



OWNER'S MANUAL

HELPING OUR CUSTOMERS IMPROVE QUALITY AND PROFITABILITY SINCE 1958



SPM301
Screw Pocket Machine

MADE IN THE U.S.A.

THE SPM301

SCREW POCKET MACHINE

A FAST FLEXIBLE SOLUTION
TO CUTTING SCREW POCKETS.



MADE IN THE U.S.A.



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WWW.SAFETYSPEED.COM • 800.772.2327

**Thanks you for purchasing a SPM301 Screw Pocket Machine.
We take pride in building these machines in the USA.**

Warranty

Safety Speed Manufacturing warrants the parts and workmanship of this tool, except for the electric motors, for one year from the date of manufacture. Safety Speed will repair or replace, at our cost, any component that is determined to be defective. Such repair or replacement is limited to providing satisfactory replacement parts from the factory. Safety Speed assumes no responsibility for making repairs on site. Any parts returned to the factory must be returned freight prepaid.

All router motors are warranted directly by the manufacturer. See local repair and maintenance centers for warranty claims for motors.

Safety Speed assumes no responsibility for any damage or accidents resulting from the misuse of this tool, its misapplication, or failure to follow precautionary safety measures. Safety Speed assumes no responsibility for any consequential damage or loss of production. Safety Speed will not be responsible for claims made for machines that are not used or maintained in the normal course of business, used for applications not intended, or modified in any way.

This manual covers the following Safety Speed screw pocket cutters:

SPM301 (Electric powered)

SPM301- P (Pneumatic Powered)

REPAIRS

If your tool is damaged, call Safety Speed at 800-772-2327 for technical advice or for the name of a dealer near you who can service your machine.

SAFETY

WARNING: When using electric tools, always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE. Before use, be sure everyone using this tool reads and understands this manual as well as any labels packaged with or attached to the tool.

1. **KNOW YOUR POWER TOOL.** Read this manual carefully to learn your power tool's applications and limitations as well as potential hazards associated with this type of tool.
2. **DO NOT ALLOW UNQUALIFIED PEOPLE TO OPERATE** the tool.
3. **AVOID DANGEROUS ENVIRONMENTS.** Do not use your power tool in rain, damp or wet locations, or in the presence of explosive atmospheres (gaseous fumes, dust, or flammable materials). Remove materials or debris that may be ignited by sparks.
4. **KEEP WORK AREA CLEAN AND WELL LIT.** Cluttered, dark work areas invite accidents. Provide at least 200 watts of lighting at the front work area of the tool. Eliminate all shadows that could interfere with clear viewing of the work area.
5. **DRESS PROPERLY.** Do not wear loose-fitting clothing or jewelry. Wear a protective hair covering to contain long hair, as it may be caught in moving parts. When working outdoors, wear rubber gloves and insulated, nonskid footwear. Keep hands and gloves away from moving parts.
6. **USE SAFETY EQUIPMENT.** Everyone in the work area should **wear safety goggles or glasses with side shields** that comply with current safety standards. Wear hearing protection during extended use and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc. should be used when specified or necessary. Keep a fire extinguisher nearby.
7. **KEEP BYSTANDERS AWAY.** Keep children and bystanders at a safe distance from the work area to avoid distracting the operator and contacting the tool or extension cord.
8. **MAKE THE WORKSHOP CHILD PROOF** with padlocks, master switches, etc.
9. **NEVER LEAVE THE TOOL RUNNING UNATTENDED.** Turn the power off. Do not leave the tool until it comes to a complete stop.
10. **PROTECT OTHERS IN THE WORK AREA** from debris such as chips and sparks. Provide barriers or shields as needed.
11. **USE PROPER ACCESSORIES.** Using non-recommended accessories may be hazardous. Be sure accessories are properly installed and maintained. Do not defeat a guard or other safety device when installing an accessory or attachment.
12. **CHECK FOR DAMAGED PARTS.** Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts, and any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired. Repair or replace a damaged guard or other part. For all repairs, insist on identical replacement parts.
13. **REMOVE ALL ADJUSTING WRENCHES AND TOOLS** from the tool before turning it on. Make this a habit.
14. **GROUND YOUR TOOL. AVOID ACCIDENTAL STARTING.** Be sure your tool is turned off before plugging it in. Do not use the tool if the power switch does not turn it on and off. Observe correct lockout/tag out procedures when performing maintenance on the tool.
15. **DO NOT FORCE THE TOOL.** Your tool will perform best at the rate for which it was designed. Excessive force only causes increased wear, increased risk of binding or sudden breakage, and reduced control. See the chart in the back of this manual for suggested cycle speed settings

16. KEEP HANDS AWAY FROM ALL CUTTING EDGES AND MOVING PARTS.
17. DO NOT ABUSE THE CORD. Never unplug the cord by yanking it from the outlet. Pull the plug rather than the cord to reduce the risk of damage. Keep the cord away from heat, oil, sharp objects, cutting edges, and moving parts.
18. DO NOT OVERREACH. MAINTAIN CONTROL. Keep proper footing and balance at all times. Maintain a firm grip.
19. STAY ALERT. Watch what you are doing, and use common sense. Do not use a tool when you are tired, distracted, or under the influence of drugs, alcohol, or any medication causing decreased control.
20. UNPLUG THE TOOL when it is not in use, before changing items such as Cutters, and before performing recommended maintenance. Observe appropriate lockout/tag out procedures.
21. MAINTAIN TOOLS CAREFULLY. Keep handles dry, clean, and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories. Periodically inspect tool cords and extension cords for damage. Have damaged parts repaired or replaced.
22. MAINTAIN LABELS AND NAMEPLATES. These carry important information. If unreadable or missing, contact ARC Machinery for a free replacement.
23. STAY ALERT. Watch what you are doing and use common sense. Do not allow yourself to be distracted. Do not operate the tool when you are tired or under the influence of drugs or alcohol. Hold the material firmly and exercise control at all times. Repetitive cuts can lull you into carelessness. A brief "stretch" may be all that is necessary to avoid a problem.
24. IF THE CUTTER STALLS, DO NOT TURN THE SWITCH ON AND OFF. A dull cutter or excess cycle speed may cause stalling. Switch power off immediately if the cutter stalls, and remove the workpiece from the cut.
25. AVOID CUTTING NAILS OR OTHER FASTENERS. Inspect for and remove all metal fasteners before cutting.
26. ALWAYS WAIT FOR THE CUTTERS TO STOP COMPLETELY BEFORE making adjustments. Unplug the tool before transporting or moving it.
27. DO NOT PLACE YOUR HANDS IN THE PATH OF THE CUTTERS. Do not try to retrieve a piece of cut material while the cutters are rotating.
28. DO NOT DEFEAT THE GUARDS OR OPERATE THE TOOL WITHOUT THE GUARDS IN PLACE.
29. NEVER STAND ON THE TOOL. Serious injury could occur if the tool is tipped or if you unintentionally contact the cutting tool.
30. HOME CENTERS AND COMMERCIAL LOCATIONS should check with their local electrical contractor to be sure the proper amount of electrical power (volts/amps) will be available for this machine during all operating hours and conditions. Be aware of any special electrical safety requirements for this machine (examples: key lock offs, timers, coded security, touch pads, or time lockouts) required by local codes.
31. DISCONNECT AND LOCK THE POWER OFF before changing Cutters or making any adjustments.
32. BEFORE CONNECTING THE ROUTER MOTORS TO THE POWER SUPPLY, BE SURE THE ROUTER MOTOR SWITCH IS IN THE OFF POSITION.

Please Read Before Operating the Pocket Cutter

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-based paint
- Crystalline silica from bricks and cement and other masonry products, and
- 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 specifically designed to filter out microscopic particles.

Electrical Safety

WARNING: Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are not sure that the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a qualified electrician before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Some of our machines are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power supply system mentioned above.

Do not expose your tool to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low-resistance path to carry electricity away from you, reducing the risk of electric shock.

Grounded Plug and Outlet

The grounding prong on the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances.

Extension Cords

Grounded tools require a three-wire extension cord. As the distance from the supply outlet increases, you must use a heavier-gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord

for more than one tool, add their nameplate amperes and use the sum to determine the required minimum wire size.

Guidelines for Using Extension Cords

If you are using an extension cord outdoors, be sure it is marked with the suffix “W-A” (“W” in Canada) to indicate that it is acceptable for outdoor use.

Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.

Protect extension cords from sharp objects, excessive heat, and damp or wet areas.

Short-Circuit Protection

This tool must only be plugged into a circuit that has a short-circuit protection device which is located ahead of the equipment in the circuit, in accordance with local codes.

General guidelines are as follows:

120 volt: 20 amp protection

Operating Environment

For safe operation, install the tool in an area that is well lit. Eliminate all shadows that could interfere with clear viewing of the work area.

Do not locate the tool in a damp or wet location, or a location where it may be exposed to rain. If the tool will be operated in an enclosed area, SSM recommends installing a Dust Collection System

Avoid explosive atmospheres (gaseous fumes, dust, or flammable materials).

Secure the area so that children and bystanders are kept a safe distance from the work area. Provide barriers and shields as needed.

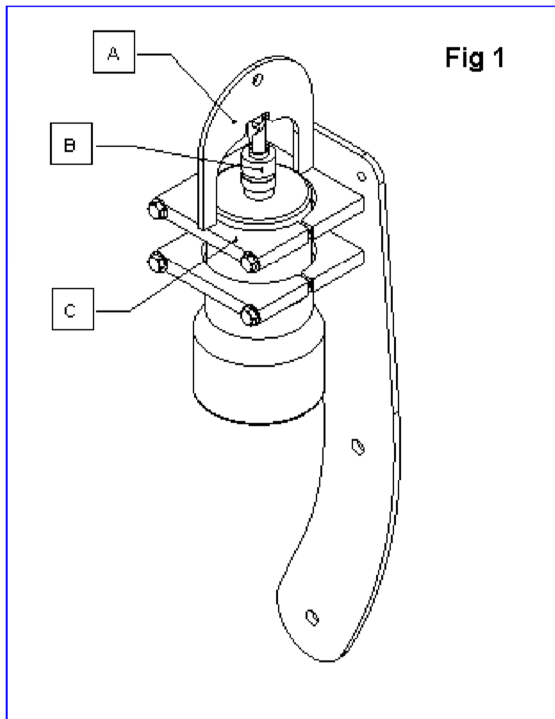
INSTALLATION

Your SSM screw pocket machine comes from the factory assembled and aligned. You will only need to mount the machine on a level surface and supply power and dust collection.

Installing a Router cutter

Select the correct Cutter for your needs. Consult with your machinery dealer, or with our customer service department (800-772-2327) to determine the best cutter for your cutting needs.

DANGER! Always use supplied cutter setting guide (Fig 1-A) when installing cutters. Failure to do so could result in the cutter colliding with the machine table or the drill when the machine is cycled. If your guide is missing or damaged contact Safety Speed for a replacement.



DANGER!

Disconnect air and electrical power from the unit before proceeding!

1. Using the wrench provided, loosen the collet nut (Fig 1B) and remove the cutter.
2. Insert the new bit into the collet. and snug up the collet nut by hand.
3. Hold the router bit length guide (Fig 1-A) against the router mount, (Fig1-C) then pull the router bit up against the bottom of the guide.
4. Tighten the collet nut securely

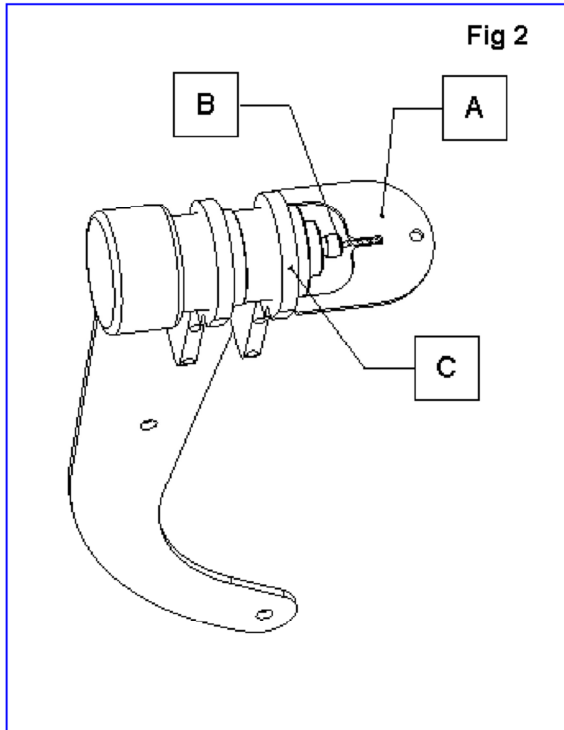
DANGER! Failure to use the router bit setting guide properly can result in the cutters colliding with each other or the machine table.

THIS WILL DESTROY THE BITS AND COULD INJURE THE OPERATOR!

Always wear proper eye protection when operating machinery. If your guide is missing or damaged contact Safety Speed for a replacement.

Installing a Drill Bit

DANGER! Always use supplied drill bit length setting gauge Fig 2-A when installing drills. Failure to do so could result in the drill colliding with the cutter when the machine is cycled. If your gauge is missing or damaged contact Safety Speed for a replacement.



DANGER!

Disconnect air and electrical power from the unit before proceeding!

1. Using the wrench kit provided, loosen the collet (Fig 2-B) and remove the drill bit.
2. Insert the new drill bit into the collet and snug up the collet nut by hand.
3. Hold the drill bit length setting gauge (Fig 2-A) against the drill mount, (Fig 2-C) then pull the drill bit out against the bottom of the gauge.
4. Tighten the collet securely.

DANGER! Failure to use the drill bit length setting gauge properly can result in the cutters colliding with each other or the machine table.

THIS WILL DESTROY THE BITS AND COULD INJURE THE OPERATOR!

Always wear proper eye protection when operating machinery. If your drill bit setting gauge is missing or damaged contact Safety Speed for a replacement.

Always keep cutters and drills clean and sharp for the best performance. A dull or dirty cutter can bind and pinch, resulting in poor quality cuts. **If in doubt, replace it with a new one.**

OPERATION

WARNING: The following are suggestions that give you a general idea of how an **SAFETY SPEED** screw pocket cutter is intended to be operated. No instructions can replace common sense and experience. Be sure you and all operators have enough time and material to become familiar with the general operating characteristics of this tool, and have **FULLY READ AND UNDERSTOOD** all general operating and safety instructions.

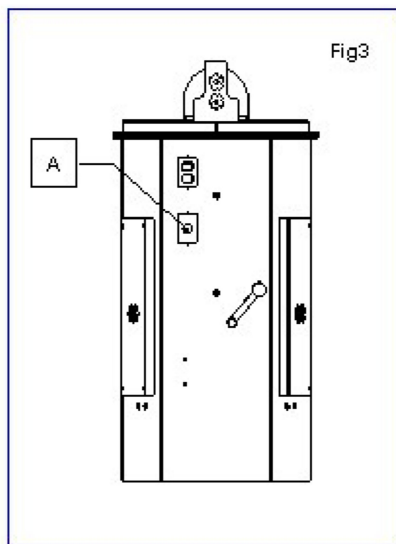
Limitations of the Tool

Small Work pieces

Safety Speed screw pocket cutters are not recommended for work pieces that are shorter than the clamp guard. **Do not cut pieces that are so small that your hand must be under the guard to hold the piece in place.**

Work piece thickness

The SPM301 screw pocket cutter is limited to material thickness ranging from a minimum of 1/2" to a maximum of 1-1/2". Do not attempt to cut pockets in material thinner than 1/2". Doing so could result in the workpiece being insufficiently clamped, and could cause bit breakage or operator injury.



Variable Cycle Speed Setting

The SPM301 screw pocket cutter has variable cycle speed. The speed setting knob is located on the front of the machine (Fig 3-A). Turn knob counterclockwise to reduce cycle speed, and clockwise to increase speed. Use slower speeds when cutting deep pockets or harder materials. Faster speeds can be used for cutting shallow pockets or soft materials. Slower cycle speeds will produce more accurate pockets and better finishes.

Cycle Speed must be matched to the materials being cut. Improper speed selection can result in reduced tool life, inaccurate and poor quality cuts, and safety risks.

After installing new cutters, or when cutting a new material, use a low cycle speed for the first cut. Gradually increase cycle speed for subsequent cuts until the desired performance is achieved.

CAUTION! When cutting deep pockets it may be necessary to reduce cycle speed. Using fast cycles along with deep pockets in hard materials can stall the machine or break the drill or cutter.

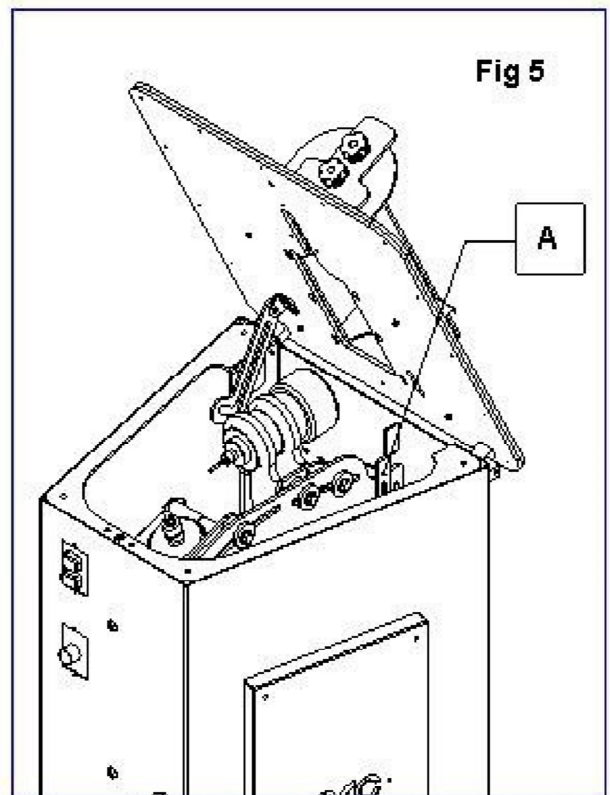
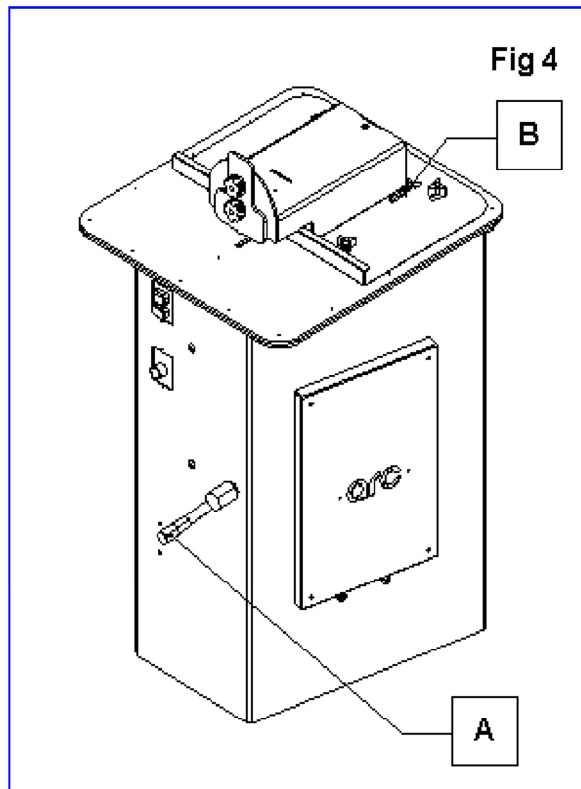
WARNING! IF THE CUTTER STALLS, DO NOT TURN THE SWITCH ON AND OFF. A dull cutter or excess cycle speed may cause stalling. Switch power off immediately if the cutter stalls, and remove the workpiece from the cut.

If in doubt, consult with your machinery dealer, or our customer service department (387-7974), to determine the best settings for your application.

Pocket Depth Adjustment

The SPM301 screw pocket machine can be adjusted for varying pocket depths. The pocket depth adjustment crank is located on the front of the machine (Fig 4A). Turn the crank counterclockwise to cut shallower pockets, and clockwise to cut deeper pockets. Use the depth setting gauge at the back of the clamp guard (Fig 4B) to set the cutter to the desired depth. This gauge is adjustable, (Fig 5-A) and can be set to show either the depth of the pocket or the drilled hole position.

CAUTION! When cutting deep pockets it may be necessary to reduce cycle speed. Using fast cycles along with deep pockets in hard materials can stall the machine or break the drill or cutter.



MAINTENANCE

WARNING: To reduce the risk of injury, always unplug the tool before doing any maintenance. Never disassemble the tool or try to do any rewiring to its electrical system. Contact a qualified electrician for electrical repairs. Always follow lockout/tag out procedures when servicing electrical equipment.

General Maintenance

Keep the tool in good repair by adopting a regular maintenance program. Before each day's use, examine the general condition of the tool, and inspect the guards, switches, power cord, and extension cord for damage. Check for loose screws, misalignment, binding of moving parts, improper mounting, broken parts, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired.

Cleaning

Daily, clean all dust and debris from the vents in the motor housing.

Keep the handles clean, dry and free from oil and grease.

Use only mild soap and a damp cloth to clean the tool, because certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia, and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

WARNING: To reduce the risk of injury, electric shock, and damage to the tool, never immerse the router in liquid or allow a liquid to flow inside it.

Maintaining the Motors

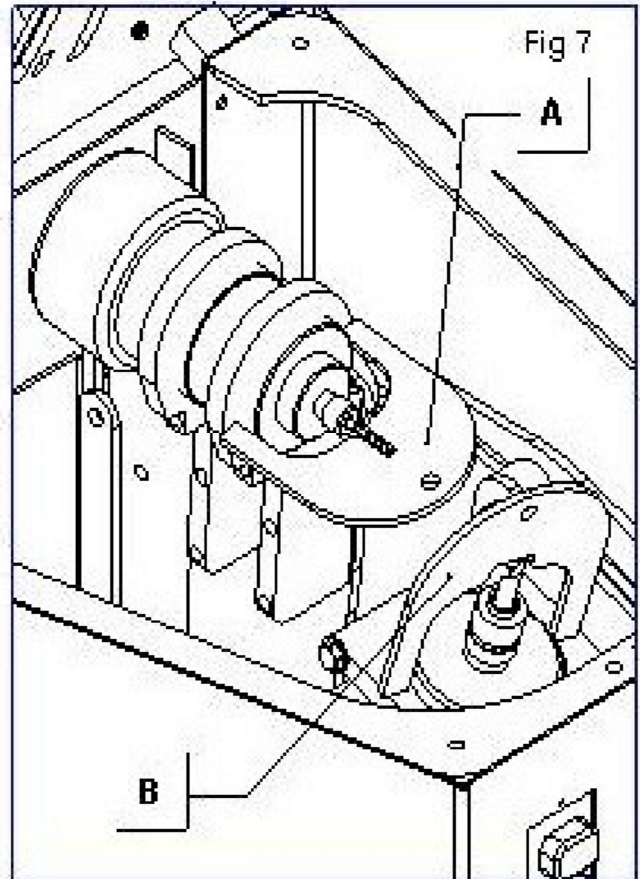
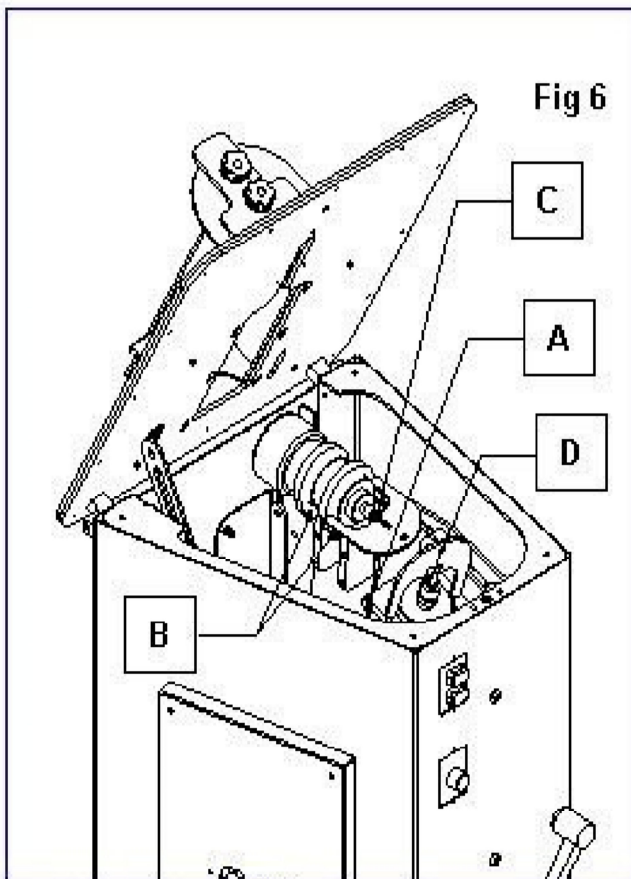
For motor maintenance instructions see the included router motor manuals. If your Motor manuals are missing contact SSM for a replacement.

Removing the Motors

1. Disconnect and lock off the power supply.
2. Loosen the bolts on the motor mounts. Router,(Fig 6-A), and drill motor, (Fig 6-B)
3. Support the motor by hand and carefully pull it free of the motor mount.

Installing Motors

1. To reinstall the motor, First install the appropriate cutter into the collet. Drills should be protruding approximately 1-1/4" from the collet, (Fig 6-c) and router cutters should protrude approximately 1-5/8". (Fig 6D) **WARNING!** This setting is for motor installation reference only, do not cycle the machine until step 3 is complete!
2. Mount the motor into its brackets,(Fig 7) using the appropriate router cutter setting guide (Fig 7-A) or drill setting guide (Fig 7-B).Now, to ensure accurate cutter placement, reset the cutters. See installing a router cutter and installing a drill bit, pages 7 and 8.

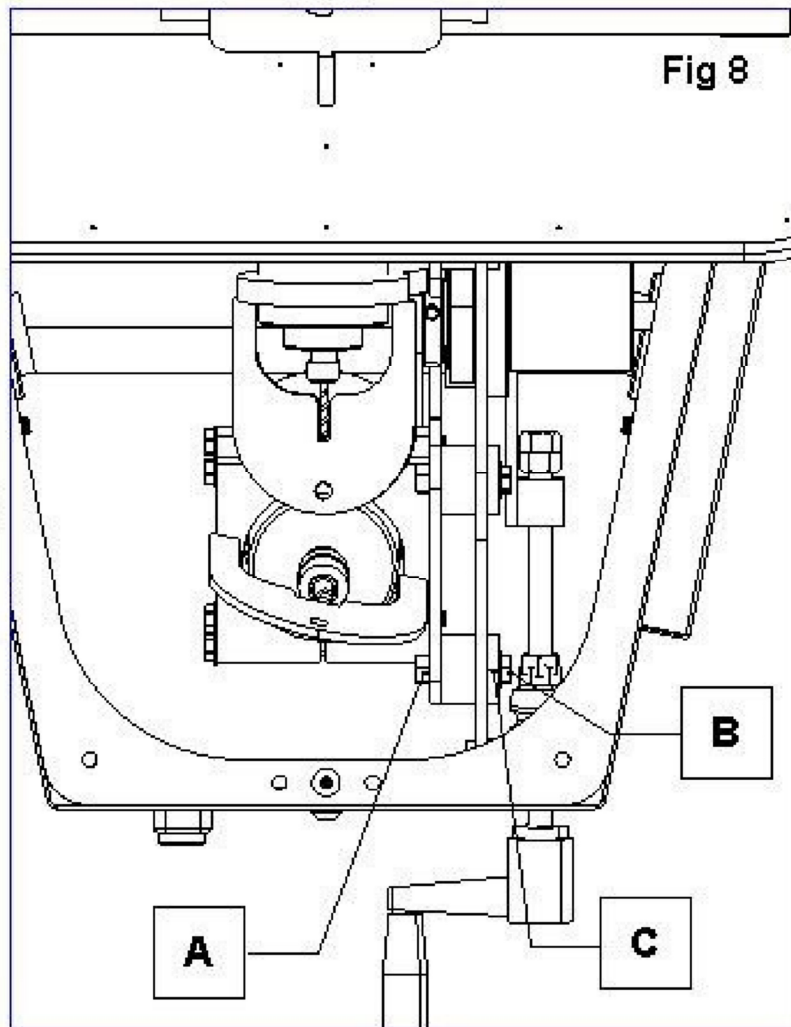


DANGER! Always use supplied cutter setting guides (Fig 7) when installing router motors or cutters and drill bits Failure to do so could result in the cutters colliding with each other or the machine table when the machine is cycled. If your guide is missing or damaged contact SSM for a replacement.

Adjusting the Arm Guides

The arm guide adjustment should be checked weekly. Guide tension is correct when you can rotate the black nylon guide by hand.

1. Loosen the nut (Fig 8-A)
2. Tighten bolt (Fig 8-B) until slight resistance can be felt when rotating the nylon guide (Fig 8-C) by hand.
3. Tighten nut. When the guides are properly adjusted you will be able to turn the guide easily by hand, but will feel a slight drag. If this is too loose the tool will chatter in the cut. If it is too tight, the machine will overload and motor life will be shortened. Repeat the above procedure on all four guides.

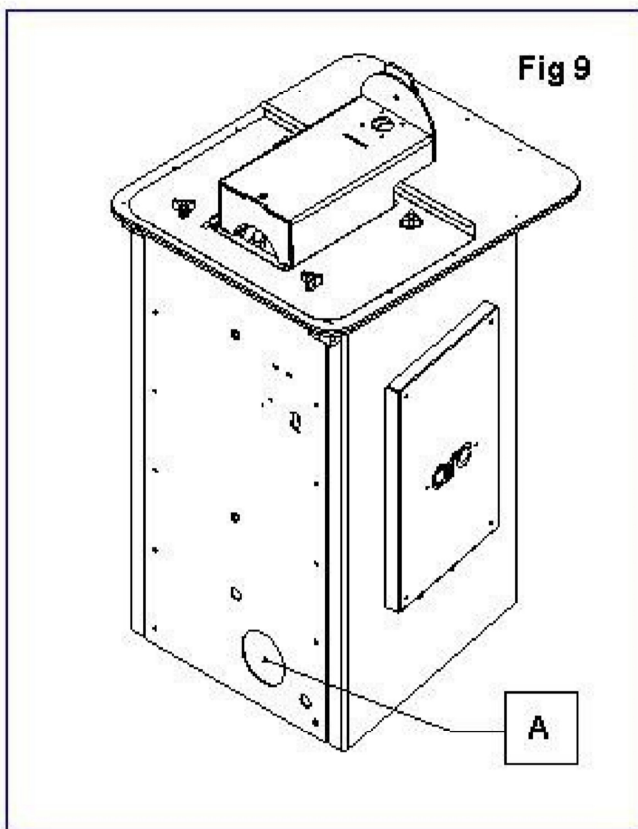


Lubricating the Arm Guides

The arm guides should move smoothly over the frame plate. However, if the guides become caked with dust or debris, the guides may get stuck or may not slide smoothly. Periodically clean the guides with a damp cloth, following the directions under “Cleaning” above. Then use a dry lubricant such as a spray silicone. Other lubricants cause dust and debris to collect on the guides and contaminate the bearings.

Dust Collection Kit-Optional

Connecting the machine to a dust collection system is recommended if the tool will be used in an enclosed area. A 4" hose adapter and four self-tapping screws are included with the kit.



Installation

1. Center the adapter over the 4" hole in the back of the machine (Fig 9A) and mark the location of the screws.
2. Drill 1/8" diameter holes through the back panel of the machine at the marked locations.
3. Mount the adapter to the machine using the 4 supplied screws.

Operation

Always turn the vacuum source on before starting the machine, and turn it off when finished cutting.