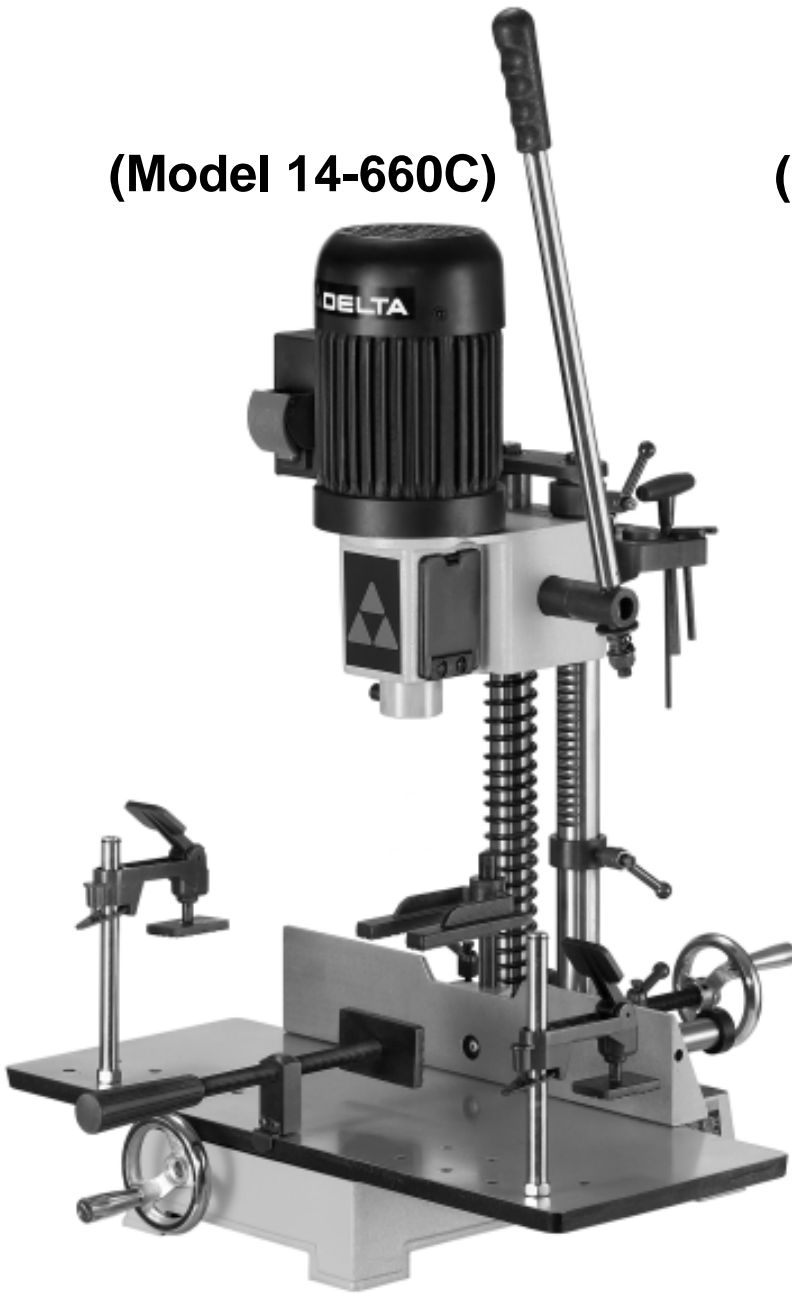


Heavy Duty Mortiser

(Model 14-660C)

(Model 14-661C)



Dated 1-30-02

Part No. 1235800
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SAFETY RULES

As with all machinery there are certain hazards involved with operation and use of this machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine NOT be modified and/or used for any application other than for which it was

designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

Technical Service Manager
505 Southgate Drive
Guelph, ONTARIO N1H 6M7



WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **For your own safety, read instruction manual before operating the tool.** Learn the tool's application and limitations as well as the specific hazards peculiar to it.
2. **Keep guards in place** and in working order.
3. **Always wear eye protection.** Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty. These safety glasses must conform to ANSI Z87.1 requirements. Note: Approved glasses have Z87 printed or stamped on them.
4. **Remove adjusting keys and wrenches.** Form a 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.
6. **Don't use in dangerous environment.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.
7. **Keep children and visitors away.** All children and visitors should be kept a safe distance from work area.
8. **Make workshop childproof** – with padlocks, master switches, or by removing starter keys.
9. **Don't force tool.** It will do the job better and safer at the rate for which it was designed.
10. **Use the right tool.** Don't force tool or attachment to do a job for which it was not designed.
11. **Wear proper apparel.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip hard-toed footwear is recommended. Wear protective hair covering to contain long hair.
12. **Don't overreach.** Keep proper footing and balance at all times.
13. **Maintain tools in top condition.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
14. **Disconnect tools** before servicing.
15. **Never stand on tool.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
16. **Check damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
17. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
18. **Make sure tool is disconnected from power supply** while motor is being mounted, connected or reconnected.
19. **⚠ WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-base paints
 - Crystalline silica from bricks and cement and other masonry products.
 - Arsenic and chromium from chemically-treated lumber.Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAVE THESE INSTRUCTIONS

Refer to them often and use them to instruct others.

ADDITIONAL SAFETY RULES FOR MORTISERS



WARNING: DO NOT OPERATE YOUR MORTISER UNTIL IT IS COMPLETELY ASSEMBLED AND INSTALLED ACCORDING TO THE INSTRUCTIONS.

1. **If you are not** thoroughly familiar with the operation of a mortiser, obtain advice from your supervisor, instructor or other qualified person.
2. **Make sure** wiring codes and recommended electrical connection instructions are followed and that the machine is properly grounded.
3. **Make all** adjustments with the power off.
4. **Machine must** be firmly mounted to a flat and secure work surface.
5. **Do not** wear any gloves while operating this machine.
6. **Always** check that the worktable is clear of loose tools, hardware, scrap, etc.
7. **Make sure** the mortiser fence extends over the sliding table at all times.
8. **Make sure** the work piece is flat on the worktable.
9. **Always** position the work piece firmly against the fence to prevent any movement of the work piece.
10. **Always** position the hold-down directly above your work piece. This will keep the work piece from lifting off the table during drilling operations.
11. **Make sure** the chisel and drill bit are installed correctly prior to turning the machine ON.
12. **Do not** turn the machine ON if the drill bit and/or chisel are contacting the work piece. Check that the drill bit is fully seated in the chuck. (If it is fully seated, your work piece is too thick for this machine).
13. **Always** turn the power switch to the OFF position and let the drill bit come to a complete stop prior to removing the work piece from the mortiser.
14. **Make sure** the chisel and drill bit are sharp (for safe and precise mortising operations).
15. **Disconnect** machine from the power source when making repairs.
16. **Close** all access points after servicing or making operating adjustments.
17. **Before leaving** the machine, make sure the work area is clean.
18. **IMPORTANT:** When the tool is not in use, the switch should be in the "OFF" position and the power cord disconnected.

ELECTRICAL CONNECTIONS

Power Source

A separate electrical circuit should be used for your tool. This circuit should not be less than #12 wire and should be protected with a 20 amp time lag fuse. The Mortiser is wired for 120-volt operation. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and be sure the electric current is of the same characteristics as indicated on the tool. All line connections should make good contact. Running on low voltage will damage the motor.

THIS UNIT IS EQUIPPED WITH A MAGNETIC SWITCH. If loss of power is experienced, the unit will need restarted by pressing the ON button.

Extension Cords

Make sure your extension cord is in good condition and is a 12 gauge, 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the tool's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the tool. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Extension cords should be no longer than 100 ft.



WARNING: DO NOT EXPOSE THE TOOL TO RAIN OR OPERATE IN DAMP LOCATIONS.

Grounding Instructions



WARNING: THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

All grounded, cord-connected tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal. Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Figure 1

Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts will have a grounding plug similar to illustration.

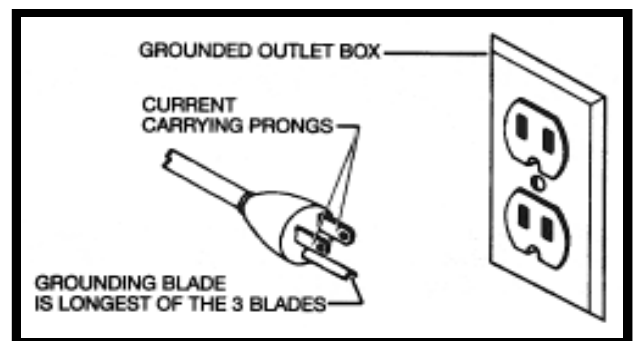


Fig. 1



WARNING: IN ALL CASES, MAKE SURE THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED.

UNPACKING YOUR MORTISER

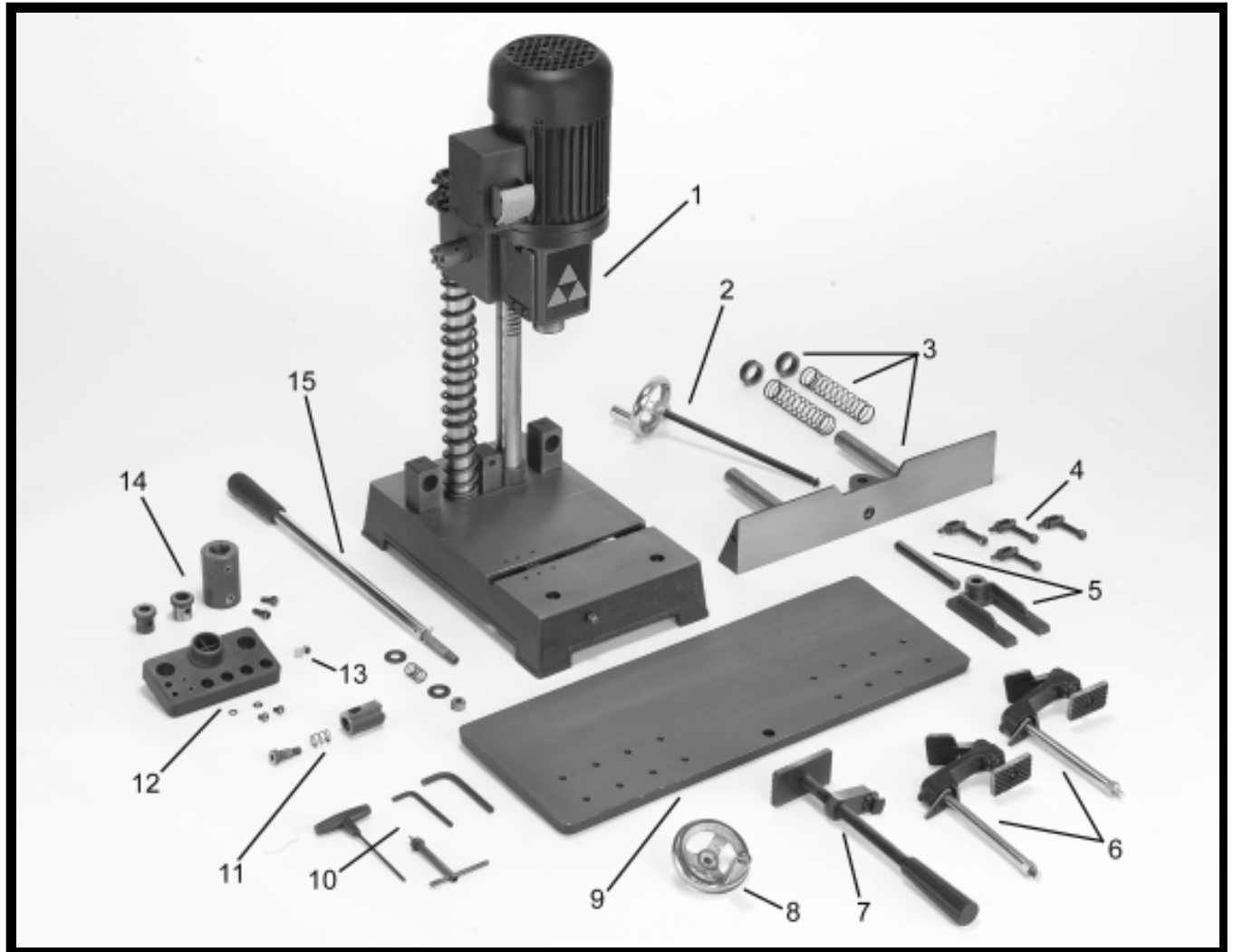


Fig. 2

Figure 2

Unpack your Delta Mortiser from the container and check to see that you have all of the following items. Do not turn the machine ON if any of these items are missing. You may cause injury to yourself and/or damage the machine.

1. Mortiser
2. Fence adjusting screw with screw, lockwasher and flatwasher
3. Fence with springs and stop collars
4. Four indexable lock handles
5. Center hold-down with shaft
6. Movable hold-down clamps
7. Front work clamp
8. Front lateral head wheel
9. Worktable
10. Tools: T-handle wrench, chuck key, M6 and M8 hex wrenches
11. Head index hub with spring and shoulder bolt
12. Tool holder with mounting screws and washer
13. Nylon wire clamp with screw, nut and washer
14. Chisel bushings: 5/8", 3/4", 1-1/8" with screws
15. Operating lever with two flatwashers, spring and lock nut

ASSEMBLY INSTRUCTIONS



WARNING: FOR YOUR SAFETY, DO NOT CONNECT THE MORTISER TO A POWER SOURCE UNTIL THE TOOL IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL.

Installing Table Assembly

Figure 3

Mount front lateral hand wheel (A) to shaft at front of the table base. Note the lateral gear assembly (B).

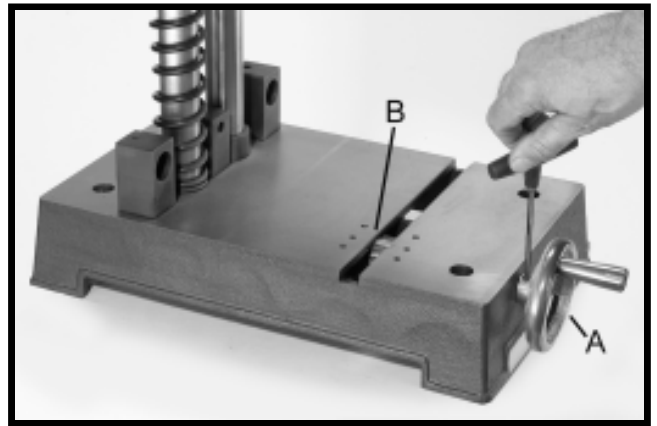


Fig. 3

Figure 4

Mount table (A) with rack gear down and toward the front of machine. Notice the fence guide blocks (B).

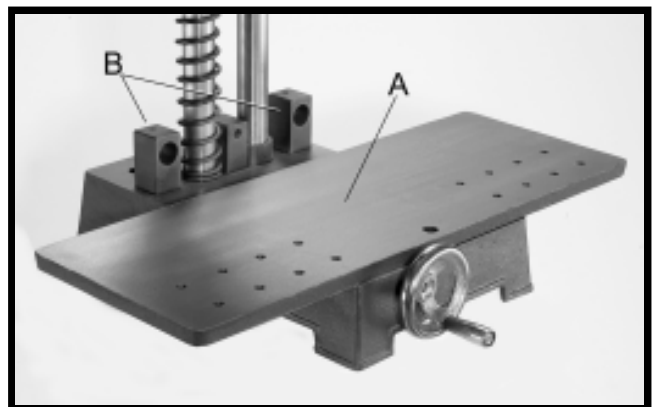


Fig. 4

Installing Fence Assembly

Figure 5

Place a spring on each fence guide (A). Slide fence guides through guide blocks (B) and attach stop collars (C) using supplied T-handle wrench. NOTE: If fence guides don't align with guide blocks, it may be necessary to loosen the screws on the underside of blocks and make adjustments.

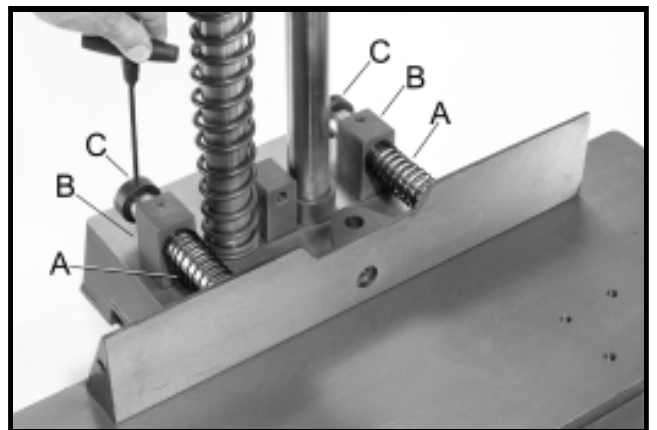


Fig. 5

Figure 6

Thread the fence adjusting screw (A) through the center block (B) until the interior threaded shaft butts against back of fence (C). Attach from front of fence with screw, lock, washer and flat washer (D).

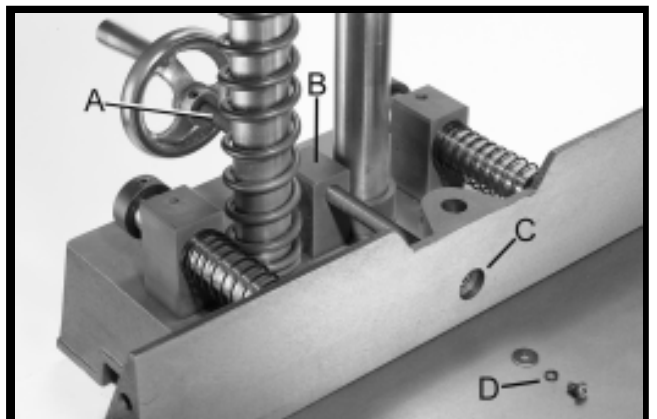


Fig. 6

Installing Indexable Lock Handles

Figure 7

Thread a lock handle into the top of each fence guide block (A) and into the upper and lower depth stops (B) (upper stop not shown). Both stops are on the right column. When in use, firmly tighten all handles. NOTE: Use depth stops for precise repetitive operations. The upper depth stop may be clearly seen in Fig. 25.

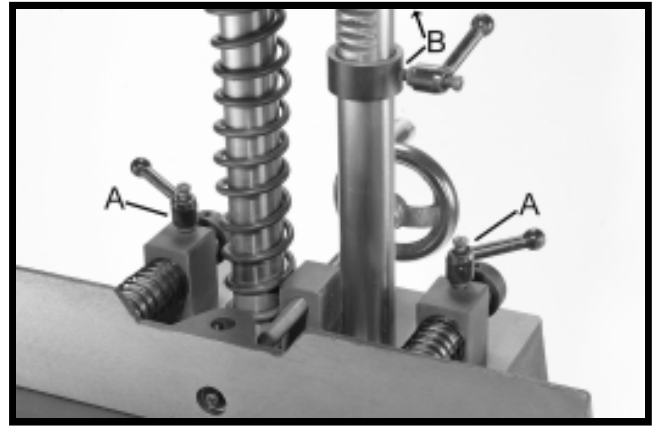


Fig. 7

Installing Center Hold-Down

Figure 8

Lower shaft (A) into the top of fence, line up flat sides and tighten with T-handle wrench. Install hold-down (B) in same manner.

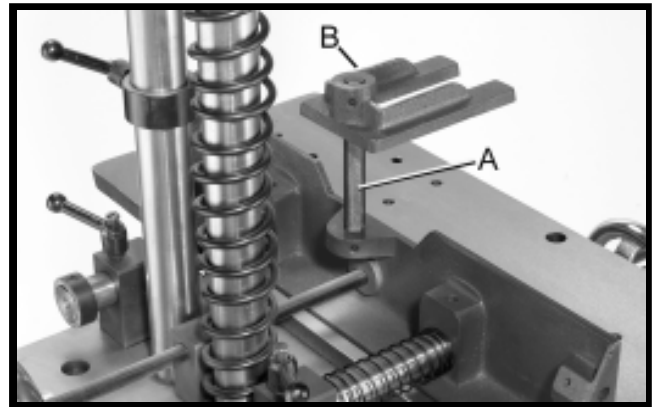


Fig. 8

Installing Head Index Hub and Operating Arm

Figure 9

Place spring over shoulder bolt (A). Insert bolt through index hub (B), keeping slot (C) at top. Attach assembly to head (D) using supplied wrench. NOTE: The index hub can be mounted on the left side of the head for additional versatility.

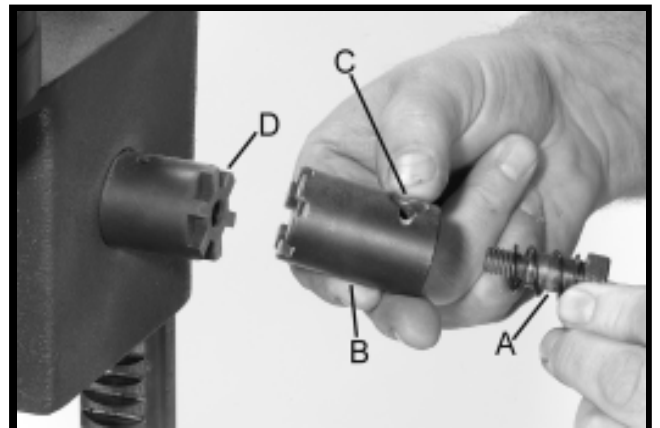


Fig. 9

Figure 10

Lower operating arm (A) through slot in head index hub (B), noting locking pin (C).

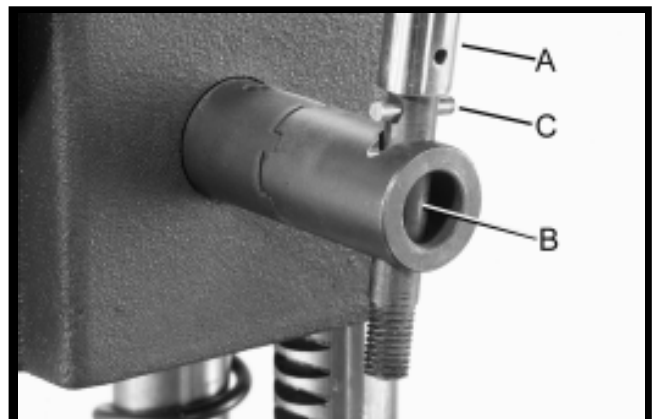


Fig. 10

Figure 11

Attach operating arm (A) with washer, spring and locking nut (B). The locking nut can be adjusted to vary the spring tension. This view shows right or left hand-operating capability.

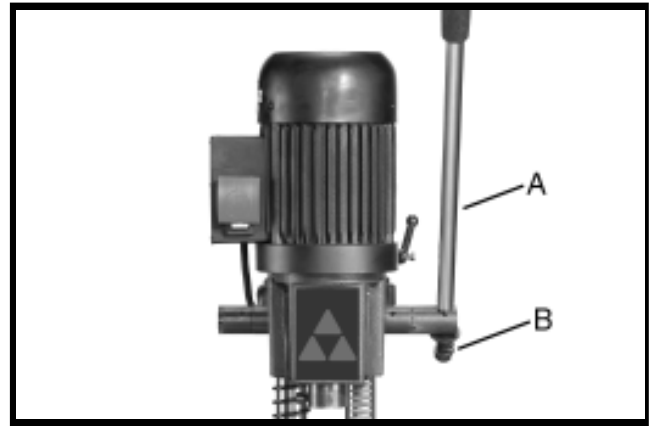


Fig. 11

Installing Tool and Bit Tray

Figure 12

Attach tray (A) to rear of head housing (B) using supplied bolts and washers (C).

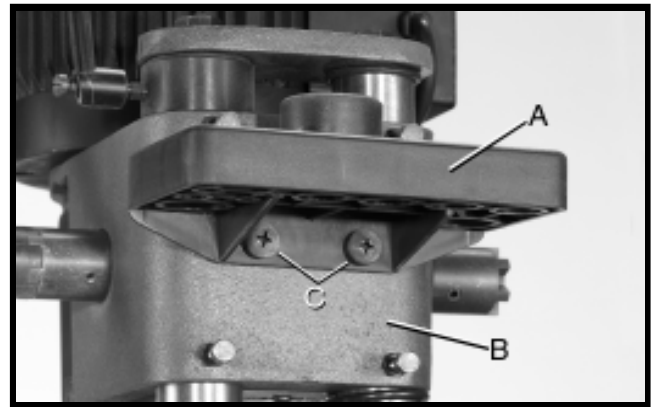


Fig. 12

Figure 13

The nylon motor wire clamp (A) attaches to side of tool and bit tray using supplied screw, nut and washer.

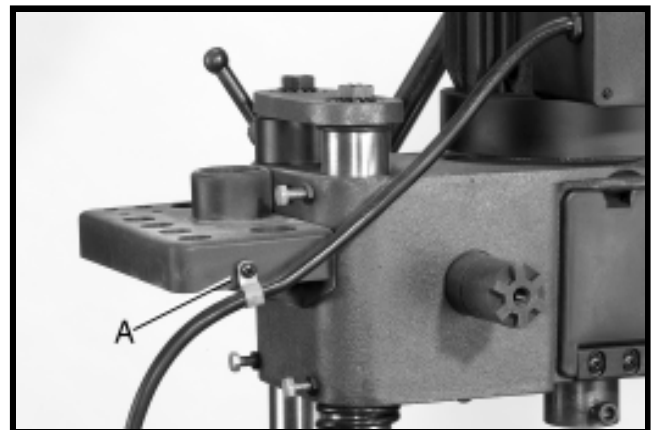


Fig. 13

Figure 14

This view shows typical use of tool and bit tray.

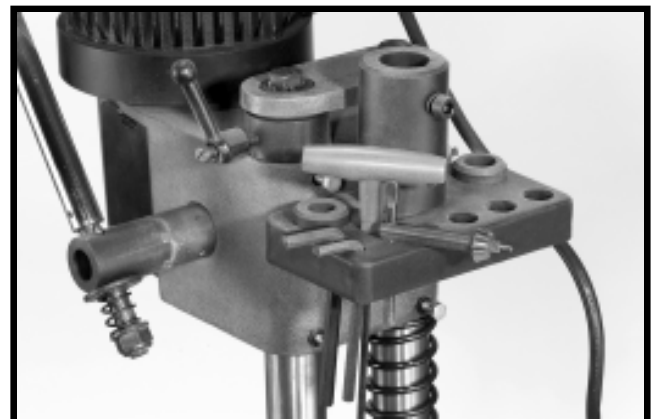


Fig. 14

Attaching Clamps

Figure 15

The view shows ALL clamps installed to demonstrate the variety of hold-down positions available.

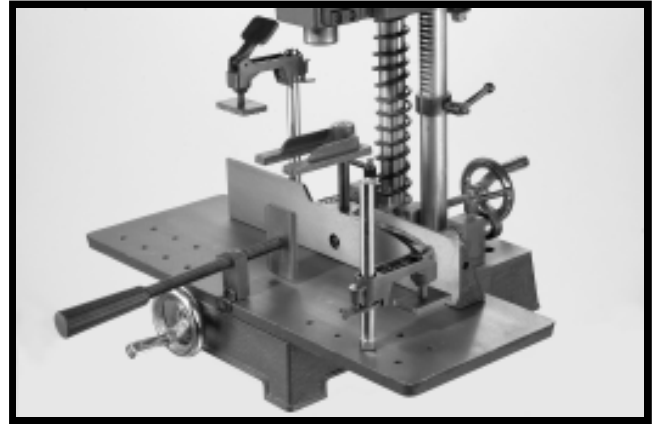


Fig. 15

Installing Collets, Chisels, Bits

DISCONNECT TOOL FROM POWER SOURCE.

Figure 16

Your machine is supplied with three collets and hardware (A) that can be attached to the head stock (B).

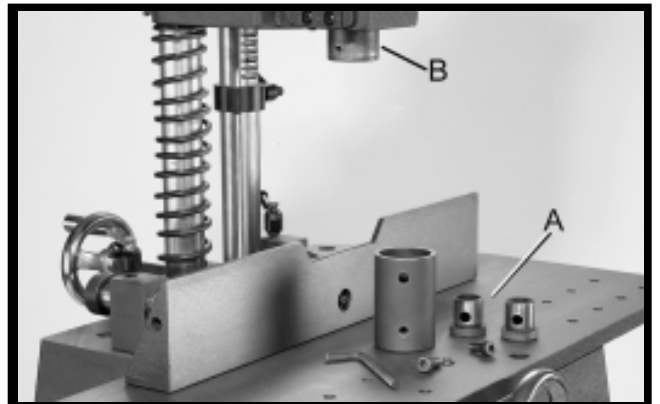


Fig. 16

Figure 17

For larger chisels, attach the 1 1/8" chisel bushing (A) to the head stock (B). The chisel (C) should be positioned so it has approximately 1/16" clearance from bottom of bushing. Tighten screws with supplied wrench. NOTE: On the 1 1/8" bushing, the top screw requires the use of a lock washer.

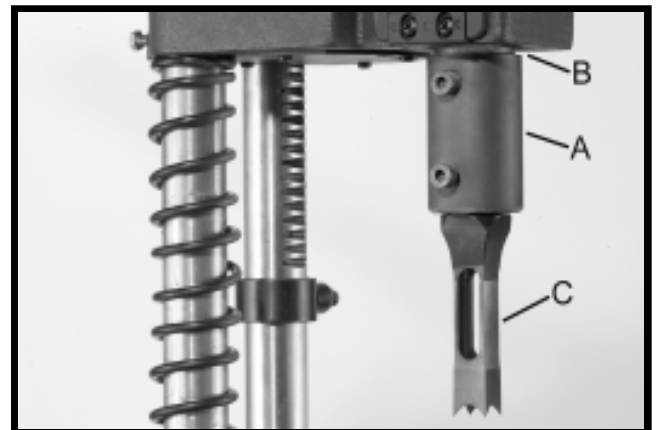


Fig. 17

Figure 18

Insert drill bit through chisel opening (A) and seat in Mortiser chuck (B). Tighten bit with supplied chuck key. Now loosen chisel and push it up flush with bottom of bushing. Retighten chisel.

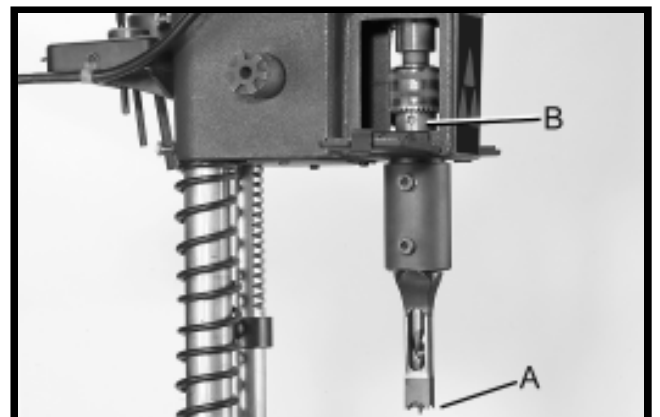


Fig. 18

Figure 19

Install the 5/8" or 3/4" collet (A) directly to the head stock (B) for smaller chisel/bit combinations.

For best results with your Mortiser, use only quality DELTA bits and chisels.

Mortising bit lengths vary by manufacturer. Shorten an oversized bit by cutting the shank.

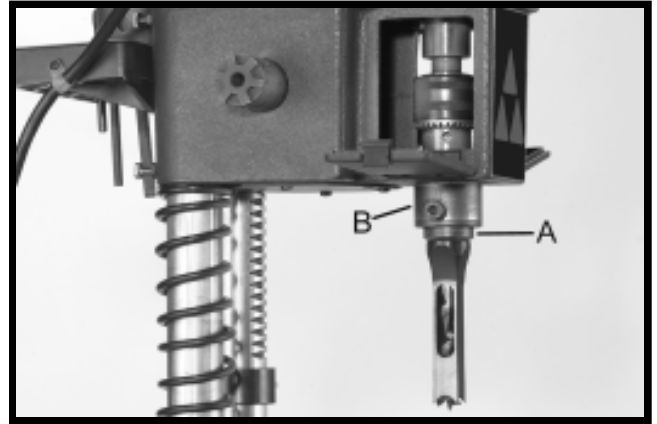


Fig. 19

ADJUSTMENTS AND OPERATIONS

Adjusting Operational Arm

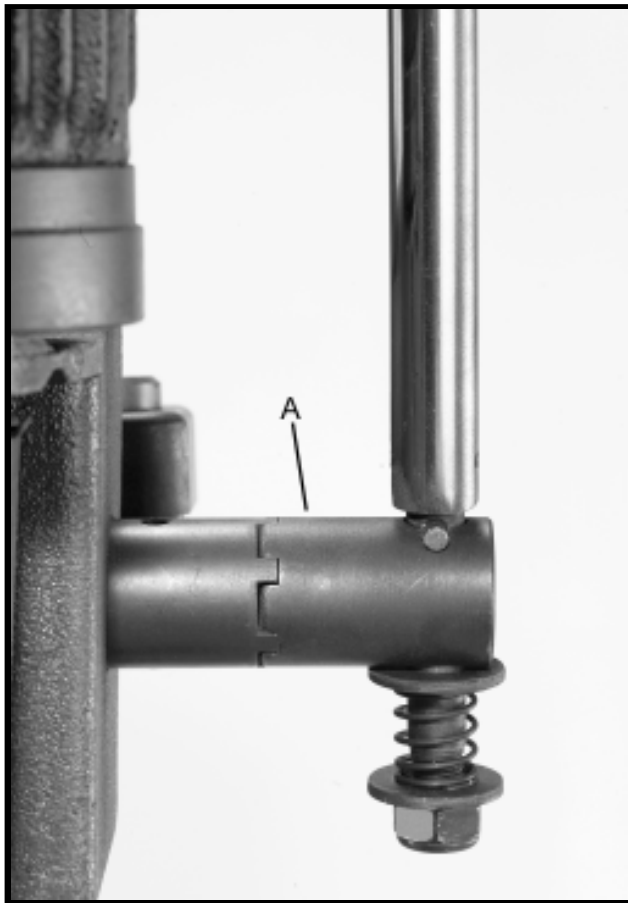


Fig. 20

Figure 20

Shows indexing hub (A) interlocked.



Fig. 21

Figure 21

To make an adjustment, rock operating arm (B) away from machine and rotate hub (A) to desired position.

Operations

Before performing any operations, make sure machine is firmly mounted to a flat and secure work surface.

Figure 22

The Mortiser is set up for a lock-down stationary mortising operation on a 6" x 6" timber.

NOTE: The front clamp (A), hold-down (B) and two auxiliary clamps (C).

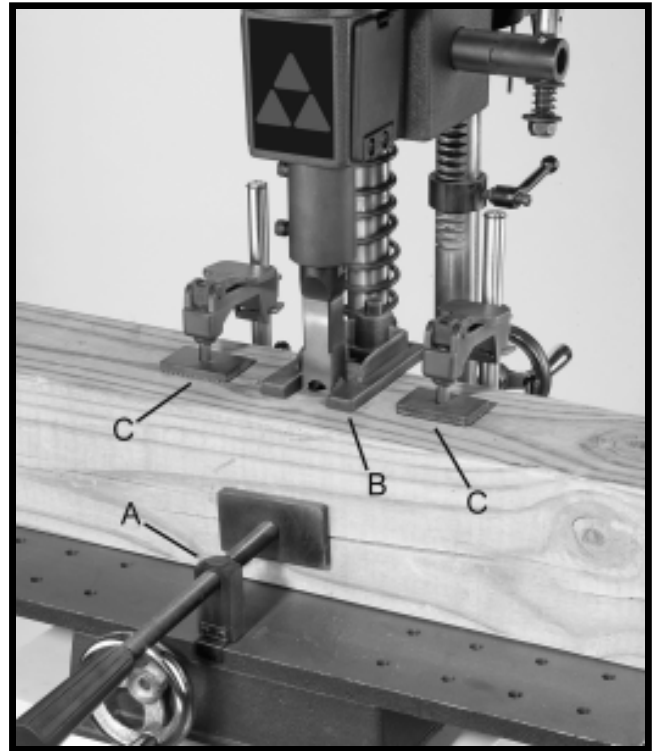


Fig. 22

Figure 23

This rear view of the mortising operation shows the lower depth stop (A), fence adjustments (B), fence locks (C) and the placement of auxiliary clamps (D) on the fence.

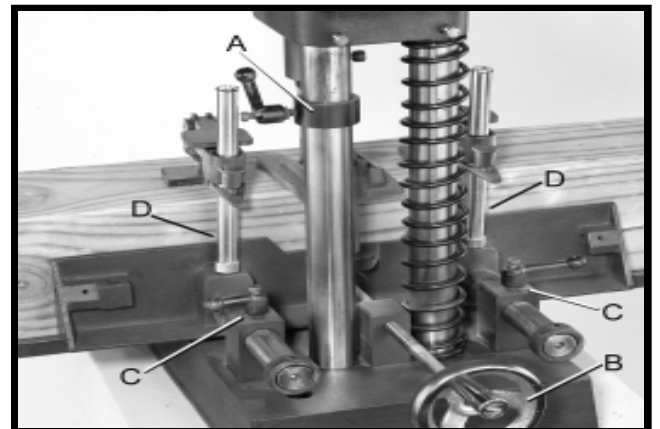


Fig. 23

Figure 24

This is a traversing mortise operation on a 4" x 4" section of lumber. NOTE: The auxiliary clamps (A) holding the lumber securely to the moving table. Numerous clamping positions are available to fit any work stock.

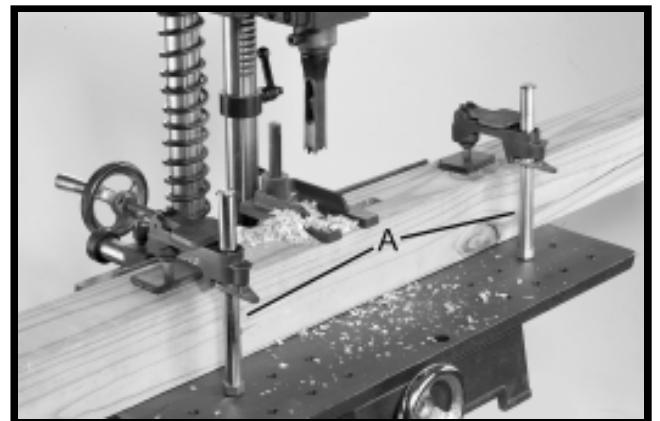


Fig. 24

MAINTENANCE INSTRUCTIONS

Maintaining Head to Column Clearance

DISCONNECT TOOL FROM POWER SOURCE.

Figure 25

Should the clearance between the motor head casting (A) and the two support columns (B) ever need adjusting, loosen the four M6 hex nuts (C) and either tighten or loosen the M6 hex screw (D).

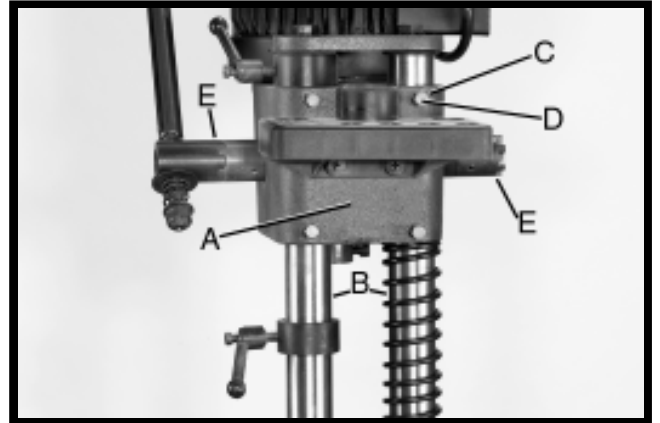


Fig. 25

Cleaning and Lubrication

DISCONNECT TOOL FROM POWER SOURCE.

Figure 25

- 1) Periodically clean the columns (B) with a Scotchbrite type pad or 600 grit polishing cloth. Remove residue with mineral spirits and coat columns with a "3 in 1" type oil.
- 2) Lubricate both sides of hub assembly (E).

Figure 26

The threads of the fence index screw (A) and fence guides (B) should routinely be lubed with a "3 in 1" type oil.

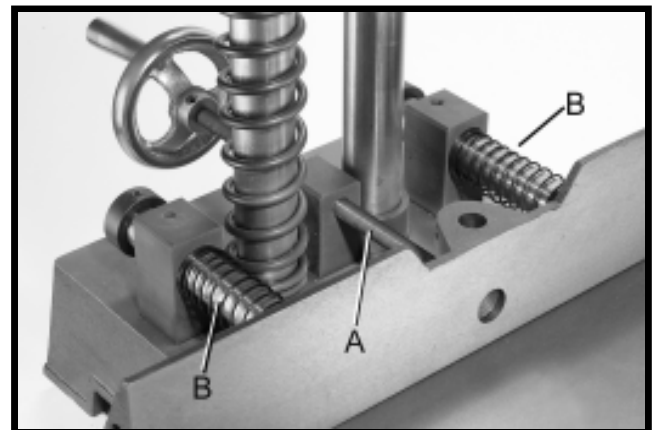


Fig. 26

Figure 27

The chuck assembly (A) should be lubed with a spray type lube such as WD-40.

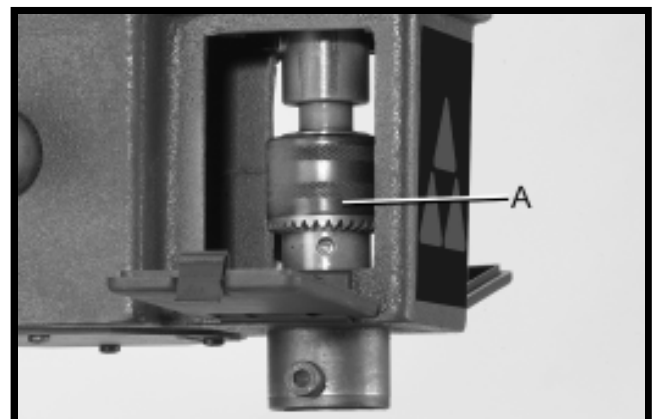



Fig. 27

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable Delta Factory Service Centers and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

 **WARNING:** Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.

PARTS, SERVICE AND WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable/Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain accessories, parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-800-463-3582.

Two Year Limited Warranty

Delta will repair or replace, at its expense and at its option, any Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta Service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.