



# 13" PLANER WITH HELICAL CUTTERHEAD

08/2016



MODEL: KC-13HPC

# INSTRUCTION MANUAL

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# WARRANTY INFORMATION



**2-YEAR  
LIMITED WARRANTY  
FOR THIS 13" PLANER**

**KING CANADA TOOLS  
OFFERS A 2-YEAR LIMITED WARRANTY  
INTENDED FOR NON COMMERCIAL USE**

## **PROOF OF PURCHASE**

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

## **REPLACEMENT PARTS**

Replacement parts for this product are available at our authorized King Canada service centres across Canada.

## **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 purchase to an authorized King Canada service centre. Contact your retailer or visit our web site at [www.kingcanada.com](http://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.

## **PARTS DIAGRAM & PARTS LISTS**

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

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

**[www.kingcanada.com](http://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, they 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 switch 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.

## SPECIFIC SAFETY RULES FOR PLANERS WITH HELICAL CUTTERHEAD

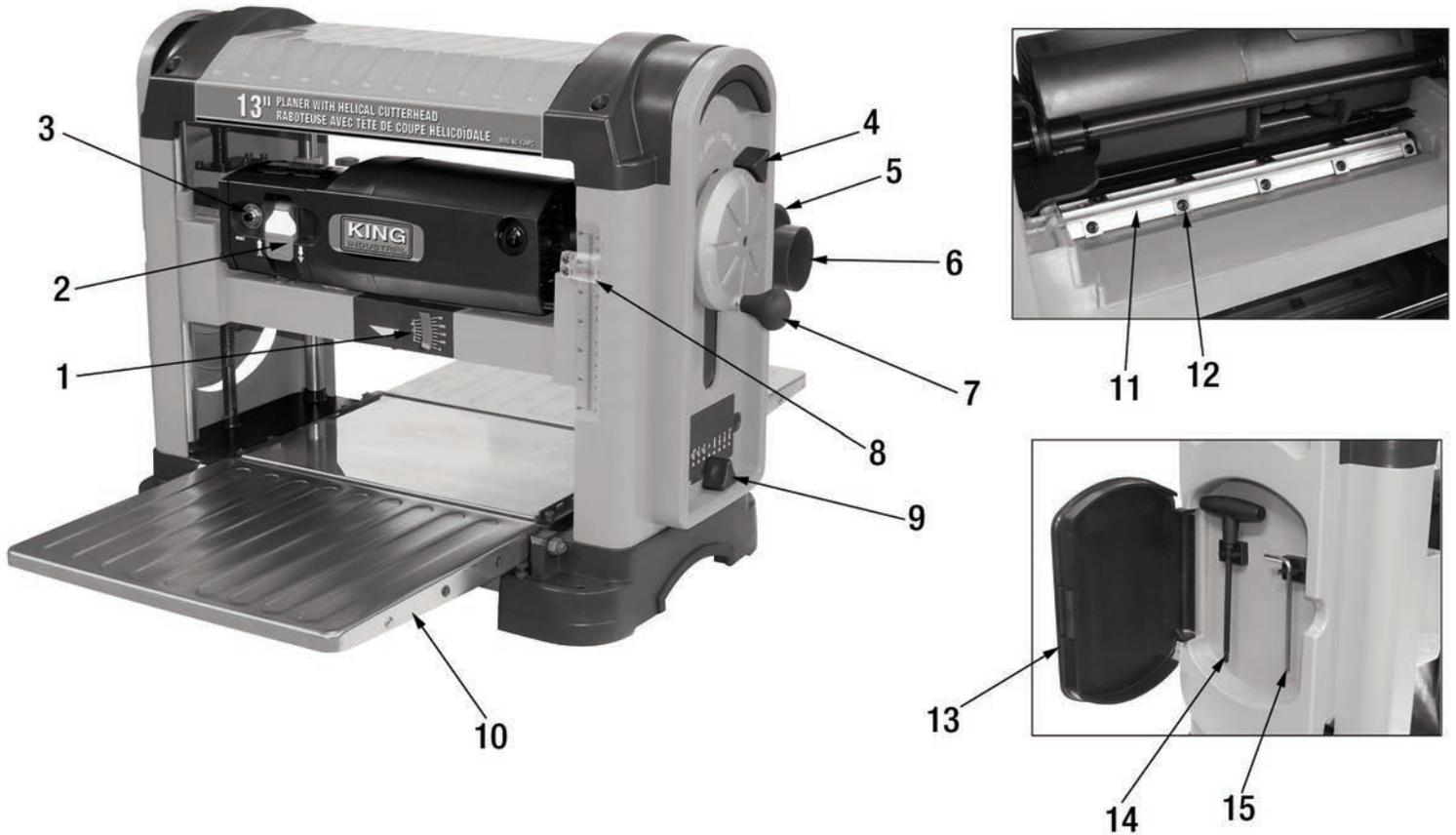
Safety is a combination of common sense, staying alert and knowing how your planer works. Read and understand the following safety rules before operating.

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 push or force stock into the cutterhead. The planer 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 plane a workpiece.
6. Inspect stock and remove all foreign objects before planing. Make sure that any stock you plane is clean and free of any dirt, nails, staples, tiny rocks or any other foreign objects that may damage

the planer knives. Only process natural solid wood boards. Never plane MDF, particle board, plywood, laminates or other synthetic materials.

7. Do not operate this planer 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 tool 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.

# GETTING TO KNOW YOUR 13" PLANER



## Getting to know your 13" Planer with Helical Cutterhead

- 1) Depth of cut indicator
- 2) Switch with safety key
- 3) Reset
- 4) Height handwheel lock lever
- 5) 4" dust chute
- 6) 2-1/2" dust chute adaptor
- 7) Height adjustment handle
- 8) Planing thickness scale & indicator
- 9) Pre-set depth stop selector
- 10) Infeed extension table
- 11) Helical cutterhead
- 12) Cutter insert (1 of 26)
- 13) Tool storage cover
- 14) Torx adjustment wrench
- 15) 4mm hex. key

## Specifications

MODEL	KC-13HPC
Maximum planing width	13"
Maximum planing thickness	6"
Number of cutter inserts	26
Feed rate	26 ft/min
Cutterhead speed	10,000 RPM
Motor	15 Amp.
Voltage	120V, 1 phase, 60 Hz
Ass. dimensions (LxWxH)/weight	25-3/4" x 34" x 19-3/4" / 85 lbs
Pkg dimensions (LxWxH)/weight	26-7/8" x 15" x 22-1/2" / 90 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 PLANER MUST BE CONNECTED TO A 110V-120V, 15-AMP CIRCUIT BREAKER. FAILURE TO CONNECT IN THIS WAY CAN RESULT IN INJURY FROM SHOCK OR FIRE.

### GROUNDING

This 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 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.

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

**WARNING:** IF NOT PROPERLY GROUNDING, THIS 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.

### 110V-120V OPERATION

As received from the factory, your Planer is ready to run for 110V-120V operation. This 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 ADAPTOR 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 chart in Fig.2 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 Planer motor. Refer to Fig.2 for wire length and size.

### SAFETY SWITCH

This machine is supplied with a safety switch (A) Fig.3 equipped with a removable safety key (B). To turn the machine ON make sure the yellow safety key is inserted and pull the switch up, to the ON position. To turn the machine OFF push the switch to the OFF position. To prevent unauthorized use of your machine remove the safety key and store it in a secure location.

### RESET BUTTON (thermal overload protector)

This Planer comes with an overload reset button (C) Fig.3 (next to the On/Off Switch). If the motor overheats, a safety mechanism stops the motor automatically due to motor overheating or low voltage. Press the reset button and restart the Planer. If the Planer does not restart, wait 5 minutes before attempting to restart.

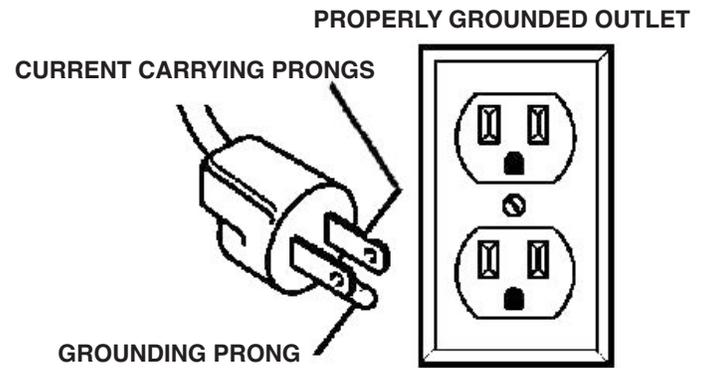


FIGURE 1

Tool's Amperage Rating	Cord Size in A.W.G.			
	Cord Length in Feet			
	25	50	100	150
3-6	18	16	16	14
6-8	18	16	14	12
8-10	18	16	14	12
10-12	18	16	14	12
12-16	14	12	-	-

FIGURE 2

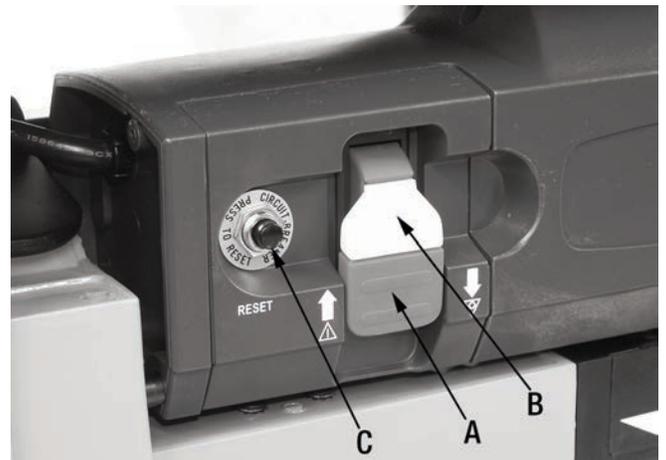


FIGURE 3

# ASSEMBLY & OPERATION



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

## Installing the planer on a stable surface

This Planer should be secured to a flat, level, sturdy surface, able to support the weight of the machine and the workpiece with ease. It is recommended to use the mounting holes and drilling matching holes in your workbench or mounting surface to bolt the planer in place (hardware not included).

**Note:** Never install or operate this Planer over the edge of a table, workbench or other mounting surface.

## Assembling height adjustment handwheel knob

1. Lower the front and rear extension tables.
2. Push the lever (A) Fig.4 to the left, then align the mounting hole (B) in the height adjustment handwheel (C) with the opening in the frame, as shown.
3. Insert the handwheel knob (A) Fig.6 into its mounting hole (B) Fig.4, insert the cap screw (D) Fig.4 into the same mounting hole from the other side of the handwheel and tighten the cap screw with the supplied 4 mm hex. key.

## Installing the exclusive 2 position dust chute

1. Slide the dust chute (A) Fig.5 over the cutterhead as shown.
2. Install and tighten two lock knobs (B) Fig.5.

**Note:** The 4" (C) Fig.5 and 2 1/2" adaptor (D) dust ports allow you to connect the machine to your shop dust collection system (not included). If using the 4" dust chute, remove the 2-1/2" adaptor. Be sure to use correct size hoses and fittings (not included). If you do not already own a dust collection system contact your King Canada retailer or visit our website at [www.kingcanada.com](http://www.kingcanada.com) for information on our complete line of dust collectors and accessories.

**Note:** If a dust collector is not available, this dust chute comes with an exclusive system which allows the dust chute (A) Fig.5 to be flipped down to an open position for free flow chip ejection. Pull and pivot the dust chute (A) down as shown in Fig.5.

## Raising/lowering the cutterhead

To set the depth of cut, the motor/cutterhead assembly can be raised or lowered as needed by rotating the depth of cut adjustment handwheel (A) Fig.6.

Before attempting to adjust the depth of cut, make sure the cutterhead is unlocked by pushing the lever (B) Fig.6 to the left as shown. In order to minimize workpiece snipe, before turning on the Planer lock the cutterhead by pushing the lever (B) all the way to the right.

**Note:** Each 360° rotation of the handwheel will raise or lower the motor/cutterhead assembly 1/16".

## Using and adjusting the pre-set depth stops

The adjustable pre-set depth stops (A) Fig.7, allow the user to select one of eight common workpiece final thickness setting.

With the cutterhead positioned just above the height of the workpiece, slide the adjustment knob (B) and select the desired final thickness setting from either 1-3/4", 1-1/2", 1-1/4", 1", 3/4", 1/2", 1/4", 1/8". This will set the stop to prevent the cutterhead from going any lower than the selected thickness.

**Note:** Once the operation is complete, do not attempt to lower the cutterhead further. Forcing the handwheel when the cutterhead rests on the depth stop will damage the raising/lowering mechanism.

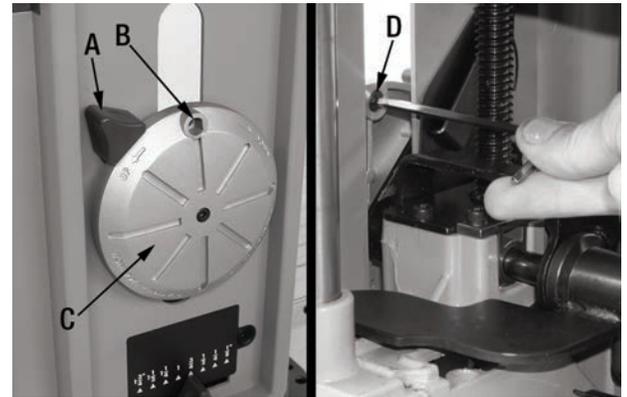


FIGURE 4



FIGURE 5



FIGURE 6

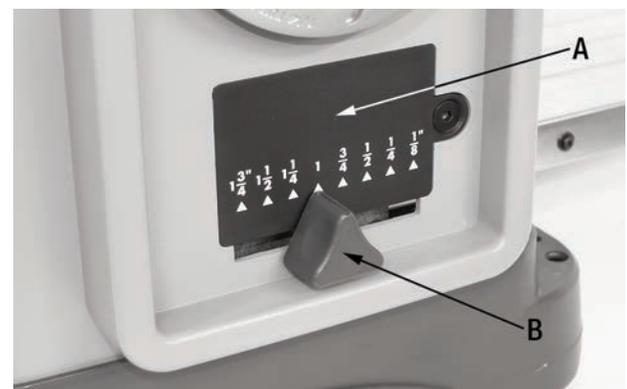


FIGURE 7



# OPERATION & ADJUSTMENTS

## Using and adjusting the pre-set depth stops continued....

The pre-set depth stop Fig.8 is adjusted at the factory, but in some rare cases it may eventually be necessary to readjust. To adjust the pre-set depth stops:

1. Set the pre-set depth stop to the 1" position by sliding the knob (A) Fig.8.
2. Plane a board thicker than the pre-set depth stop value until the stop prevents you from lowering the cutterhead.
3. Measure the thickness of the board. If the thickness of the board does not match the value indicated by the pre-set depth stop, an adjustment is needed.
4. Remove the flat head allen screw (B) Fig.8 with the supplied 4 mm hex. key, then pull and slide the cover (C) downwards to remove it.
5. Loosen the hex. nut (D) Fig.8.
6. Turn the stop bolt (E) Fig.8 a 1/4" turn in the required direction in order to re-adjust the stop bolt against the stop plate (F), retighten the hex. nut (D).
7. Once the adjustment is finished, re-install the cover (C).

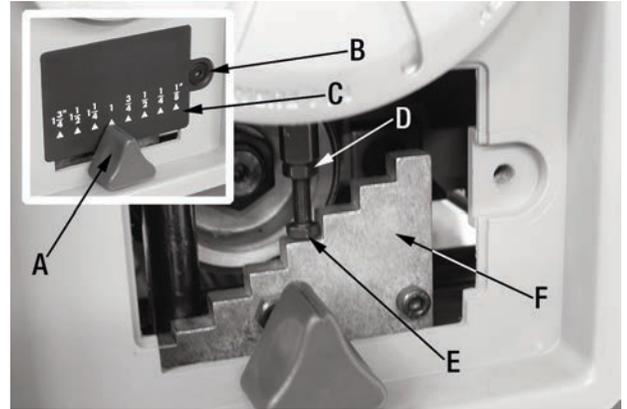


FIGURE 8

## Alignment of infeed and outfeed extension tables

1. Place a straight edge (A) Fig.9 across the infeed table and the main table and make sure that the two tables are aligned. If the tables are not aligned, an adjustment is needed.
2. Loosen hex. nut (B) on one side of the infeed table.
3. Turn hex. bolt (C) until the infeed table is aligned with the main table.
4. Retighten hex. nut (B), repeat steps 1 to 4 on the opposite side and then proceed to verifying if the outfeed table requires adjustment. The adjustment of the outfeed table is identical to the infeed table.

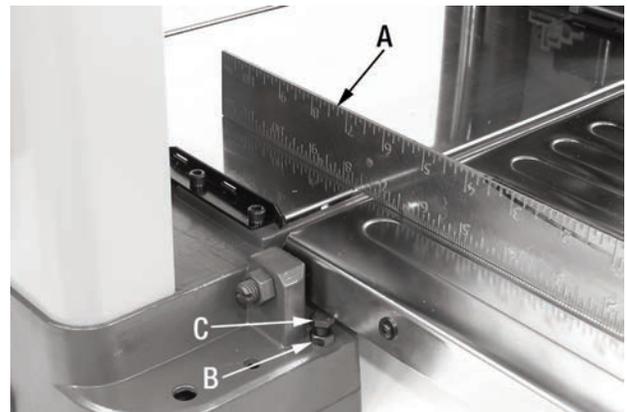


FIGURE 9

## Adjusting the thickness scale

1. Plane a board and measure its thickness to verify that is the same as the value indicated by the thickness scale (A) Fig.10 and pointer (B). If the value indicated is not the same, an adjustment is needed.
2. Loosen pan head screws (C) Fig.10 with a screwdriver, then set the pointer (B) on the scale so that it indicates the correct thickness. Retighten screws (C) once the adjustment is completed.



FIGURE 10

## Depth of cut indicator

The depth of cut indicator (A) Fig.11 and scale (B), will indicate how much material the cutterhead is set to remove from the workpiece for a given pass.

The pointer will read zero until the workpiece engages the front of the cutterhead. Place the workpiece under the front of the cutterhead and turn the height adjustment handwheel clockwise until the cutterhead makes contact with the workpiece and until the depth of cut indicator shows the reading that matches the desired cut.

**Note:** Failure to follow these recommendations will lead to premature blade wear and may cause premature motor failure.

## It is recommended that for both hard and soft wood:

- For stock up to 6" in width, never remove more than  $1/8$ " per pass.
- For stock of 6"-13" in width, never remove more than  $1/16$ " per pass.

Removing less material per pass and taking multiple passes is always preferred to more aggressive planing. Advantages include prolonged life of the cutter inserts, better finish quality (resulting in less time sanding later) and less likelihood of removing too much material causing the workpiece to be too thin for its intended use.



FIGURE 11

# BASIC GUIDELINES



## Basic guidelines

This 13" planer with helical cutterhead is designed to remove material from the top surface of a board in order to bring the board down to a specific desired thickness.

To obtain even, uniform thickness across the length of a board, the stock being planed must have one face that has already been machined perfectly flat (usually on a planer) and the stock **should be fed with this flat face against the table**.

If it is not possible to machine one face perfectly flat before planing, take shallow passes all on the same face of the board until this face has been machined level.

Then the board should be flipped over and the leveled face should be fed face down against the table to allow you to dimension the board to final thickness.

**WARNING!** TO REDUCE THE POTENTIAL FOR PERSONAL INJURY AND/OR DAMAGE TO THE MACHINE, VERIFY ALL STEPS IN THE FOLLOWING CHECKLIST BEFORE STARTING PLANING OPERATIONS.

- 1) Inspect all boards to be planed for foreign objects, loose knots, or other potential hazards.
- 2) Put on safety glasses and wear hearing and respiratory protection at all times during planing operations.
- 3) Inspect the power cord, plug, and switch for damage before plugging in and turning on the planer - **DO NOT OPERATE THE PLANER WITH A DAMAGED POWER CORD, PLUG, OR SWITCH.**
- 4) Roll up long sleeves, tie back or secure long hair, and remove all jewelry or any other objects that have the potential to become caught in the cutterhead or other moving parts, potentially causing serious personal injury.

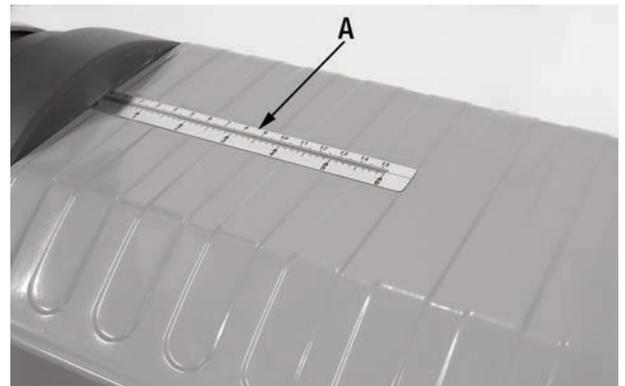
This planer is not intended (and should not be used) to plane any material other than solid wood. The workpiece should always be fed through the planer in the general direction of the grain in the wood.

## Planing guidelines

- 1) With the planer turned off, position the workpiece on the infeed extension table with the flat surface of your workpiece face down and the face to be planed facing up.

Note: Use the scale (A) Fig.12 on the top of the planer to measure the thickness of the board, making sure it doesn't exceed 6" thick.

- 2) If a specific pre-set thickness is required, set the stop to the desired final workpiece thickness, refer to Fig.7.
- 3) Slide the workpiece towards the cutterhead and using the height adjustment handwheel, raise or lower the cutterhead as needed to obtain the desired thickness of cut.
- 4) Set the board aside and turn on the planer by lifting the switch to the On position.



**FIGURE 12**

**WARNING!** TO LIMIT THE POTENTIAL FOR INJURY IN THE EVENT OF A KICKBACK, AVOID STANDING DIRECTLY IN LINE WITH THE FRONT OR BACK OF THE PLANER WHENEVER A BOARD IS ENGAGED IN THE CUTTERHEAD.

- 5) Stand to one side of the machine and set the board back on the infeed extension table with the face to be planed facing up.
- 6) Align the board laterally so that it will be fed through the planer in the general direction of the grain, and allow the workpiece enough clearance to feed properly without rubbing or catching on either side of the machine.
- 7) Slowly slide the workpiece forward until the infeed roller "grips" the board.
- 8) Release the workpiece allowing the feed roller to automatically feed it through the planer.
- 9) Step to the rear of the machine and recover the planed workpiece on the outfeed table once it has cleared the outfeed roller and has stopped advancing.



# MAINTENANCE

## MAINTENANCE

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

### Regular Maintenance

To ensure optimum performance and longer service life of your planer the following basic maintenance steps should be practiced regularly:

- 1) Inspect the power chord and plug for damage before each use. Never operate the planer with a damaged power chord or plug. To reduce the risk of electric shock, unexpected start-up, and/or damage to the motor, replace a damaged power chord or plug immediately.
- 2) Test the ON/OFF switch before each use. Never operate the planer with a damaged/ malfunctioning switch. To reduce the risk of electric shock, unexpected start-up, and/or damage to the motor, replace a damaged/malfunctioning switch immediately.
- 3) Keep the planer and its tables clean and free of debris, sawdust, woodchips, glue. Vacuum or brush off loose debris and wipe down the machine regularly with a damp rag.
- 4) Regularly inspect freshly planed boards for signs of worn or damaged cutterhead inserts. Replace worn/damaged cutterhead inserts immediately.
- 5) An occasional light coating of paste wax can help protect the tables' surface and reduce workpiece friction. Avoid using silicon based products that may affect wood finishing products such as oil, solvent or water based stains, varnishes and lacquers.
- 6) The motor and cutterhead bearings are sealed and permanently lubricated, no further lubrication is required.
- 7) The drive gears, chain and elevation screws should be cleaned of woodchips, dust, debris and old grease after every 10-15 hours of use. After cleaning, re-apply a generous coating of any common automotive bearing grease.

### Replacing/Rotating Cutterhead Inserts

The cutterhead is equipped with 26 cutter inserts with 2 cutting surfaces each. To maintain even wear and smooth planing results, always rotate or replace all 26 inserts each time replacement is needed.

**NOTE:** Original King Canada replacement cutter inserts (model KW-204) can be ordered through your local retailer.

**WARNING!** MAKE SURE THE MACHINE HAS BEEN TURNED OFF AND UNPLUGGED FROM THE POWER SOURCE BEFORE PERFORMING ANY MAINTENANCE OR ADJUSTMENTS.

Observing planed workpieces as they come off of the machine and looking for signs of cutter insert damage or wear is the best method to help you to determine when they are due to be changed. Signs to look for:

- 1) A raised ridgeline in the workpiece that runs a straight line from beginning to end of the board. This is generally an indication that one or more cutter inserts have been nicked or damaged by a foreign object such as a nail, staple or other hard object hidden or embedded in the workpiece.
- 2) A slight washboard or chatter effect which can be an indication of uneven cutter insert wear causing one cutter cuts slightly deeper than the others.
- 3) Rough, irregular, torn or fuzzy grain on a freshly planed surface may be a sign of worn or dull cutter inserts causing the wood to tear out. Sharp cutter inserts cut crisply and leave a relatively smooth finish.

Note: Fuzzy grain can also be a sign of high moisture content in the workpiece. If cutter inserts have recently been changed or if you suspect that moisture content and not dull inserts is the cause, set the workpiece aside and test by planing other boards with known or acceptable moisture content. If the planed results using a different workpiece are smooth, then moisture content in your wood is the problem. No adjustments can be made to the machine for this. Set the "wet" stock aside and simply work with drier wood.

- 1) Turn off and unplug the machine from the power source and remove the switch safety key.
- 2) Remove the dust chute lock knobs (A) Fig.13 and remove the dust chute (B).
- 3) Remove the flat head allen screw (B) Fig.8 with the supplied 4 mm hex. key, then pull and slide the cover (C) downwards to remove it.
- 4) Insert the supplied 4 mm hex. key (A) Fig.14 into the cutterhead shaft (B) to immobilize the cutterhead shaft.

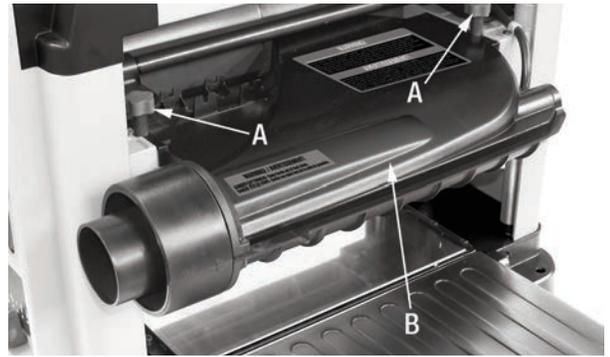


FIGURE 13

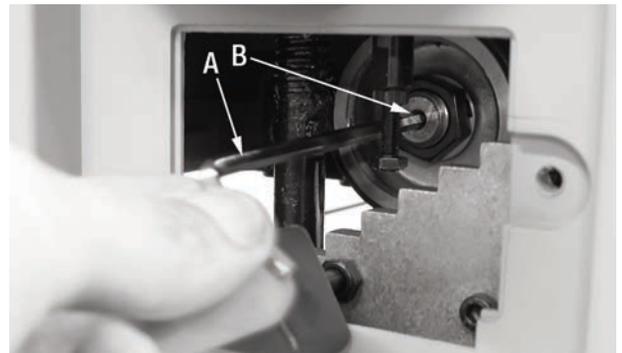


FIGURE 14

# MAINTENANCE



## Replacing/Rotating Cutterhead Inserts continued...

- 5) While preventing the cutterhead from turning, remove each of the cutter inserts (A) Fig.15 with the supplied Torx wrench (B).
- 6) Before replacing or rotating the inserts take a moment to clean the screw housing, inserts (if rotating rather than replacing), and screws with a solvent such as lacquer thinner.

**Note:** There is an etched reference mark on each insert to help keep track of which cutting surface to use. Make sure to rotate all inserts so that the reference mark sits in the same position on all inserts. All cutter inserts have a flat side, this side must be positioned against the flat of the cutterhead.

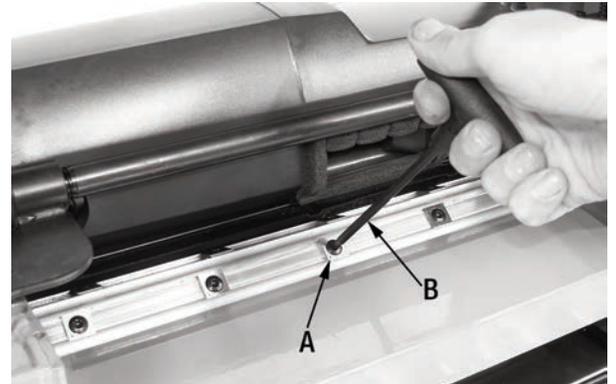


FIGURE 15

## Motor carbon brush replacement (After about 150 hours of usage)

Note: Replace both motor carbon brushes when their length is less than 6 mm.

- 1) Unplug the machine from the power source and remove the safety key from the switch.
- 2) Using a flat head screwdriver, unscrew and remove the carbon brush cover (A) Fig.16.
- 3) Remove the motor carbon brush (B) Fig.16 from its housing as shown. Install the new identical carbon brush in its housing, then re-install the cover.
- 4) Repeat steps 1 to 3 for the carbon brush on the opposite side of the motor. Removing the dust chute will be required to access the carbon brush cover.

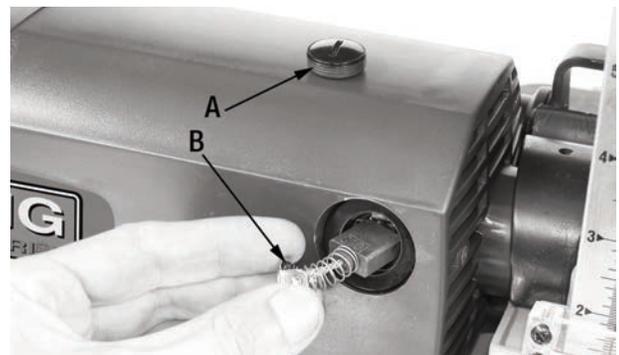


FIGURE 16

## Belt replacement

Inspect the belt after every 100 hours of use. A belt which shows visible signs of wear such as cracks or fraying at the edges should be replaced immediately.

- 1) Turn off and unplug the machine from the power source and remove the switch safety key.
- 2) Unlock the cutterhead by placing the lock lever (A) Fig.17 towards the left. Raise the cutterhead near its maximum height by turning the handwheel (B).
- 3) Remove the handwheel cap screw (C) Fig.17 with the supplied 4 mm hex. key and pull the handwheel off its shaft.
- 4) Remove the lock lever (A) Fig.18. Pull back and then raise and pull back again to remove it.

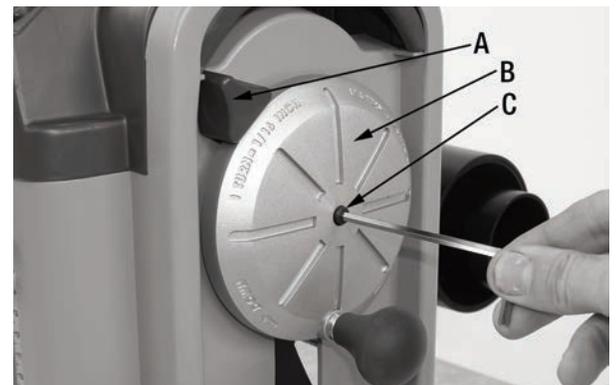


FIGURE 17

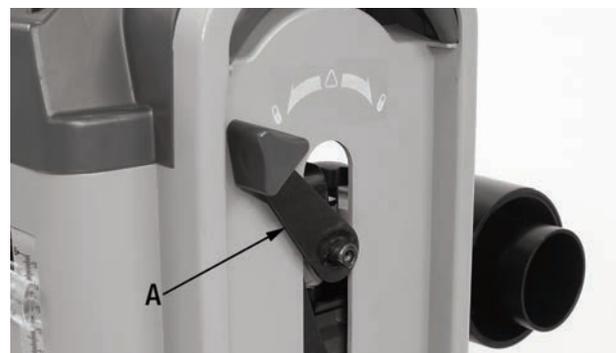


FIGURE 18

## Belt replacement continued...

- 5) Remove the two cap screws (A) Fig.19 located in the top of the right cover (C) using a 5 mm hex. key.
- 6) Remove the centre panel (B) Fig.19 and the right cover (C).

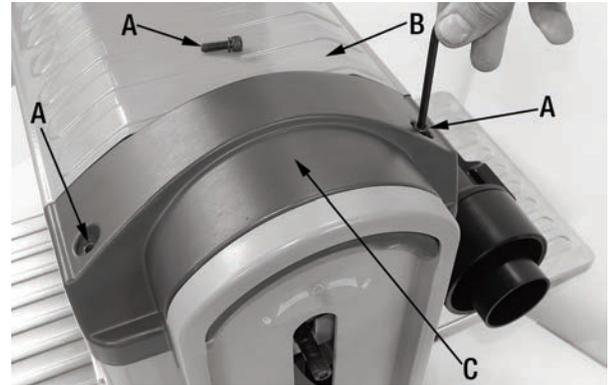


FIGURE 19

- 7) Remove the flat head allen screw (B) Fig.8 with the supplied 4 mm hex. key, then pull and slide the cover (C) downwards to remove it.
- 8) Once the cover has been removed, loosen the lock hex. nut (A) Fig.20, once loose loosen and remove the depth stop knob (B).
- 9) Remove the plastic side housing (C) Fig.20.

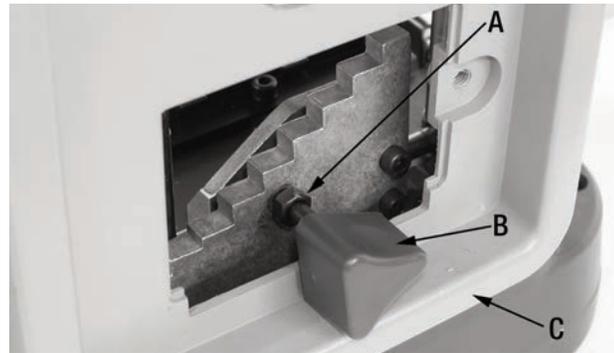


FIGURE 20

- 10) Pull on the belt (A) Fig.21 while turning the motor pulley counterclockwise until the belt comes off the cutterhead pulley (B).
- 11) Remove the belt from around the upper motor pulley.
- 12) Install the new belt on the upper motor pulley first.
- 13) Slide the belt onto the edge of the cutterhead pulley (B).

**WARNING!** TO REDUCE RISK OF INJURY KEEP FINGERS ON TOP OF THE BELT.

- 14) Turn the upper motor pulley until the belt seats properly on both pulleys.
- 15) Reinstall all parts removed in steps 3 to 9 in the reverse order.

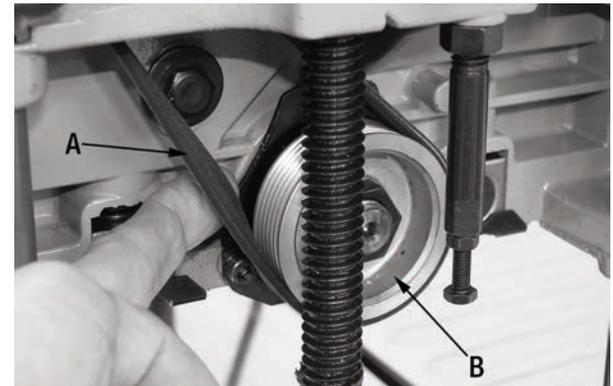


FIGURE 21