pulled back to allow the material to pass freely by the end of the guard. To adjust the cutterhead guard position:

a. Loosen the cutterhead guard lock knob (B) Fig.9 and slide the cutterhead guard (A) until it rests on against the fence (C).
b. Adjust the cutterhead guard height using the cutterhead guard height adjustment knob (D) to allow the material to pass underneath.

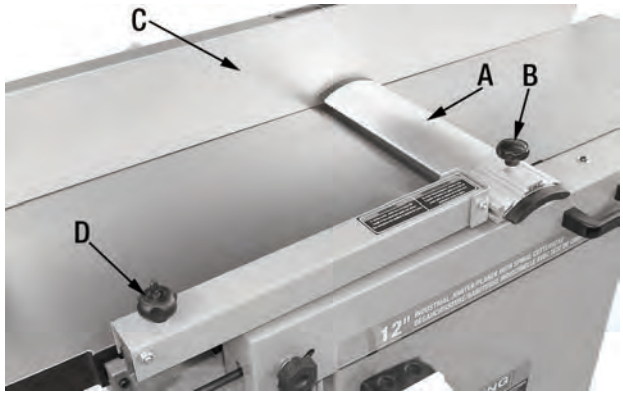


**FIGURE 9**

3. **Using The Fence**: The jointer fence can be adjusted forward and backward across the surface of the jointer table. The fence can also be tilted backward to adjust the angle. The fence can be tilted backward up to 45° (135° from the table surface.) It’s good practice to move the fence periodically to ensure even wear on the cutterhead.

To move the fence forward or backward:
a. Loosen the cutterhead guard lock knob (B) Fig.9 and move the cutterhead guard away from the fence.
b. Loosen the two fence assembly lock handles (A) Fig.10.
c. Slide the fence assembly forward or backward to the desired position.
d. Retighten the lock handles (A) and reposition the cutterhead guard against the fence.

To adjust the fence angle:
a. Loosen the cutterhead guard lock knob (B) Fig.9 and move the cutterhead guard away from the fence.
b. Loosen the fence angle lock knobs (B) Fig.10 and tilt the fence back to the desired angle.
c. You can also place a beveled workpiece or reference gauge on the table, and adjust the fence angle to match, or use the angle scale (C).
d. Retighten the lock knobs (B) and reposition the cutterhead guard against the fence.

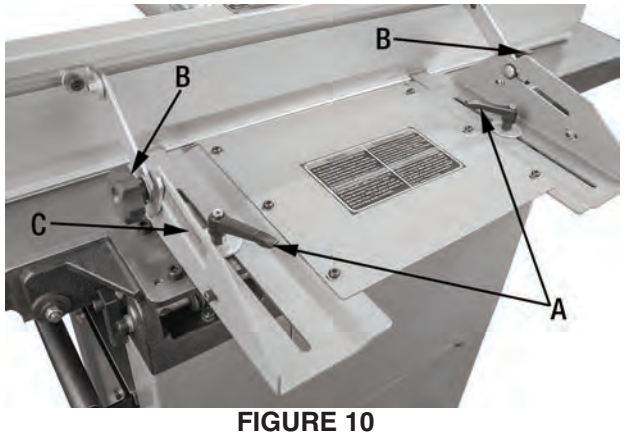


**FIGURE 10**

## TABLE ADJUSTMENTS

In order for proper jointing operation, the infeed and outfeed tables must be coplanar. This means that the infeed and outfeed tables are set along the same plane, forming a perfectly flat surface. If the tables are not coplanar, the workpiece could be slightly tapered or twisted after jointing. The tables are set coplanar from the factory, but should be checked with use to ensure they remain set properly.

To determine if the infeed and outfeed tables are coplanar:

**NOTE:** Ensure the tables are locked in position when checking.

1. Disconnect the machine from the power source.
2. Loosen the cutterhead guard lock knob (B) Fig.9 and remove the cutterhead guard by sliding it out.
3. Loosen the two fence assembly lock handles (A) Fig.10 and slide the fence assembly back as far as it will go to clear the table surface.
4. Place a straight edge (A) Fig.11 across the back of the outfeed table (B), extending over the infeed table (C) as shown.
5. Rotate the cutterhead so the cutter inserts do not interfere with the straight edge.
6. If needed, raise the infeed table (C) until it makes contact with the straight edge.
7. If the straight edge sits flat across both tables, they are coplanar. If adjustment is needed, perform the following adjustments.

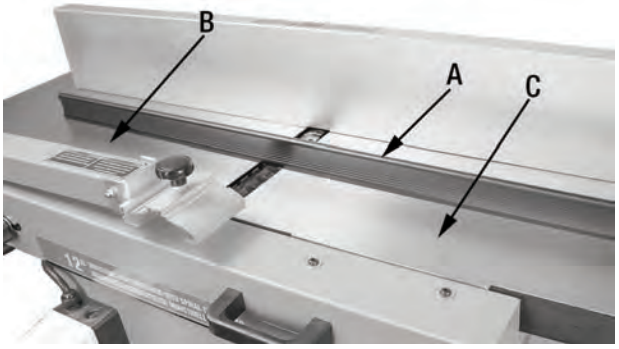



**FIGURE 11**

The adjustments consist of adjusting either the five set screws (B) Fig.12 at the back of the machine which adjust the table pitch and tilt at the back, or adjusting the two cap screws that adjust the table at the front.

1. Disconnect the machine from the power source.
2. Loosen the table lock levers and lift the table into the fully upright position.

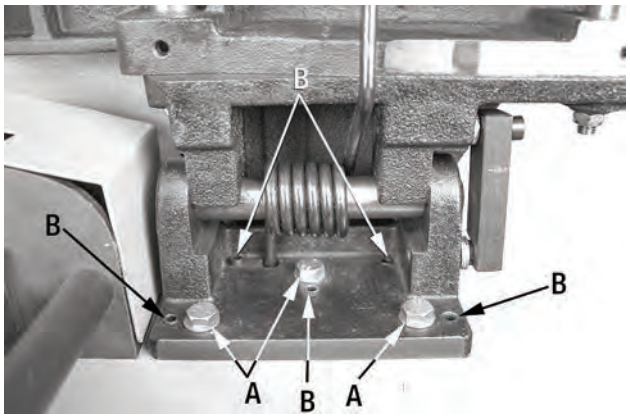



**FIGURE 12**

Making the rear adjustment:

1. Loosen the three hex. bolts (A) Fig.12 on one side, using a 13mm wrench.
2. Adjust the five set screws (B) in small increments. Rotating the set screws clockwise will raise the table, and counterclockwise will lower it. The set screws on the left will have the most impact on the left side of the table, and the set screws on the right will have the most impact on the right side of the table. The set screw in the middle should be tightened last, to create even tension on the base plate.
3. When adjustment is complete, retighten the three hex. bolts (A).
4. Repeat the above steps for the other side of the machine, if necessary.

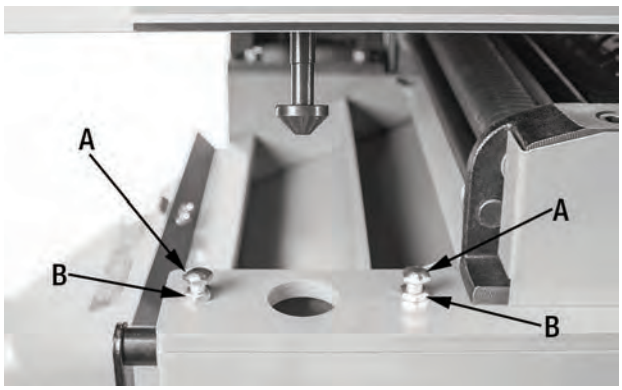



**FIGURE 13**

Making the front adjustment:

1. Using two 13mm wrenches, hold the hex. bolt (A) Fig.13 in place, and loosen hex. nut (B). Repeat for the second hex. bolt and hex. nut.
2. Adjust the hex. bolts (A) in small increments. Rotating the hex. bolts clockwise will raise the table, and counterclockwise will lower it. The hex. bolts on the left will have the most impact on the left side of the table, and the hex. bolts on the right will have the most impact on the right side of the table.
3. When adjustment is complete, secure hex. bolts and hex. nuts.
4. Repeat the above steps for the other side of the machine, if necessary.

**NOTE:** These adjustments may need to be repeated until the tables are coplanar.

## ROTATING/CHANGING CUTTERHEAD CUTTER INSERTS

**WARNING!** When checking cutter inserts, always make sure the machine is disconnected from the power source.

Two T25 Torx bit screwdrivers are supplied with this machine to remove or adjust the position of the cutter inserts secured in the cutterhead. The spiral cutterhead is equipped with 60 indexable cutter inserts (15mm x 15mm x 2.5mm accessory model KW-104) which can be rotated to reveal one of its four cutting edges. Once a cutter insert becomes dull or damaged, simply rotate it 90° to reveal a fresh cutting edge. In addition, each edge of the cutter inserts is marked with a number. These reference numbers can be used as an indicator of which edges are used and which are new. Once the reference mark revolves back around to its starting position, the cutter insert should be replaced.

To check, adjust or replace the cutterhead cutter inserts:

1. Lift the Jointer table to gain access to the cutterhead.

2. Note the position of the reference number (A) Fig.14 on each cutter insert (B). Using the T25 Torx bit screwdriver (C), loosen and remove cutter insert screw (D) by turning counterclockwise.

**Note:** The cutter insert and the seat should be as clean as possible. This will prevent breakage of inserts and ensure proper insert alignment.

3. If cutter insert is damaged, replace it with a new one. If it is not damaged, rotate it as shown in Fig.15.

4. Using a torque wrench, tighten to approximately 45-55 in/lbs torque to secure the cutter insert.

5. Lower the Jointer table.

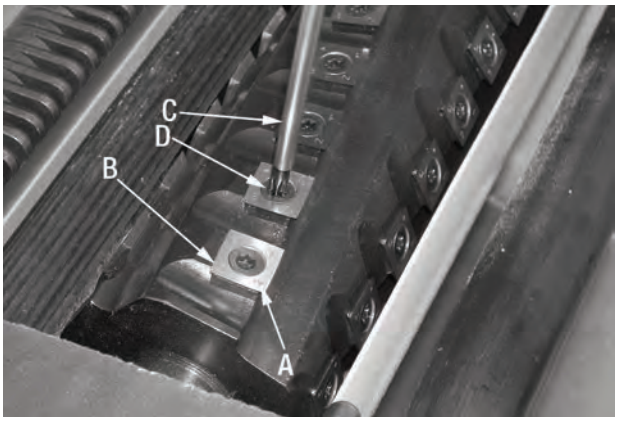



**FIGURE 14**

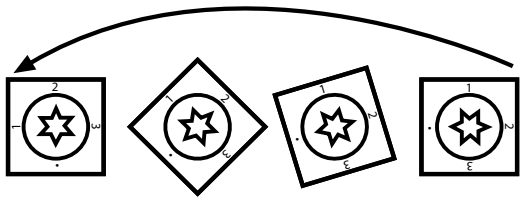


**FIGURE 15**

## JOINTER TABLE LOCK LEVER ADJUSTMENT

The Jointer table lock levers (A) Fig.5 should be facing down when locked. If an adjustment to the table lock levers is required:

1. Disconnect the machine from the power source.

2. Unlock the table lock levers, and raise the Jointer table into the upright position.

3. Loosen the hex. nut (A) Fig.16 and adjust the locking shaft (B) in small increments. Turning the locking shaft clockwise will tighten the lock lever motion, and counterclockwise will loosen it.

4. Retighten the hex. nut (A) and test for proper locking function.

5. Repeat until adjustment is no longer necessary.

6. Repeat above steps for the other side.

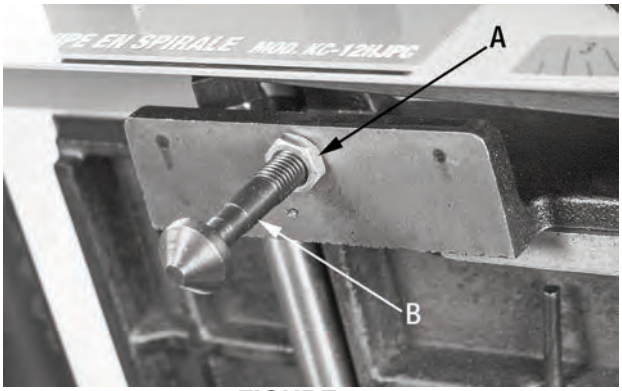



**FIGURE 16**

## CREATING A GAUGE BLOCK

A gauge block is used to check and adjust the Planer feed rollers and table. Create a gauge block by using a piece of hardwood following the dimensions (millimeters) shown in Fig.17 illustration.

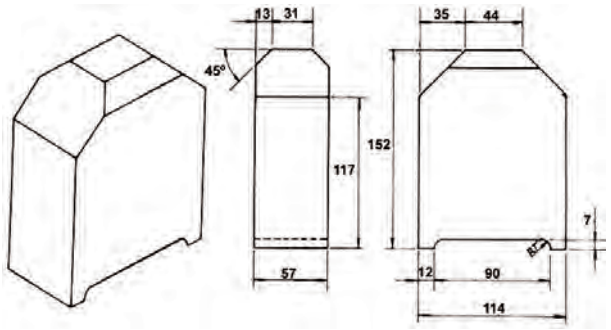



**FIGURE 17**

## FEED ROLLER HEIGHT ADJUSTMENT

The feed rollers are set at the factory, and shouldn't require adjustment. However, if the feed rollers do need to be adjusted:

1. Disconnect the machine from the power source.
2. Remove the front cutterhead access panel (A) Fig.18 and the back access panel (B) by removing the four round head allen screws (C).

**NOTE:** At the back of the cutterhead, you will need to remove the chain and sprockets from the shafts to allow adjustment of the nut/bolt assemblies.

3. Loosen hex. nut (A) Fig.19, and rotate hex. bolt (B) to raise or lower that end of the infeed roller (C).

**NOTE:** Feed rollers must be set parallel to the table, and approximately 1/32" below the "cutting circle". Use a gauge block to measure the height of the feed rollers.

4. Repeat this adjustment with the other end of the infeed roller and both ends of the outfeed roller (D).
5. Measure the height of the rollers in relation to the cutterhead using the gauge block.
6. When the proper setting is achieved, retighten all hex. nuts (A) Fig.19 and make a test cut to verify the setting.

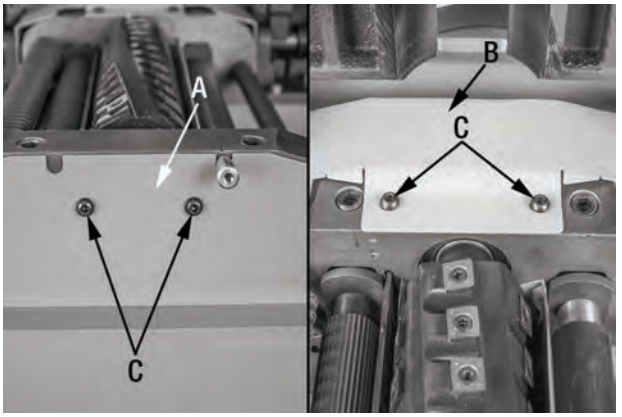


FIGURE 18

## FEED ROLLER PRESSURE ADJUSTMENT

To adjust the pressure of the feed rollers:

1. Loosen or tighten the set screw (E) Fig.19 at both ends of the infeed roller to adjust the spring tension.
2. Rotating the set screw clockwise will increase infeed roller pressure, and counterclockwise will decrease infeed roller pressure.
3. If needed, repeat above steps for outfeed roller.

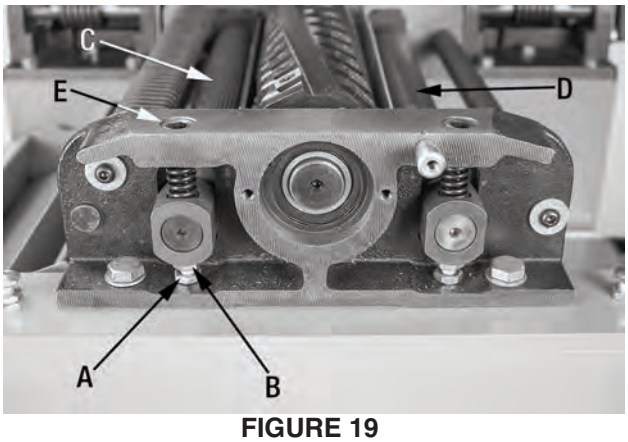


FIGURE 19

## PLANER TABLE ADJUSTMENT

The planer table has been set parallel to the cutterhead in the factory. However, table alignment should be checked to ensure there hasn't been any movement during shipment. To check Planer table alignment:

1. Disconnect the machine from the power source.
2. Lift the Jointer table into the upright position. Lift the dust chute into position for planing. See section "Switching from Jointer to Planer Mode".
3. Place a gauge block (A) Fig.20 directly under the cutterhead on one side of the Planer table.
4. Rotate the cutterhead so that one of the cutter inserts on one side of the table is at its lowest point. Raise the planer table until the gauge block makes contact with the cutter insert.
5. Rotate the cutterhead so that one of the cutter inserts on the other side of the table is at its lowest point. Move the gauge block to the other side to see if it touches the cutter insert at the same point as the previous side.

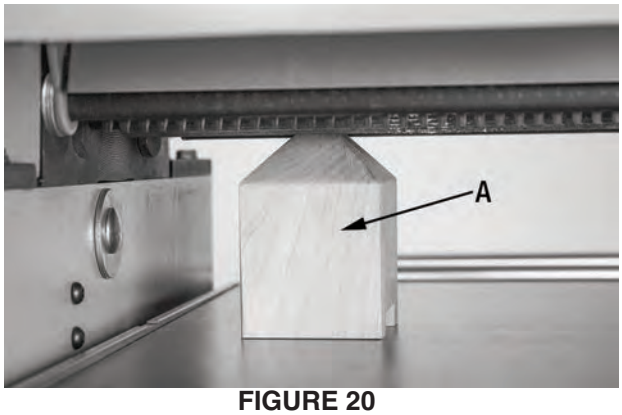


FIGURE 20

**NOTE:** Since this is a spiral cutterhead, it is important to make the same measurement at both ends of the table. The solid body of the cutterhead can also be used instead of a cutter insert to make the measurement.

To adjust the Planer table:

1. The Planer table assembly is attached to the machine with four hex. bolts (A) Fig.21. Loosen the four hex. bolts.
2. Beside each hex. bolt is an adjustment set screw. Rotate the two adjustment set screws (B) clockwise using a hex. key on the side of the table that needs to be raised.
3. Measure the table again using the gauge block, and repeat adjustment steps until the table is parallel with the cutterhead.
4. Retighten the four hex. bolts to secure the adjustment set screws.

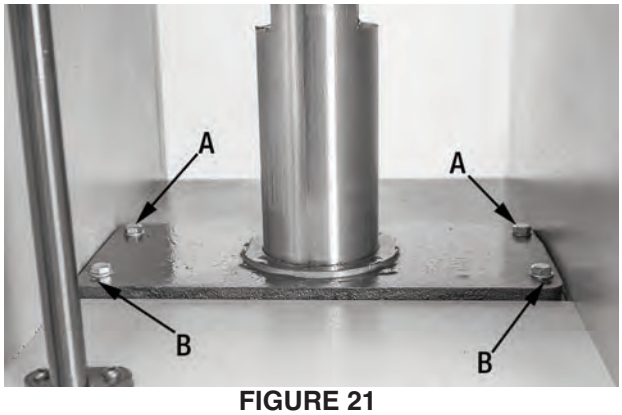


FIGURE 21

# OPERATION

**CONNECTING TO A DUST COLLECTOR**

This machine is equipped with a dust chute for use during jointing and planing operations. The dust chute (A) Fig.22 has a 4" opening. It's very important to use some type of dust collection system with this machine to prevent the build up of wood chips that could interfere with the rollers or the cutterhead. Attach an appropriate 4" diameter hose (B) (not supplied) to the dust chute and secure it in place using a wire clamp (not supplied).

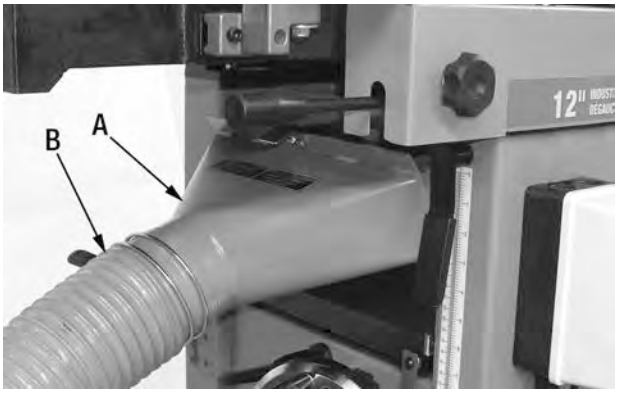



**FIGURE 22**

**USING THE MACHINE IN JOINTER MODE**

**Operator Positioning:** The operator should be positioned offset behind the infeed table, as shown in Fig.23. The workpiece is fed through the jointer from the right side of the machine to the left.

**Hand Placement:** Never allow your hands to pass over the cutterhead. At the beginning of the cut, place both hands on the workpiece, with the left hand holding the workpiece against the infeed table, and the right hand pushing it against the fence. Slowly slide the workpiece toward the cutterhead. As the workpiece moves across the cutterhead, the left hand will move to the outfeed table side of the workpiece without passing directly over the cutterhead. As the end of the workpiece approaches the cutterhead, the right hand will move to the outfeed table side of the workpiece to finish the cut.

**FIGURE 23**

**Surfacing:** The jointer can be used to produce a flat, even surface on the workpiece. The other side can then be fed through a planer to achieve two perfectly flat and parallel surfaces. Tips for surfacing:

1. If the wood is bowed, place the concave side down and make small cuts until the surface is flat.
2. Never use a workpiece that is shorter than 12" without using a special workpiece holding fixture.
3. Use a push block on workpieces that are thinner than 3".
4. Making small cuts incrementally is recommended. Cuts of approximately 1/16" at a time will produce the best results.

**Direction of Grain:** Always feed the workpiece with the grain when possible, and avoid feeding a workpiece through against the grain. Feeding against the grain could result in chipped or uneven surfaces.

**Jointing:** Jointing produces a flat edge surface that is suitable for joinery, finishing, or ripping stock on a table saw.

Safety instructions for jointing:

1. Always use a push block for workpieces less than 3" wide, less than 1/4" thick, or 12" long.
2. Adjust the fence so that only the width of the cutterhead being used for jointing is exposed.
3. Ensure that long workpieces are properly supported on both infeed and outfeed sides.

Jointing a Workpiece:

1. Use a square to set the fence at 90°.
2. Ensure the workpiece is appropriate for jointing, and determine the direction of the grain.
3. If the wood is bowed, place the concave side down.
4. Pass the workpiece across the cutterhead, making small cuts of approximately 1/16" until the surface is flat.

**Beveling:** The jointer can be used to create a beveled edge. Use a bevel gauge to set the desired angle and adjust the fence by tilting it accordingly. Follow the same steps as used in the section "Jointing". Make small cuts, and several passes to achieve the desired bevel.

**USING THE MACHINE IN PLANER MODE**

**Thickness Planing:** Thickness planing refers to feeding the workpiece through the planer until the desired thickness is achieved. Tips for thickness planing:

1. Depth of cut will have a big impact on the quality and results of thickness planing.
2. Setting the depth of cut will depend on the workpiece material, width, grain direction, dryness, etc.
3. The maximum recommended depth of cut for a single pass is 1/8" for planing operations on a workpiece up to 5-1/2" wide. The maximum depth of cut for a single pass of wider workpieces up to 12" is 1/16".
4. Using a depth of cut less than 1/16" will produce the best results.
5. Plane the workpiece repeatedly, taking off a small amount with each pass. Once the workpiece has one level side, flip the workpiece to plane the other side. Alternate sides of the workpiece with each pass until the desired thickness has been achieved.

**USING THE MACHINE IN PLANER MODE continued...**

6. The wider the workpiece, the shallower the depth of cut should be. The harder the wood, the shallower the depth of cut should be.
7. Avoid wood with knots. These can come dislodged during planing and cause damage and/or injury.
8. Remove all nails and staples from the workpiece before planing, and do not plane any material besides wood.
9. For best results, the workpiece will have at least one flat surface. The jointer can be used for creating a flat surface.
10. Twisted or warped workpieces can jam the planer. This can be avoided by ripping the lumber in half.
11. Always feed the workpiece through the machine with the grain, not against.
12. Do not plane a workpiece less that 6" long. For short workpieces, you can butt them end-to-end to reduce snipe and kickback.

**Feeding the workpiece through the machine:**

1. The planer is equipped with feed rollers which feed the workpiece through the machine automatically.
2. The operator must align the workpiece properly so that it can feed properly through the planer.
3. The operator should stand on the side of the machine where the lifting handle is located.
4. Make sure workpieces longer than 24" are properly supported on both the infeed and outfeed sides of the machine.

**Basic operation principles:**

1. Position the workpiece with the side to be planed facing upward toward the cutterhead.
2. Turn on the planer, and engage the feed rollers.
3. Rest the workpiece flat on the infeed table, and slowly feed the workpiece into the machine. The operator should let go of the workpiece and let the infeed roller pull the workpiece through the machine.
4. Do not push or pull on the workpiece as it's fed through the machine. Move to the outfeed side of the planer and receive the workpiece.

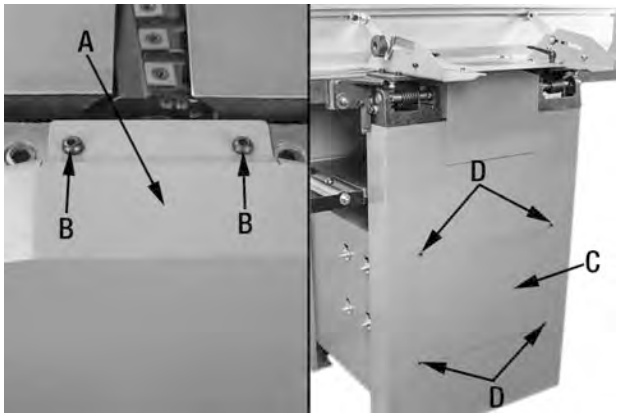



**FIGURE 24**

**MAINTENANCE**

**WARNING!** TO REDUCE THE POTENTIAL FOR PERSONAL INJURY MAKE SURE THE MACHINE IS TURNED OFF BEFORE PERFORMING ANY MAINTENANCE OPERATIONS.

**BELT REPLACEMENT**

**Removing the drive belt access panels:**

1. Remove the fence assembly by loosening the two lock handles all the way.
2. Remove the upper back access panel (A) Fig.24 by removing the two round head allen screws (B).
3. Remove the lower back access panel (C) by removing the four round head allen screws (D).

**Replacing the cutterhead drive belt:**

4. Loosen the four motor mount bolts (A) Fig.25. Raise the motor so the motor mount bolts (A) rest in the horizontal slots (B), releasing tension on the belt.
5. Remove the cutterhead drive belt (A) Fig.26 from the cutterhead pulley (B) and motor pulley (C).
6. If the planer feed roller belt does not need to be replaced, skip to step 10 on the following page to replace the cutterhead drive belt.

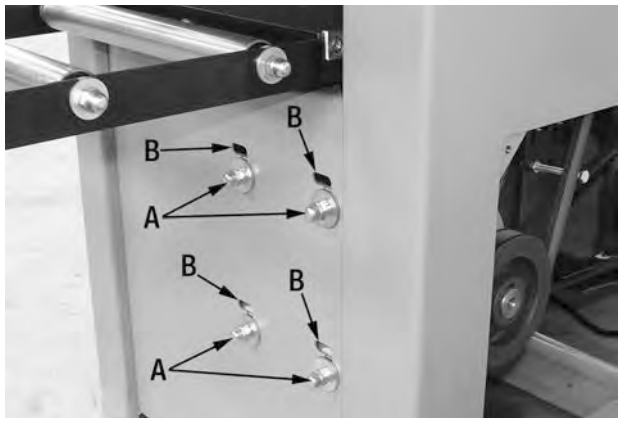



**FIGURE 25**

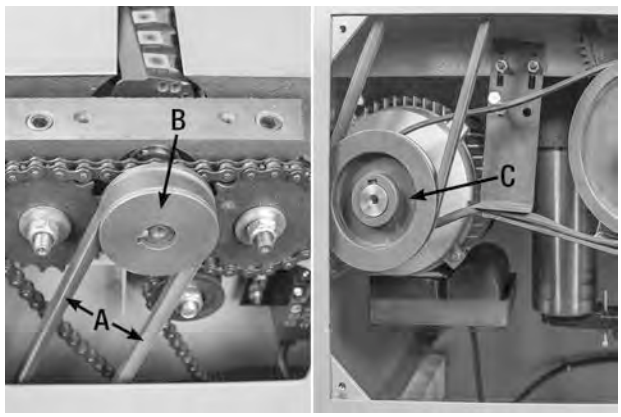



**FIGURE 26**

# MAINTENANCE

**MAINTENANCE**

**BELT REPLACEMENT**

**Replacing the Planer Feed Roller Drive Belt:**

**NOTE:** The cutterhead drive belt must be removed first in order to replace the planer feed roller drive belt.

7. Move the power feed handle into the down position, releasing tension on the belt.
8. Remove the planer feed roller drive belt (A) Fig.27 from the feed roller pulley (B) and the motor pulley (C).
9. Place the new belt around the feed roller pulley and the motor pulley.

**NOTE:** Make sure the bottom of the belt is positioned between the belt-brake plates (D).

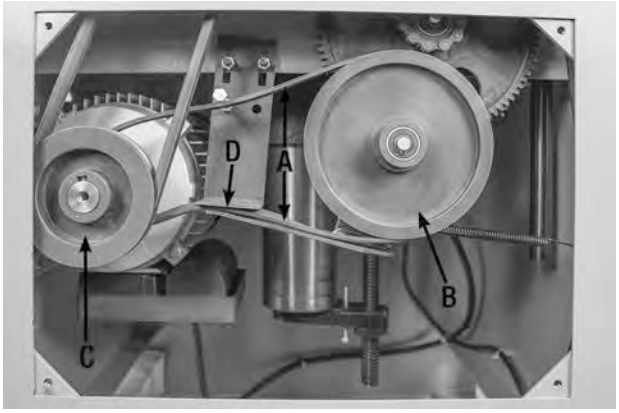



**FIGURE 27**

**After Replacing the Feed Roller Drive Belt:**

10. Place the new cutterhead drive belt around the cutterhead pulley and the larger side of the motor pulley.
11. Reposition the motor and retighten the mounting bolts.
12. Replace the upper and lower access panels, and retighten the round head allen screws.
13. Reinstall the jointer fence assembly, and retighten lock handles.

**REGULAR MAINTENANCE CHECKLIST**

**WARNING!** TO REDUCE THE POTENTIAL FOR PERSONAL INJURY MAKE SURE THE MACHINE IS TURNED OFF BEFORE PERFORMING ANY MAINTENANCE OPERATIONS.

1. Make sure everything has been installed properly. Check to make sure all parts are secured properly before using the machine. Inspect the magnetic switch, power cord/plug before each use.
2. Keep the machine clean, and regularly clear the machine of sawdust and debris.
3. Make sure you are wearing proper attire for operating machinery. This includes safety glasses, and hearing protection. Avoid loose fitting clothing, jewelry such as watches or bracelets, or anything that could be caught by moving parts (either the machine itself or the workpiece).
4. Make sure the cutter inserts are secured properly to the cutterhead.
5. Make sure the feed rollers and planer table are set properly.
6. Make sure the workpiece material is suitable for jointing and/or planing.

**PERIODIC MAINTENANCE CHECKLIST**

1. Occasionally coating the table surface with paste wax can help protect the table surface, and make it easier for the workpiece to slide along it.
2. The motor and cutterhead bearings are sealed. They do NOT require additional lubrication. However, the drive gears, chain, and elevation screws should be cleaned once every 10-15 hours of use. Remove the old grease, and apply a generous coating of common automotive bearing grease.
3. Regularly inspect workpieces for signs of wear or damage to the cutter inserts. Rotate or replace worn or damaged cutter inserts immediately.
4. Avoid the use of silicon based products on the machine, as these could interfere with wood finishing products.

**LUBRICATION**

The cutterhead bearings are sealed, and do not need to be lubricated. Use a light grease on the threaded steel columns which are part of the raising and lowering mechanisms of the Planer table.