



## 13-SPINDLE LINE BORING MACHINE

10/2016



MODEL: KC-1300BM

# INSTRUCTION MANUAL

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## WARRANTY INFORMATION

**2-YEAR  
LIMITED WARRANTY  
FOR THIS LINE BORING MACHINE**

**KING CANADA TOOLS  
OFFERS A 2-YEAR LIMITED WARRANTY  
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 centers 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 center, 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 center. Contact your retailer or visit our web site at [www.kingcanada.com](http://www.kingcanada.com) for an updated listing of our authorized service centers. In cooperation with our authorized serviced center, 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.

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# GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS



## 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 due to wax and sawdust build-up.

## 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, that 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 INSTRUCTIONS FOR LINE BORING MACHINES

1. **DO NOT** attempt to use this machine until you are totally familiar with how to operate it safely. Read instruction manual for details.

2. **MAKE CERTAIN** the machine is fastened to a supporting surface to prevent it from tipping over during operation.

3. **NEVER TURN LINE BORING MACHINE ON** before clearing the table of all objects (tools, scrap pieces, etc.).

4. **ALWAYS KEEP** hands, fingers and hair away from the rotating bits. **DO NOT ATTEMPT** on material that does not have a flat surface, unless a suitable support is used.

5. **ALWAYS CLAMP** workpiece to table with hold-downs to prevent lifting.

6. **ALWAYS SUPPORT** workpiece securely against fence to prevent rotation.

7. **BE SURE** boring bits are sharp, undamaged and properly secured.

8. **NEVER START** line boring machine with bits pressed against the workpiece.

9. **NEVER PERFORM LAYOUT** or assembly on the machine with cutting tool rotating.

10. **ADJUST DEPTH STOP** to avoid drilling into the table.

11. **ALWAYS STOP** the machine before removing scrap pieces from the table.

12. **SHUT OFF POWER**, remove boring bits, and clean the table before leaving.

13. **DO NOT WEAR** gloves, neckties or loose fitting clothing.

14. **NEVER PLACE YOUR FINGERS** in a position where boring bits could contact them if workpiece should shift unexpectedly.

15. **NEVER USE DAMAGED BITS** in the machine.



## 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 LINE BORING MACHINE MUST BE CONNECTED TO A 110-120V WALL OUTLET, WITH A MINIMUM 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.

### GROUNDING

Your Line Boring Machine 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 LINE BORING MACHINE 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.

If this Line Boring Machine should malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock. This Line Boring Machine 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, DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER.

### 110-120V OPERATION

As received from the factory, your Line Boring Machine is ready to run for 110-120V operation. This machine 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(S) 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. If you do not have a choice, use the table in Fig.2 to determine the minimum wire size (A.W.G-American Wire Gauge) extension cord needed. 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 Line Boring Machine motor. Refer to Fig.2 for wire length and size.

### USING ON/OFF SWITCH WITH REMOVABLE SAFETY KEY

The On/Off switch (A) Fig.3 is used to turn the Line Boring Machine On and Off. To turn the Line Boring Machine "On", lift the switch upwards (On position), to turn the Line Boring Machine "Off", push and lower the switch

(Off position).

This switch comes with a removable safety key (B) Fig.3. When the safety key is removed from the switch and placed in a safe location, unauthorized persons or children can't turn the switch to the On position. It is recommended to always remove the safety key from the switch whenever the Line Boring Machine is not in use. To remove the safety switch, make sure the switch is in the Off position and simply pull out the safety key.

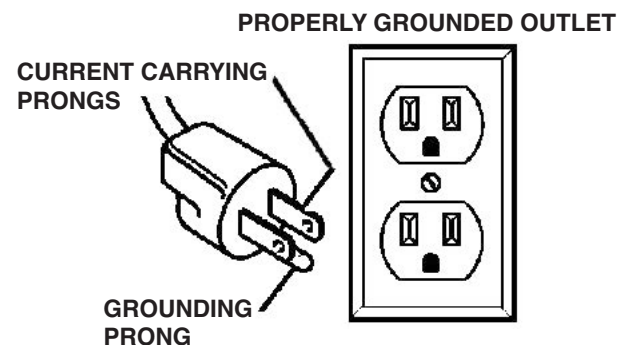


Figure 1

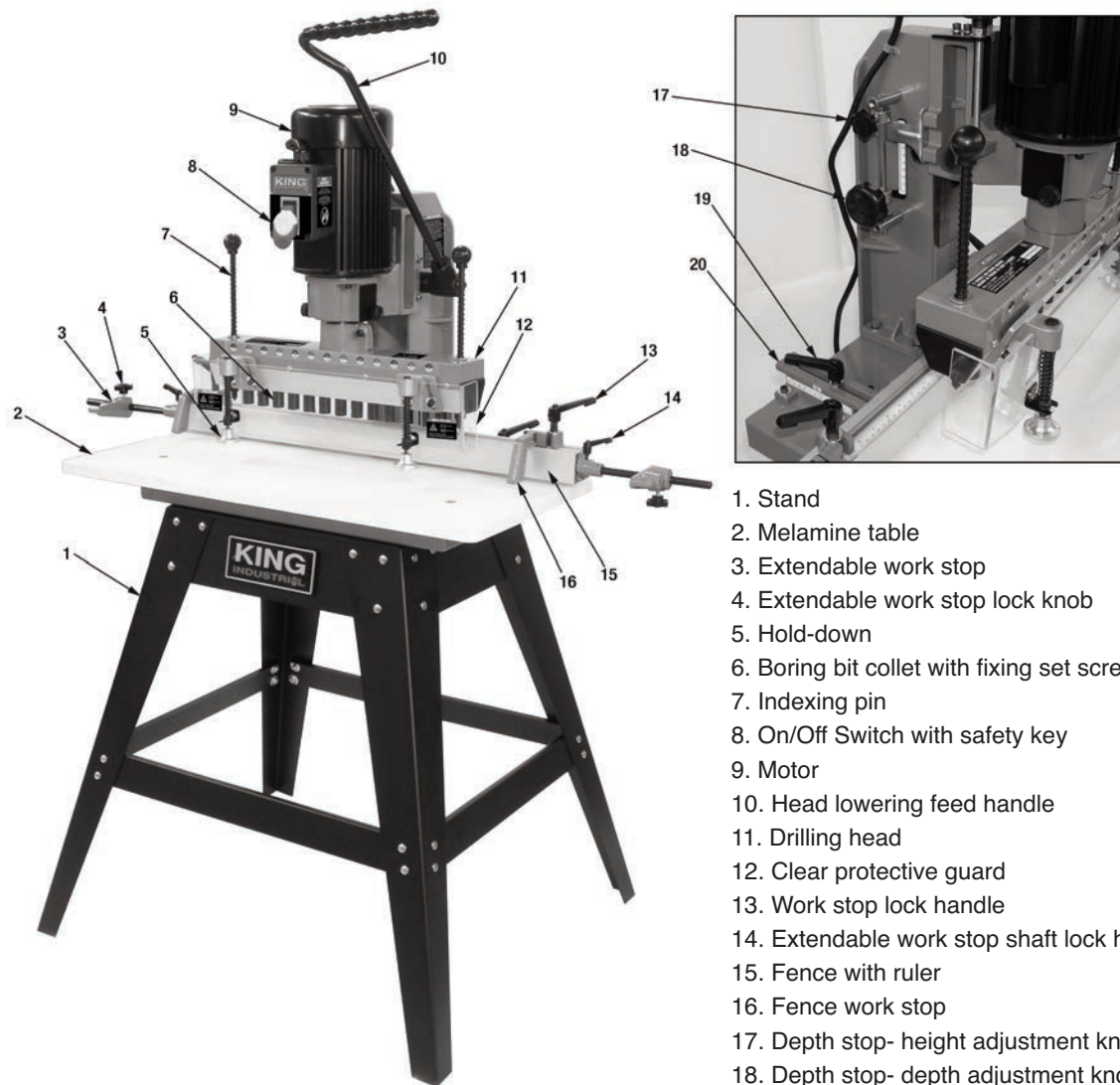
Tool's Amperage Rating	Cord Size in A.W.G.			
	Cord Length in Feet			
	25	50	100	150
3-6	18	16	16	14
6-8	18	16	14	12
8-10	18	16	14	12
10-12	18	16	14	12
12-16	14	12	-	-

Figure 2



Figure 3

# GETTING TO KNOW YOUR LINE BORING MACHINE



1. Stand
2. Melamine table
3. Extendable work stop
4. Extendable work stop lock knob
5. Hold-down
6. Boring bit collet with fixing set screw (1 of 13)
7. Indexing pin
8. On/Off Switch with safety key
9. Motor
10. Head lowering feed handle
11. Drilling head
12. Clear protective guard
13. Work stop lock handle
14. Extendable work stop shaft lock handle
15. Fence with ruler
16. Fence work stop
17. Depth stop- height adjustment knob
18. Depth stop- depth adjustment knob
19. Fence lock handle
20. Fence adjustment bracket with ruler

**FIGURE 4**

## SPECIFICATIONS

MODEL .....	KC-1300BM
NUMBER OF SPINDLES .....	13
COLLET SIZE .....	.3/8" (10MM)
SPINDLE CENTRES. ....	1-1/4" (32MM)
SPINDLE SPEED .....	3500 RPM
TABLE SIZE .....	31-1/2" X 15-3/4"
MAXIMUM DEPTH OF STROKE .....	2-1/2"
MAXIMUM STOCK THICKNESS .....	5-1/2"
MOTOR .....	1-1/2 HP, 12.6 AMP.
VOLTAGE .....	110V, 1 PHASE, 60 HZ
WEIGHT .....	215 LBS

**FIGURE 5**



# ASSEMBLY

## UNPACKING & CLEANING

**NOTE:** Do not attempt to operate the Line Boring Machine unless all the parts are accounted for and in working order.

Some parts of the Line Boring Machine may be coated with an oil that prevents them from rusting. To remove this coating, use a cloth soaked in kerosene. Using gasoline or lacquer thinner could damage the painted parts of the machine.

## STAND ASSEMBLY & MOUNTING MACHINE ON STAND

1. Using carriage bolts and hex. nuts, assemble one end of the stand first. Start by attaching one of the short top brace (A) Fig.6 and one of the short bottom brace (B) to a pair of legs (C). Repeat for the other side.
2. Assemble both ends of the stand using the remaining two long top braces (D) and long bottom braces (E) to join the two ends of the stand.

**NOTE:** Wait until the entire stand is assembled to fully tighten all of the hex. nuts. Place the assembled stand on a flat surface, ensure the stand is square, and then tighten all of the hex. nuts.

3. Place the Line Boring Machine on the stand, ensuring the front of the machine is parallel with the long side of the stand. Align the four holes in the top braces with the mounting holes on the machine. Use 4 hex. bolts, 4 hex. nuts, and 8 washers.

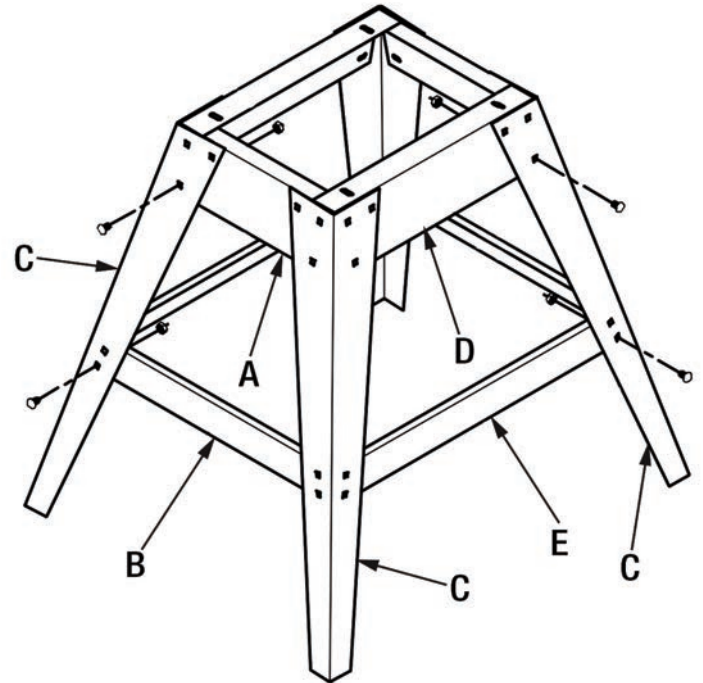


FIGURE 6

## ASSEMBLING THE FEED HANDLE

1. Insert the feed handle (A) Fig.7 into the handle body (B) by loosening the set screw (C) and mounting the handle. Retighten set screw.

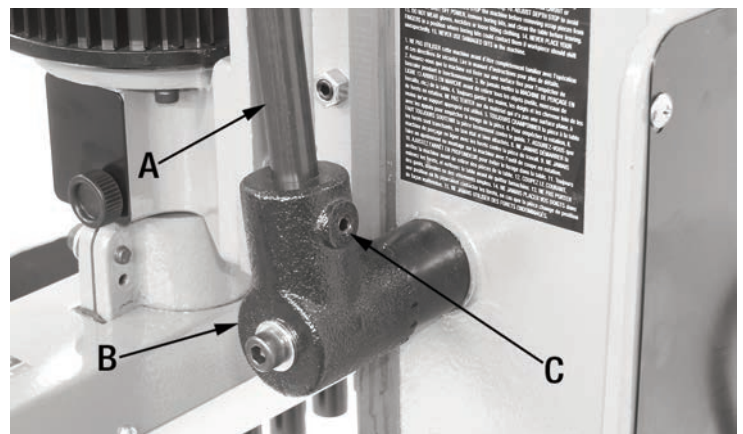


FIGURE 7

## ASSEMBLING THE FENCE EXTENSION WORK STOP

1. Attach the extension work stop (A) Fig.8 to the stop rod (B) and tighten lock knob (C). Slide the support block (D) into the fence slot (E) and tighten the cap screw (F). Slide stop rod (B) into support block (D), set the distance of the stop rod (B) and tighten the stop rod lock handle (G).

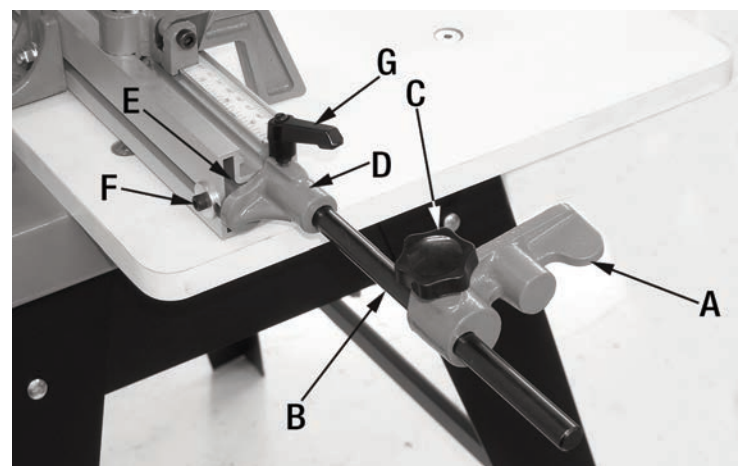


FIGURE 8

# ASSEMBLY & ADJUSTMENTS



## INSTALLATION & ALIGNMENT OF OPTIONAL BORING BITS

### Boring Bit Information

This Line Boring Machine requires 6 left (RED) and 7 right (BLACK) 10mm shank boring bits (optional, not included). Most common boring bit sizes are 5mm or 7mm.

The front of the machine head is identified with colored circles which indicate the corresponding boring bit to install, all spindles identified with a red circle will rotate counterclockwise, all spindles identified with a black circle will rotate clockwise.

### Installation & Alignment

**Warning:** Before mounting or removing a boring bit, remove safety guard and disconnect from power source. Reinstall safety guard before operating Line Boring Machine.

1. Boring bits (A) Fig.9 are especially designed for Line Boring Machine spindles, they have a flat face (B). Insert and position the flat face of each boring bit into the corresponding spindle (red or black) and align it with the spindle set screw (C).
2. Tighten each set screw of each spindle. Before proceeding to the next step, make sure you have installed the correct boring bit in the corresponding spindle.
3. Place a flat piece of wood (A) Fig.10 that is long enough to cover all 13 boring bits onto the table, under the boring bits, up against the fence. Pull down on the feed handle until ANY of the 13 boring bits (B) come into contact with the workpiece. If all of the bits come in contact with the workpiece at the same time, no alignment is necessary.
4. If a boring bit needs alignment, hold the feed handle down. Loosen the set screw (C) Fig.9 of a boring bit that is NOT touching the workpiece. Let the boring bit drop down and come into contact with the workpiece. Secure the bit by tightening the set screw.
5. Repeat Step 4 as necessary until all of the boring bits are touching the workpiece.

### ADJUSTING THE FENCE

1. The fence (A) Fig.11 can be moved back and forth by loosening the two lock handles (B) on both sides of the fence and manually moving the fence to the desired position. Make sure to align the scales (C) on both sides of the fence to the identical measurement, and retighten lock handles (B).

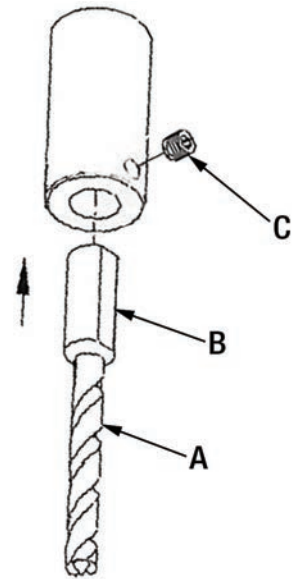


FIGURE 9

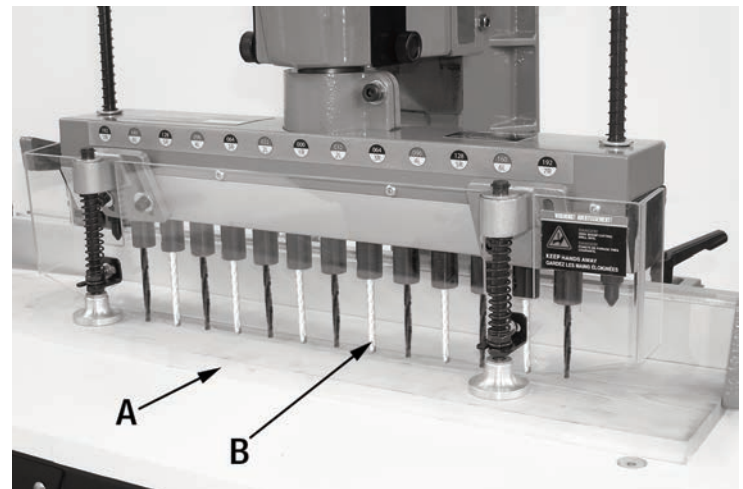


FIGURE 10

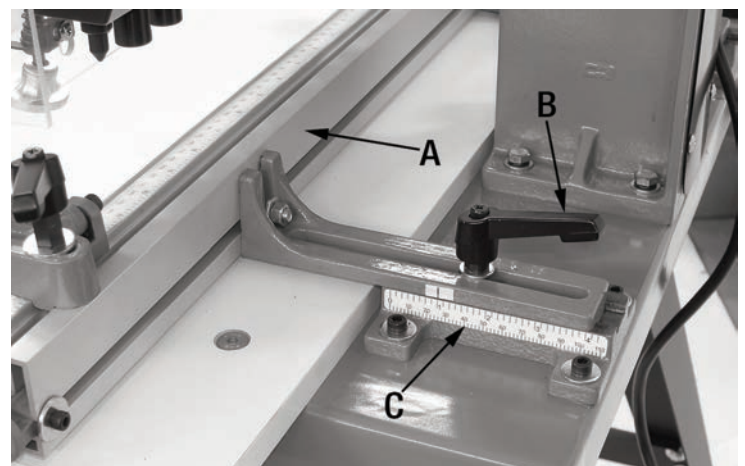


FIGURE 11



## ADJUSTMENTS

### BORING DEPTH STOP & HEAD HEIGHT ADJUSTMENT

The boring depth scale (A) Fig.12 on the side of the machine displays the boring depth in Imperial and Metric measurements.

1. Move the boring head down as close to the workpiece as possible without making contact, and tighten the top depth stop lock knob (B) Fig.12, this adjustment sets the maximum height the head will travel upwards between each operation.
2. Use the scale lock knob (C) Fig.12 to set the maximum boring depth to the desired position by moving it up, this adjustment will act as a stop to prevent drilling further than desired. Use the scale (A) as a guide to make the desired adjustment.
3. For all workpieces thicker than 2-1/2", loosen the two hex. bolts (D) Fig.12 , one on each side, and turn the knob (E) to raise the boring head to the desired position.

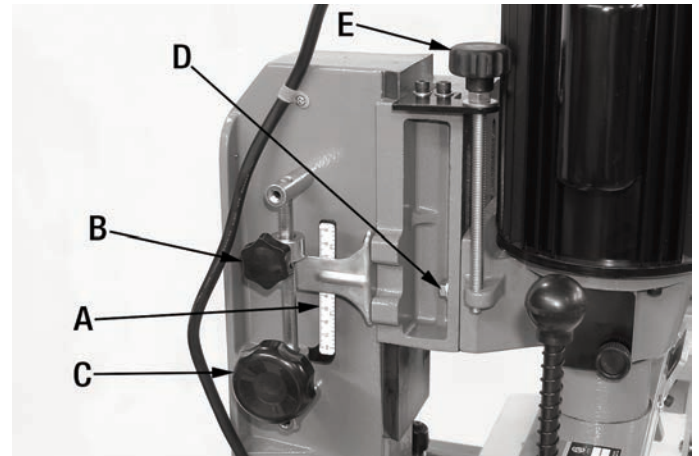


FIGURE 12

### USING FENCE WORK STOPS AND INDEX PINS

A typical line-boring operation consists of a workpiece positioned against the fence (A) Fig.13 and the fence stop (B) as shown, 13 holes are bored with a 1-1/4" (32mm) centre distance between each hole.

The fence stops (B) Fig.13 can be moved to the desired position by loosening and tightening the lock handle (C).

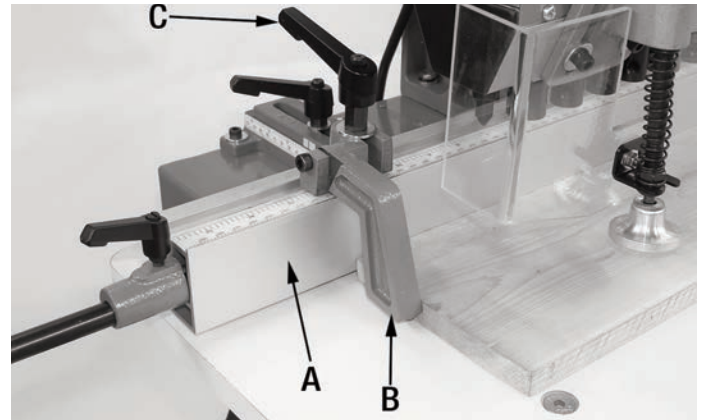


FIGURE 13

If more than 13 holes are required, lift the fence stop and slide the workpiece along the fence and push down on the indexing pin (A) Fig.14 until the pointed end of the pin is in the last hole previously bored. This aligns the workpiece for the next series of holes.

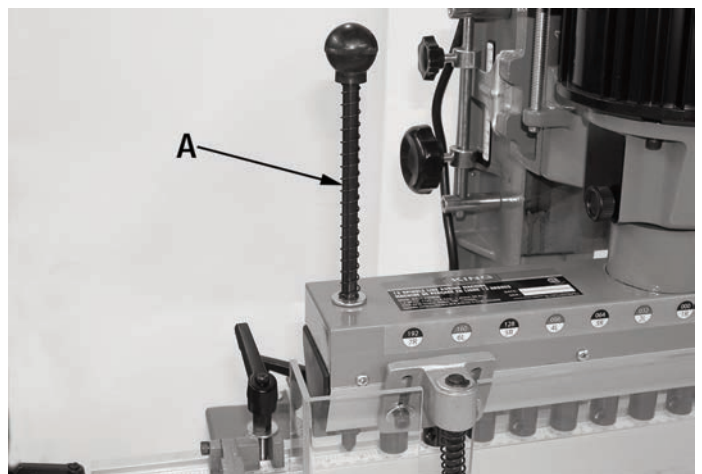


FIGURE 14

# ADJUSTMENTS & MAINTENANCE



## ADJUSTING SAFETY GUARD AND HOLD-DOWNS

This machine is equipped with a transparent safety guard (A) Fig.15 which protects the user from chips created during operation. It also keeps the operator from coming in contact with the boring bits when changing the workpiece. The safety guard positions itself automatically.

**NOTE:** Before mounting or removing boring bits, always disconnect from the power source and remove the safety guard.

To remove safety guard, loosen the top hex. nuts (B) on both hold-downs until the safety guard bracket can slide out from underneath the hex. nuts. Remove safety guard. Reinstall in the reverse order.

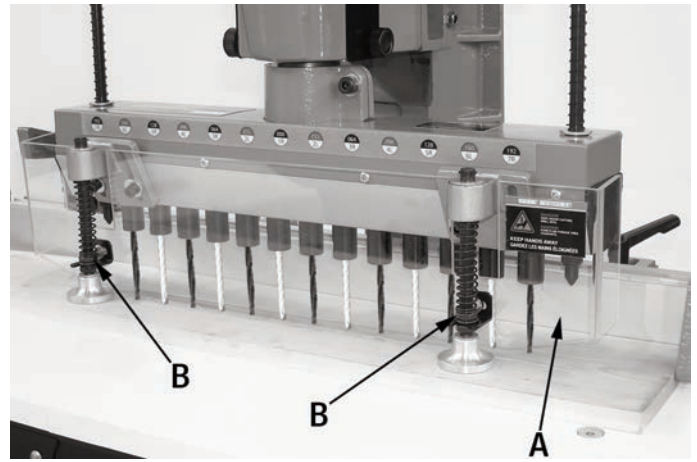


FIGURE 15

The hold-downs (A) Fig.16 are spring loaded, and engage automatically when the feed handle is pulled down for boring.

To adjust the hold downs, the position of the hold-down bracket (B) Fig.16 must be adjusted. Loosen the cap screws (C) and move the hold down assembly to the desired height.

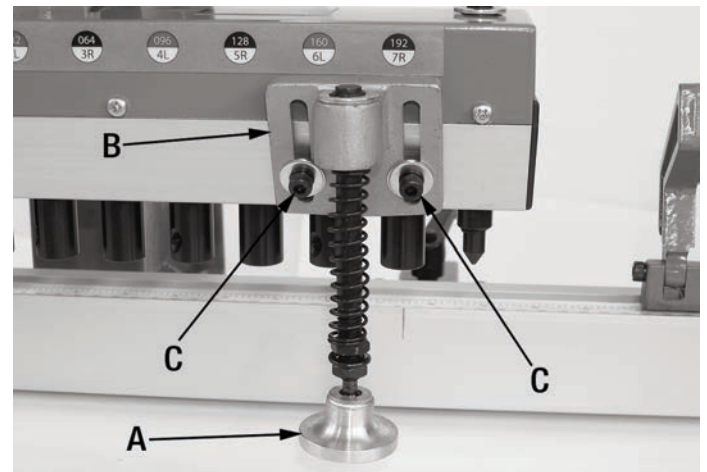


FIGURE 16

## ADJUSTING THE RETURN SPRINGS

The return springs (C) Fig.17 located at the rear of the column are used to return the boring feed handle to its original position. Over time, the spring may loosen slightly. If the spring becomes too loose, an adjustment can be made.

Remove rear cover (A) Fig.17 by removing all 6 pan head screws (B). Tension the return springs (C) to ensure it's functioning properly by tightening the top hex. nut (D).

## MAINTENANCE

**WARNING!** For your own safety, turn the switch "OFF" and remove the plug from the power source before maintaining or lubricating your Line Boring Machine.

- Keep the Line Boring Machine clean and free of dust and debris. Painted surfaces can be wiped with a damp rag.
- Periodically lubricate all sliding or moving parts using any all purpose grease, available at any hardware store.
- Frequently blow out any dust that may accumulate on or inside the motor. After operation, remove chips or dirt on the machine.

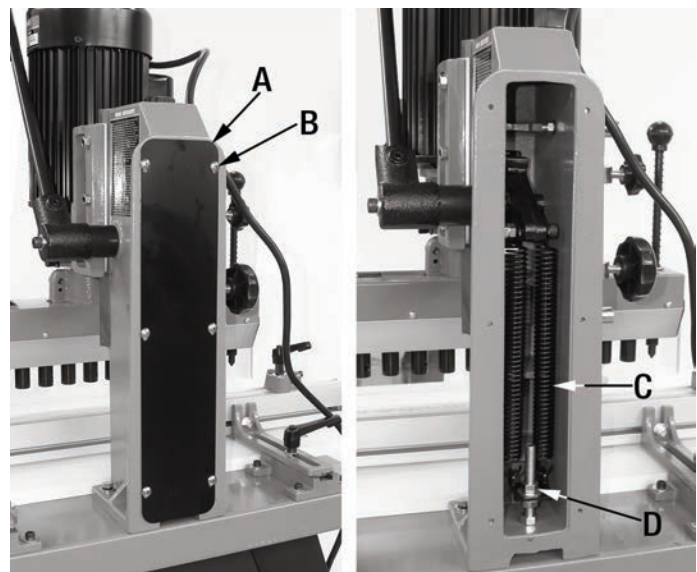


FIGURE 17