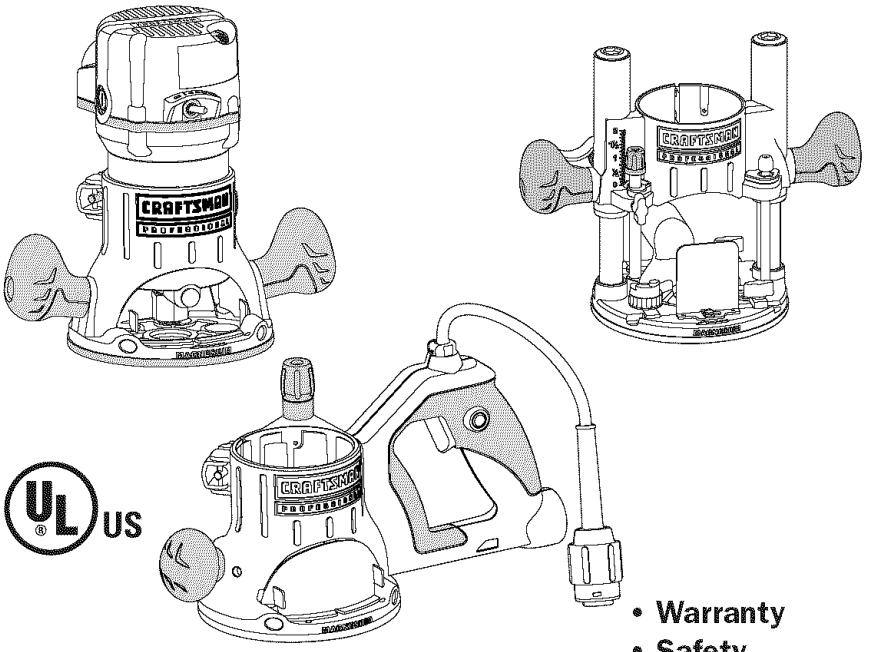
Product Manual

CRAFTSMAN®
PROFESSIONAL

# 12.5 Amp, Variable Speed, 2-1/4 Peak HP Router Combo

# with Fixed Base, Plunge Base, and D-Handle Base

Model No. 320. 28084

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- Warranty
- Safety
- Assembly
- Description
- Operation
- Maintenance
- Troubleshooting

⚠ CAUTION! Read, understand and follow all Safety Rules and Operating Instructions in this Manual before using this product.

Sears, Roebuck and Co., Hoffman Estates, IL 60179
www.craftsman.com

## TABLE OF CONTENTS



**ONE YEAR FULL WARRANTY ON CRAFTSMAN PROFESSIONAL TOOL**

If this Craftsman professional tool fails to give complete satisfaction within one year from the date of purchase, return it to any Sears store or parts & repair center or other craftsman outlet in the United States for free repair (or replacement, if repair proves impossible).

This warranty does not include expendable parts such as lamps, batteries, bits, or blades.

This warranty applies for only 90 days from the date of purchase if this product is ever used for commercial or rental purposes

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., Hoffman Estates IL 60179

⚠ **WARNING:** Some dust created by using power tools contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

**SAVE THESE INSTRUCTIONS!**
**READ ALL INSTRUCTIONS!**

## SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The symbol warnings **DO NOT**, by themselves, eliminate any danger. The instructions and warnings they give are no substitutes for proper accident-prevention measures.

⚠ **WARNING:** Be sure to read and understand all safety instructions in this manual, including all safety-alert symbols, such as "DANGER," "WARNING," and "CAUTION," before using this router. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

### SYMBOL MEANINGS

⚠ **SAFETY-ALERT SYMBOL:** Indicates DANGER, WARNING, OR CAUTION. May be used in conjunction with other symbols or pictographs.

⚠ **DANGER:** Failure to obey this safety warning WILL result in death or serious injury to you or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

⚠ **WARNING:** Failure to obey this safety warning CAN result in death or serious injury to you or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

⚠ **CAUTION:** Failure to obey this safety warning MAY result in personal injury to you or others or property damage. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

### DAMAGE PREVENTION AND INFORMATION MESSAGES

These inform user of **important information and/or instructions** that could lead to equipment or other property damage if not followed. Each message is preceded by the word "NOTE:" as in the example below:

**NOTE:** Equipment and/or property damage may result if these instructions are not followed.


⚠ **WARNING:** The operation of any router can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, ALWAYS wear safety goggles or safety glasses with side shield and a full-face shield when needed. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shield, available at Sears Stores or other Craftsman® Outlets.

## SAFETY INSTRUCTIONS

⚠ **WARNING:** BE SURE to read and understand all instructions in this manual before using this router. Failure to follow all instructions may result electric shock, fire and/or serious personal injury.

### WORK AREA SAFETY

- **Keep your work area clean and well lit.** Cluttered workbenches and dark areas invite accidents.
- **Do not operate power tools in explosive environments,** such as in the presence of flammable liquids, gases, or dust. Power tools create sparks, which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away** while operating a power tool. Distractions can cause you to lose control.
- **Make your workshop childproof** with padlocks and master switches. Lock tools away when not in use.
- **Before using your router, make sure** that the work area has ample lighting and that there are no obstructions that will interfere with its safe operation.

### PERSONAL SAFETY

- **Know your power tool.** Read this operator's manual carefully. Learn the router's applications and limitations, as well as the specific, potential hazards related to this tool.
- **Stay alert**, watch what you are doing, and use common sense when operating a power tool.
- **Do not** use this 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.
- **Dress properly.** Do not wear loose clothing or jewelry. Pull back long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothing and long hair can be caught in moving parts. Air vents often cover moving parts and should also be avoided.
- **Avoid** accidental starting. Be sure switch is in the "OFF" position before plugging in the tool. Do not carry tools with your finger on the switch. Carrying tools with your finger on the switch or plugging in tools that have the switch in the "ON" position invites accidents.
- **Remove** adjusting keys or blade wrenches before turning the tool "ON." A wrench that is left attached to a rotating part of the tool may result in personal injury.
- **Do not overreach.** Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

- **Always secure your work.** Use clamps or a vise to hold the workpiece securely. It is safer than using your hand, and it frees both hands to operate the tool.
- **Use safety equipment.** Always wear eye protection. A dust mask, non-skid safety shoes, hardhat, and/or hearing protection must be used for appropriate conditions.
- **Do not use on a ladder or unstable support.** Stable footing on a solid surface enables better control of the tool in unexpected situations.

## TOOL USE AND CARE

⚠ **WARNING:** Be sure to read and understand all instructions before operating this router. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

- **Always use clamps** or other practical ways to support and secure the workpiece to a stable platform. Holding the workpiece by hand or against your body is unstable and may lead to loss of control.
- **Do not force the tool.** Use the correct tool and bit for your application. The correct tool and bit will do the job better and more safely at the rate for which it is designed.
- **Do not use the tool if switch does not turn it "ON" or "Off."** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source before making any adjustments,** changing accessories, or storing the tool. Such preventive safety measures reduce the risk of accidentally starting the tool.
- **Never leave the tool running.** Always turn it off. Do not leave the tool until it comes to a complete stop.
- **Store idle tools out of the reach of children** and other untrained persons. Tools are dangerous in the hands of untrained users.
- **Maintain tools with care.** Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
- **Check for misalignment or binding of moving parts**, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended for this tool**. Accessories that may be suitable for one tool may become hazardous when used on another tool.

## ELECTRICAL SAFETY

⚠ **WARNING:** Do not permit fingers to touch the terminals of the plug when installing or removing the plug from the outlet.

- **Double insulated tools** 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 cord and grounded power-supply system. Applicable only to Class II (double-insulated) tools.
- This router motor is double insulated.

⚠ **WARNING:** Double insulation does not take the place of normal safety precautions when operating this tool.

- **Before** plugging in the tool, be sure that the outlet voltage supplied is within the voltage marked on the tool's data plate. **Do not** use "AC only" rated tools with a DC power supply.
- **Avoid body contact with grounded surfaces**, such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- **Do not expose power tools to rain or wet conditions** or use power tools in wet or damp locations. Water entering a power tool will increase the risk of electric shock.
- **Inspect tool cords for damage**. Have damaged tool cords repaired at a Craftsman Service Center. Be sure to stay constantly aware of the cord's location and keep it well away from the moving router.
- **Do not abuse the cord.** Never use the cord to carry the tool or to pull the plug from an outlet. Keep the cord away from heat, oil, sharp edges, and moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

## EXTENSION CORDS

**Use a proper extension cord.** Use only cords listed by Underwriters Laboratories (UL). Other extension cords can cause a drop in line voltage, resulting in a loss of power and overheating of the tool.

For this tool, an AWG (American Wire Gauge) size of at least 14-gauge is recommended for an extension cord of 25-ft. or less in length. Use 12-gauge for an extension cord of 50-ft. Extension cords 100-ft. or longer are not recommended.

A smaller wire gauge size has greater capacity than a larger number (14-gauge wire has more capacity than 16-gauge wire; 12-gauge wire has more capacity than 14-gauge). When in doubt, use the smaller number. When operating a power tool outdoors, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

⚠ **CAUTION**: Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools, or other obstructions while you are working with a power tool.

⚠ **WARNING:** Check extension cords before each use. If damaged, replace immediately. Never use a tool with a damaged cord, since touching the damaged area could cause electrical shock, resulting in serious injury.

## SAFETY SYMBOLS FOR YOUR TOOL

The label on your tool may include the following symbols.

V .....Volts

A.....Amps

Hz.....Hertz

W.....Watts

min.....Minutes

~ .....Alternating current

⎓ .....Direct current

$n_o$ .....No-load speed

⧈ .....Class II construction, Double Insulated

.../min.....Revolutions or Strokes per minute

⚠ ..... Indicates danger, warning or caution. It means attention! Your safety is involved.

## SERVICE SAFETY

- **If any part** of this router is missing or should break, bend, or fail in any way; or should any electrical component fail to perform properly: shut off the power switch, remove the router plug from the power source, and have the missing, damaged or failed parts replaced before resuming operation.
- **Tool service** must be performed only at a Craftsman Parts and Repair Center. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- **Use only identical replacement parts** when servicing a tool. Follow the instructions in the maintenance section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

## SAFETY RULES FOR ROUTERS

⚠ **CAUTION:** Cutting bits coast after the router is switched off.

- **Hold the tool by insulated gripping surfaces (handles)** when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make the exposed metal parts of the tool "live" and shock the operator.
- **Maintain a firm grip** on the router with both hands to resist torque upon starting the router.
- **Never** attempt to use the router motor without first installing it in an approved base. Failure to heed this warning could result in personal injury and damage to the motor.
- **Make sure** that the router motor does not move up or down when clamped in a fixed base.
- **Do not** hold the router by hand for use in an upside-down or horizontal position. The router motor can separate from the base if it is not properly attached according to the instructions.
- **Tighten the collet/nut securely** to prevent the cutting bit from slipping. If the collet/nut is not securely tightened, the cutting bit may detach during use, causing serious personal injury.
- **Never** tighten the collet/nut without a cutting bit installed in the collet /nut.
- **Use clamps** or other practical ways to secure and support the workpiece to a stable platform, and hold the workpiece rigidly in position. Holding the workpiece by hand or against your body is unstable and may lead to loss of control.
- **Never** hold the piece being cut in your hands or across your legs. It is important to support and clamp the workpiece properly in order to minimize body exposure, bit binding, and loss of control.
- **Always** keep the chip shield clean and in place.
- **Stay alert** and clear the router cutting-bit path of any obstructions before starting the motor. Keep the cutting area clear of all foreign objects while the router motor is running.
- **Check** to see that the cord will not "hang up" during routing operations.
- **Make sure** that the cutting bit is not in contact with the workpiece before the switch is turned on. The bit must always be running at full speed before contacting the workpiece.
- **Keep hands clear** of the cutting bit when the router motor is running to prevent personal injury.
- **Provide clearance** under the workpiece for the router cutting bit when through-cutting.

- **Keep cutting pressure constant**. Do not overload the motor.
- **Use only sharp cutting bits** that are not chipped or cracked. Blunt cutting bits will cause stalling and can burn the workpiece.
- **Never** use this router motor with a cutting bit larger than 3-1/2-inches in diameter.
- **Always use cutting bits that are designed for this router.** Never use cutting bits that are larger in diameter than the opening in the router sub-base. Cutting bits that have cutter diameters larger than the opening could cause possible loss of control or create other hazardous condition that could cause serious personal injury.
- **The sub-base on this router has an opening of 1-1/4 inch.** To use cutting bits with a larger diameter, install and use a sub-base with a larger diameter opening (sold separately at Sears stores or other Craftsman outlets).
- **Do not use large router cutting bits for freehand routing**. Use of large cutting bits when freehand routing could cause loss of control or create hazardous conditions that could result in serious personal injury. If using a router table, large bits should be used for edging only.
- **Be sure the cutting bit is centered** in the template guide (sold separately) prior to template-guide applications to avoid personal injury or damage to finished work.
- **Do not remove more than 1/8 inch in a single pass**. Excessive depth of cut can result in loss of control that could result in personal injury.
- **Turn the router motor OFF** after completing a cut, and let it come to a complete stop before removing the router from workpiece.
- **Let the router motor come to a complete stop** before putting the router down. Cutting bits coast after the power is turned off.
- **Only** use router tables that conform to safe woodworking practices and offer proper guarding for the cutting bit. Use router tables that are UL classified and identified as suitable for use with this specific router model. Failure to comply could result in serious personal injury.
- **Only use router tables with on-board, switch-controlled receptacles**. Failure to use router tables with all the appropriate safety features could result in serious personal injury.
- **Disconnect** the tool from the power source before making any adjustments or changing cutting bits.
- **Be careful not to touch the collet/nut or cutting bit** with your hands or fingers if you are changing a bit immediately after use. The heat buildup from cutting could cause severe burns. Always use the wrench provided.
- **Avoid "climb cutting."** See the OPERATION section in this manual. "Climb cutting" increases the chance for loss of control resulting in possible serious injury.

⚠ **WARNING:** Use of this product can generate dust containing chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based 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 upon how often you do this type of work. To reduce your exposure to these chemicals:

- Work in a well-ventilated area.
- Work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth, eyes or lie on the skin may promote absorption of harmful chemicals.

⚠ **WARNING:** Use of this tool can generate and/or disburse dust, which may cause serious and permanent respiratory or other injury. Always use NIOSH/ OSHA approved respiratory protection appropriate for the dust exposure. Direct the particles away from face and body.

## ADDITIONAL RULES FOR SAFE OPERATION

⚠ **WARNING**: Be sure to read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

- **Know your power tool.** Read this operator's manual carefully. Learn the applications and limitations, as well as the specific potential hazards related to this tool. Following this rule will reduce the risk of electric shock, fire, or serious injury.
- **Always wear safety** glasses or eye shields when using this router. Everyday eyeglasses may have impact-resistant lenses, but they are not safety glasses.
- **Protect your lungs.** Wear a facemask or dust mask if the operation is dusty.
- **Protect your hearing.** Wear appropriate personal hearing protection during power-tool use. Under some conditions noise from this product may contribute to hearing loss.
- **All visitors and bystanders** must wear the same safety equipment that the operator of the router should wear.

- **Inspect tool cords** periodically and, if they are damaged, have them repaired at your nearest Craftsman Service Center. Be aware of the cord location.
- **Always check the tool for damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine if it will operate properly and perform its intended function. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. A guard or other part that is damaged should be properly repaired or replaced at a Sears Service Center.
- **Inspect and remove all nails** from lumber before routing.
- **Save these instructions.** Refer to them frequently and use them to instruct others who may use this tool. If someone borrows this tool, make sure they have these instructions, also.

## UNPACKING

⚠ **WARNING:** Your router should never be connected to the power source when you are assembling parts, making adjustments, installing or removing collets/nuts or cutting bits, cleaning, or when it is not in use. Disconnecting the router will prevent accidental starting, which could cause serious personal injury.

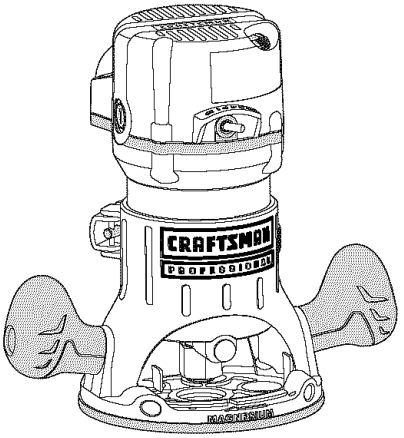
1. The router motor is attached to the fixed base, and the ½-in. collet nut is already installed when you open the package. Carefully lift the router motor in the fixed base out of the storage/carrying case and place it on a stable, flat surface.
2. Lift the plunge base and the D-handle base out of the case and place them on a flat surface.
3. Open the parts bag to locate the following:
   - Edge Guide
   - 1/4-in. Collet/Nut
   - Collet/Nut wrench
   - Power Cord
   - 2 Sawdust-Extraction Hoods
   - 2 Screws to attach the Sawdust-Extraction Hood to the Plunge Base
   - Chip Shield for Plunge Base
   - Depth-Adjustment Wrench
4. Inspect the items carefully to make sure that no breakage or damage has occurred during shipping. If any of the items mentioned is missing, (refer to "PARTS LIST" illustration), return the router to your nearest Sears store or Craftsman outlet to have the router replaced.

**⚠ WARNING:** If any parts are broken or missing, do not attempt to plug in the power cord or operate router until the broken or missing parts are replaced. Failure to do so could result in possibly serious injury.

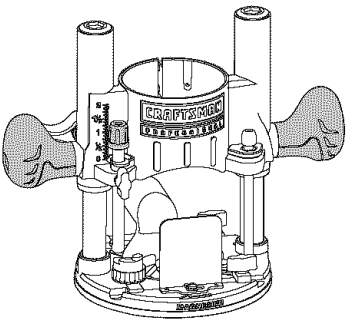
PARTS LIST (Fig. 1)

Fig. 1

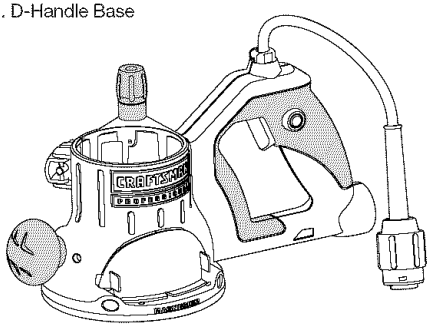
1. Fixed Base and Router motor with 1/2-in. Collet/Nut



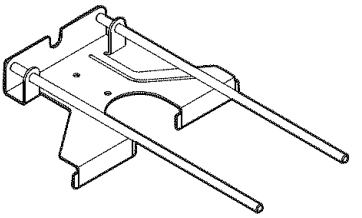

2. Plunge Basse



3. D-Handle Base

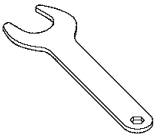


4. Edge Guide

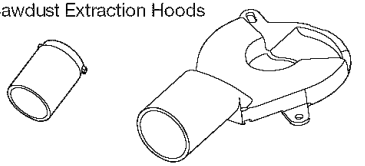


5. 1/4-in. collet/Nut

6. Collet/Nut Wrench

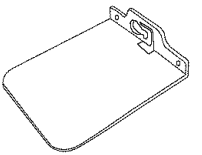


7. 2 Sawdust Extraction Hoods

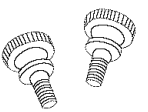


8. Depth-Adjustment Wrench

9. Chip Shield for Plunge Base

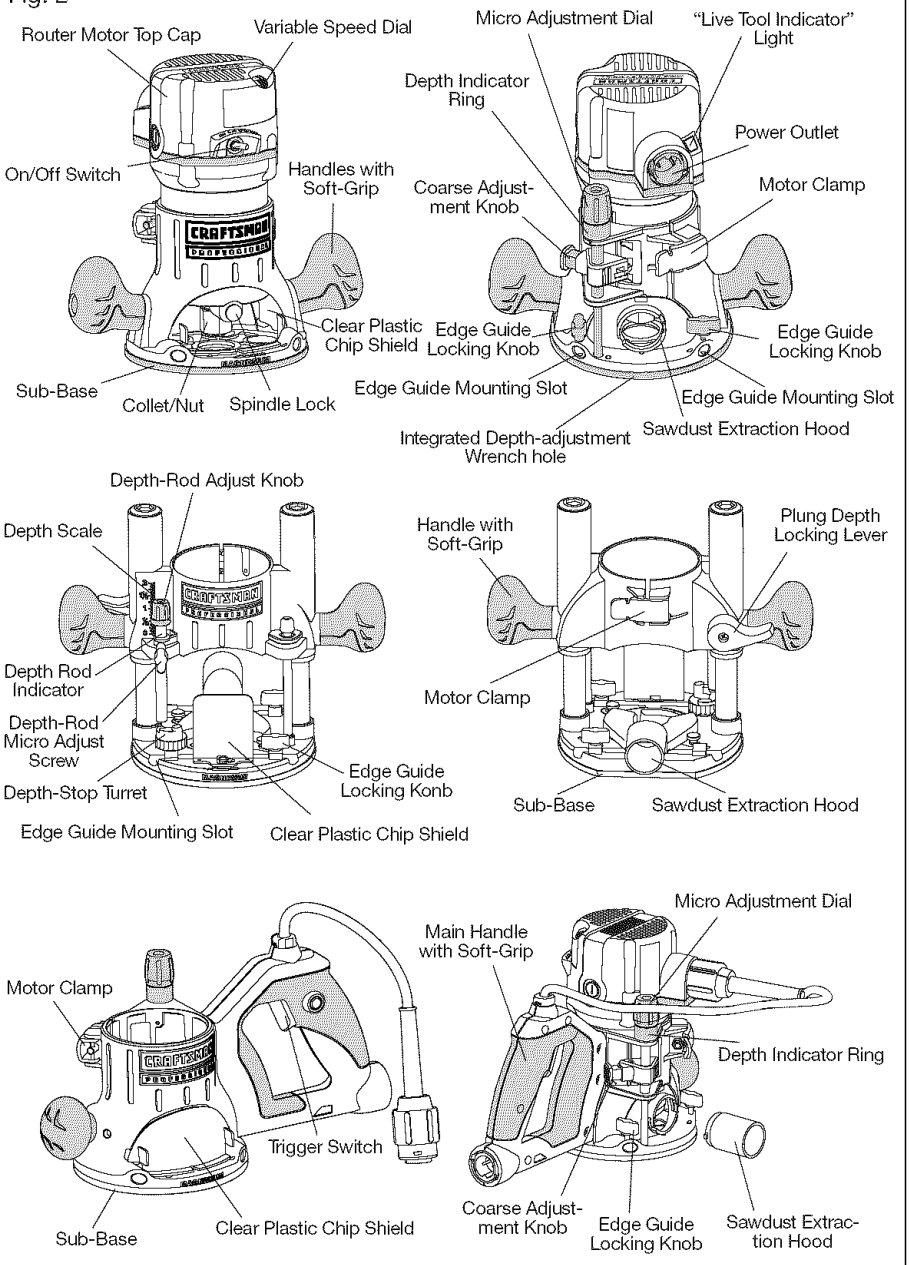


10. 2 Screws



## KNOW YOUR ROUTER COMBO (Fig. 2)

Fig. 2



| PRODUCT SPECIFICATIONS | |
|---|---|
| Rating | 12.5 Amps |
| No load Speed | 12000-25000RPM |
| Peak HP | 2-1/4 |
| Input | 120V, 60Hz AC |
| Collets/Nuts and Cutting Bit Shank Diameters | 1/4 in., 1/2 in. |
| Fixed Base Diameter | 6 inches |
| Plunge Base Diameter | 6 -11/16 inches |
| D-Handle Base Diameter | 6 inches |
| Sub-Base Opening (Diameter for cutting bit use) | 1-1/4 inches |
| Sub-Base Thickness | 0.23 inches (6mm) |
| Fixed Base Depth of Cut | 1-3/4 inches (45mm) |
| Plunge Base Depth of Cut | 2-1/8 inches (55mm) |
| D-handle Base Depth of Cut | 1-3/4-inches (45mm) |

**NOTE:** Before attempting to use your router, familiarize yourself with all of the operating features and safety requirements.

Your router has a precision-built electric router motor, and it should be connected only to a 120-volt, 60-Hz AC ONLY power supply (normal household current). **Do not** operate on direct current (DC). This large voltage drop will cause a loss of power and the router motor will overheat. If the router does not operate when plugged into a correct 120-volt, 60-Hz AC ONLY outlet, check the power supply. This router has a 10-ft, 2-wire power cord (no adapter needed).

**This Router Combo has the following features:**

1. 12.5 Amp, 2-14 Peak HP, Variable Speed Router motor, which runs at 12,000 to 25,000 RPM (no-load speed).
2. Variable Speed Dial for matching the speed to the workpiece material and bit size.
3. Electronic-Feedback Circuitry maintains constant speed under load for a quality finish in all materials.
4. Soft-start feature minimizes the torque twist common with larger router motors by limiting the speed at which the router motor starts. This also increases the motor's life.
5. Quick-Clamp System allows the router motor to be changed among Fixed, Plunge, and D-Handle bases without tools.
6. Fixed Base and D-Handle bases feature coarse and fine depth adjustments for accurate set-ups.

7. Plunge Base features fine and micro depth-rod adjustments with turret stops for precise set-ups and repetitive cutting.
8. Smooth plunge action lowers the bit into the workpiece at 90° for accurate cutting.
9. 3-position auxiliary handle on the D-handle base for positioning to individual preference.
10. Spindle Lock for easy, one-wrench bit changes.
11. 1/4-inch and 1/2-inch Self-Releasing Collets/Nuts for use with a wide variety of 1/4-in. and 1/2-in. router bits, sold separately.
12. Detachable power cord: replaceable to prolong tool life and removable for easy carrying and storage.
13. Ball Bearings throughout the motor for smooth, efficient operation and long life.
14. Ergonomically designed handles with soft grip on the three router bases for comfort and maximum control with less vibration.
15. Large base openings and large chip shields on the three bases, combined with 3 LED Worklights on the Router motor to provide high visibility of the bit and the workpiece.
16. Durable, non-marring sub-bases glide smoothly over the workpiece. The sub-bases have a cutter-bit opening of 1-1/4 in.
17. Router motor constructed of high-density nylon and precision-milled cast aluminum for strength and exact fit into bases.
18. Bases constructed of magnesium to provide lightweight, durability, and stability.
19. Impact-resistant router-motor top cap and handles on bases help protect the tool from damage.
20. Heavy-duty Edge Guide for routing applications such as decorative edging, grooving, dadoing, slotting, and straightedge planing /trimming.
21. Conveniently located On/Off Toggle Switch is front mounted for added visibility and easy access.
22. Sawdust-Extraction Hood allows bases to attach to 1-1/4-inch vacuum hose attachment, sold separately.
23. Live Tool Indicator Light shines green when the router is plugged into a power source.
24. Replaceable Brushes (sold separately) for dependable service.
25. Includes impact-resistant case for easy carrying and storage.
26. Table Mounting Holes on bases for mounting the router to a router table (available separately).
27. Integrated depth-adjustment-wrench opening for adjusting the depth of cut from above a routing table with the depth-adjustment wrench.

## ASSEMBLY

**NOTE:** This tool is shipped completely assembled. To change the router motor from one base to another, install or remove cutting bits, add accessories such as sawdust ejection hoods for hook-up to vacuums, or install the heavy-duty edge guide, see the following instructions.

**DETACHABLE POWER CORD** (Figs. 3, 3a and 3b)

The router has a detachable power cord for easy carrying and storage.

**Note:** Always attach the detachable power cord to the router **before** connecting the power cord to the power source.

Before turning the router on, for the fixed base or the plunge base, connect the long power cord the power outlet located on router motor top cap (See indicator label on the router); for the D-handle base, connect the long power cord to the power outlet located on back of the main handle.

Fig. 3

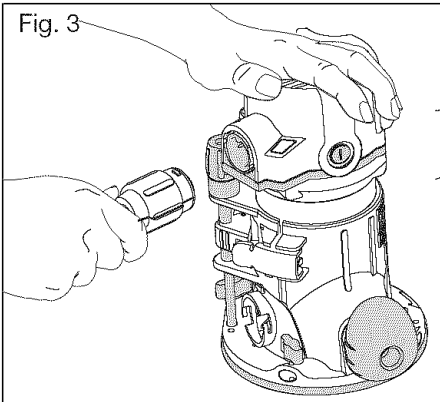


Fig. 3a

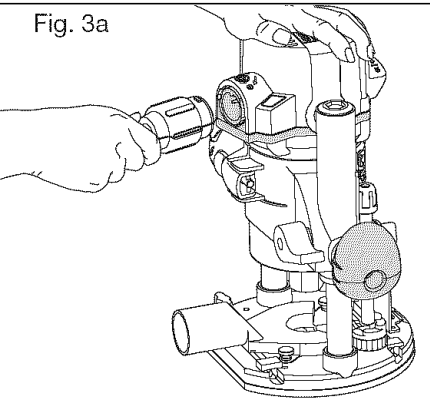


Fig. 3b

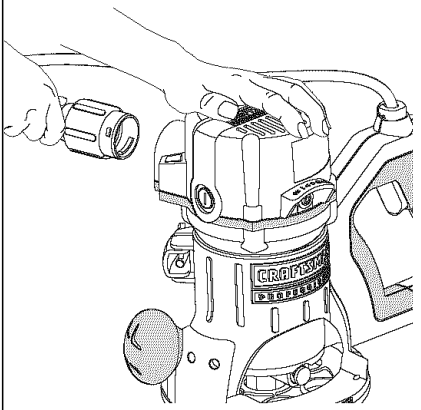
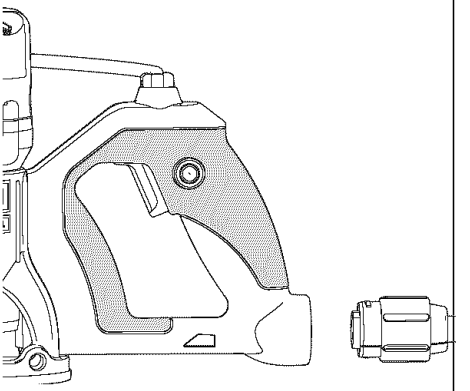
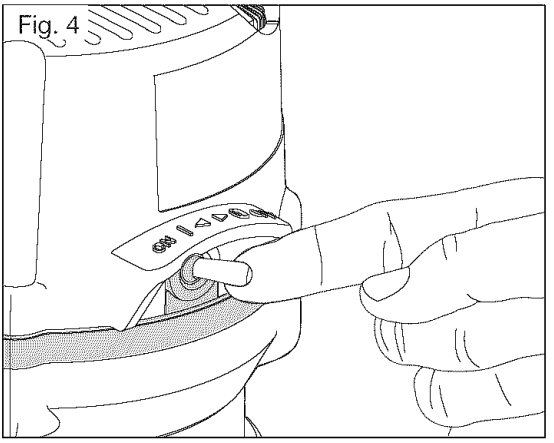



Fig. 3c



## TOGGLE "ON/OFF" SWITCH (Fig. 4)

Your router motor is turned "ON" and "OFF" by the toggle switch located on the top cap of the router motor.




The left side of the toggle-switch (as you face it) is marked "I" for "ON" and the right side (as you face it) is marked "O" for "OFF."

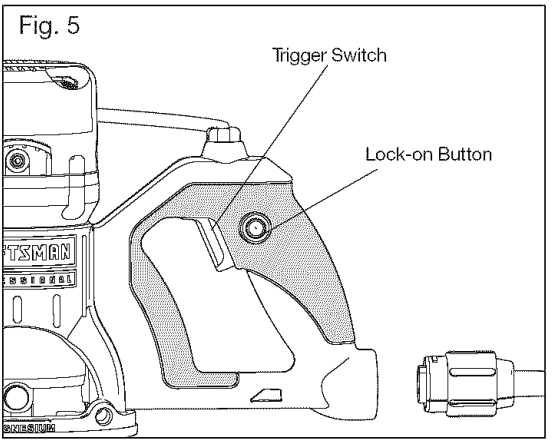
To turn the router motor "ON," Push the toggle switch to the left side marked "I," or "ON."

To turn the router motor "OFF," Push the toggle switch to the right side marked "O," or "OFF."

1. Always hold the router and cutting bit away from the workpiece when turning the toggle switch "ON."
2. Contact the workpiece with the router and cutting bit only after the router has fully reached the selected speed.
3. Remove the router and cutting bit from the workpiece only after turning the router motor "OFF," and after the cutting bit has come to a complete stop.

## TRIGGER SWITCH and LOCK-ON BUTTON for D-HANDLE BASE ROUTER (Fig. 5)

The D-handle base features an on-off trigger switch and a lock-on button for easy and safe operation.




### To Start/Stop D-handle Base Router

1. Connect the plug attached the main handle to the power outlet located on the router-motor top cap (See indicator on the Router).
2. Connect the detachable power cord to the router as shown in Fig. 3b.
3. Connect the plug of the detachable power cord to a standard, household-power outlet.

4. Start the router by turning on the router motor (see Fig. 14), then squeezing the ON/OFF trigger switch (see Fig. 5).
5. To stop the router, release the ON/OFF trigger switch or push the toggle switch to the right side marked "O" ("OFF").
6. To lock the ON/OFF trigger switch in the "ON" position, press trigger switch and, while holding it "ON," press in the lock-on button located on the left side of the handle (see Fig. 5).
7. The lock-on button allows the operator to keep the router running without squeezing the trigger switch. This is useful for continuous routing applications.
8. To release the power lock-on button, press and release the trigger switch. This will turn the router off.

**LIVE-TOOL INDICATOR LIGHT (Figs. 6 and 6a)**

Your router has a Live-Tool Indicator light located on the router-motor top cap adjacent to where the power cord enters the router motor. This green light is always on when router motor is plugged into a power source.

The D-Handle base has an additional light loacting on the back of the main handle.

Fig. 6

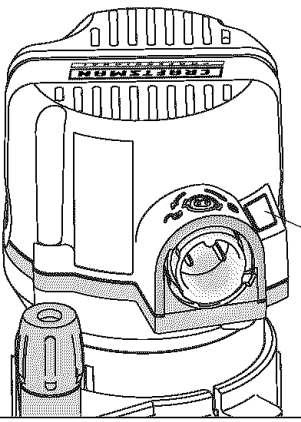
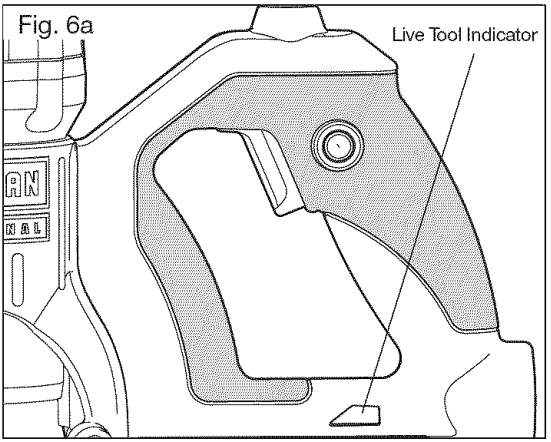



Fig. 6a



## SELECTING THE CUTTING BIT

This router comes with 1/4-in. and 1/2-in. collets/nuts that accept ¼-inch-diameter and 1/2-inch-diameter shanked cutting bits, respectively.

⚠ **WARNING:** Do not use router cutting bits that have a cutting-bit diameter larger than 1-1/4 inches when using the router with the sub-bases included with this combo, as they will not fit through the sub-base opening and will cause damage to the sub-base and the motor and could cause serious personal injury to the operator.

**NOTE:** The sub-base installed on this router has an opening of 1-1/4-inches. To use cutting bits with a larger diameter, use a sub-base with a larger opening, sold separately at Sears stores or other Craftsman outlets.

⚠ **WARNING:** When using router cutting bits with a cutter diameter larger than 1-1/2 inches, always have the speed dial set at number 1 or 2. Refer to the Variable Speed Selection Chart located on top cap of the router motor for the maximum speeds to use with various cutting-bit diameters. Failure to follow these instructions could cause loss of control of the router in the workpiece, causing possibly serious personal injury.

## INSTALLING AND REMOVING THE CUTTING BIT (Figs. 7, 8, 8a)

### INSTALLING THE CUTTING BIT

1. Turn router motor off and unplug it from the power source.
2. Remove the router motor from its base.

**NOTE:** See instructions for removing and installing the router motor in the fixed base, plunge base, and D-handle base.

3. Place the router motor upside down on its top cap with the collet/nut pointing up.
4. Press the spindle-lock button to engage and lock the spindle shaft and collet/nut (Fig. 7).
5. Place the wrench on the collet/nut, and turn it counter-clockwise to loosen collet/nut slightly to accept the cutting-bit shank.
6. Insert the cutting bit shank into the collet/nut assembly as far as it will go, then back the shank out until the cutters are approximately 1/8 to 1/4-inch away from the face of the collet/nut (Fig. 8, 8a).
7. With the cutting bit inserted and the spindle lock button pressed in to engage the shaft, place the wrench on the collet/nut and turn it clockwise until the router-cutting bit and the collet/nut are firmly tightened.

Fig. 7

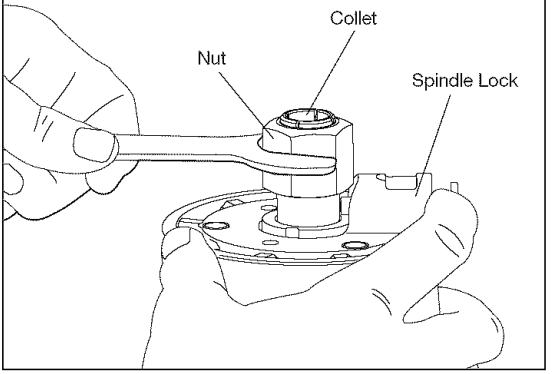



Fig. 8

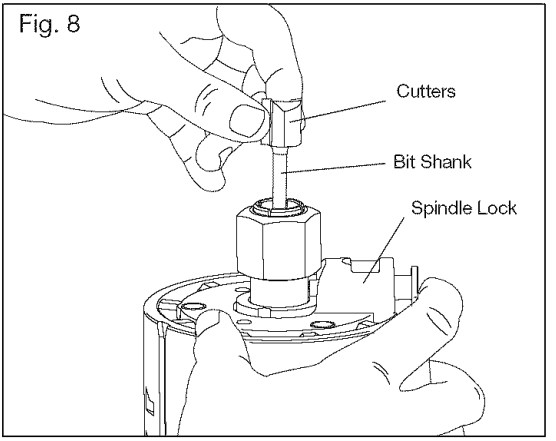
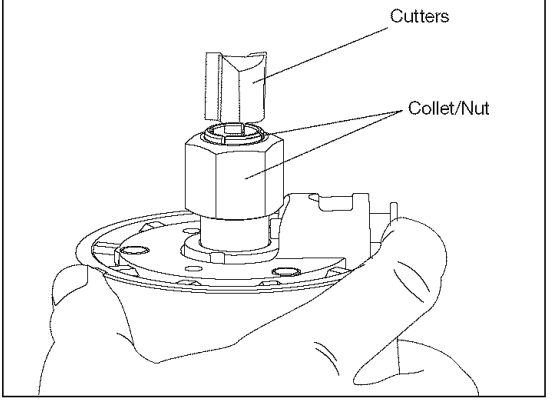



Fig. 8a



⚠ **WARNING:** Tighten the collet/nut securely to prevent the cutting bit from slipping. If the collet/nut is not securely tightened, the cutting bit may detach during use, causing serious personal injury

**NOTE:** To ensure proper gripping of cutting-bit shank and minimize run-out, the shank of the cutting bit must be inserted into the collet/nut at least 5/8-inch.

⚠ **CAUTION:** To prevent damage to tool, do not tighten the collet/nut without a cutting bit installed.

**REMOVING THE CUTTING BIT** (Figs. 7, 8, 8a)

1. Turn the router motor off and unplug the router from the power source.
2. Remove the router motor from the base.
3. Place the router motor upside down on its top cap, with the collet/nut pointing up.
4. Press the spindle-lock button to engage and lock the spindle shaft and the collet/nut (Fig. 7).
5. Place the wrench on the collet/nut and turn it counterclockwise to loosen collet/nut slightly.
6. Remove the cutting-bit shank (Fig. 8).

**NOTE:** The collet/nut is self-releasing; it is not necessary to strike the collet/nut to free the router cutting bit. If the cutting bit seems stuck after use, loosen the collet/nut a little more until it releases.

**COLLET/NUT CARE**

1. From time to time, inspect the collet/nut to make sure that it is clean and that it is gripping the cutting bit properly.
2. With the router cutting bit removed and the spindle lock engaged, turn the collet/nut counterclockwise until it is free from the motor's spindle shaft.
3. Blow the collet out with compressed air, and clean the tapered inside of the collet/nut with a tissue or a fine brush.
4. Always make sure that the cutting-bit shank, collet/nut, and router-motor spindle are clean and free of woodchips, dust, residue, grease, and rust before installing.
5. Apply a small amount of machine oil to the spindle shaft if it looks dry.
6. Replace worn or damaged collets/nuts immediately.

## CUTTING BITS

Get faster, more accurate cutting results by keeping cutting bits clean and sharp.

1. Remove all accumulated pitch and gum from cutting bits after each use.
2. When sharpening cutting bits, sharpen only the inside of the cutting edge. Never grind the outside diameter.
3. Be sure, when sharpening the end of a cutting bit, to grind so that the clearance angle remains the same as it was originally.

## INSTALLING AND REMOVING THE ROUTER MOTOR

⚠ **WARNING:** Never use the router motor without installing it into either the fixed, plunge, or D-handle bases in this Router Combo. Failure to do so could result in serious personal injury and damage to the motor.

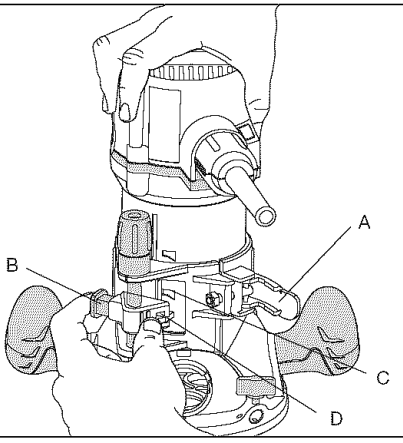
**NOTE:** Install the collet/nut and router cutting bit you are going to use before installing the router motor in the fixed base, plunge base or D-handle base. See "Installing and Removing the Cutting Bit" section.

⚠ **WARNING:** Always turn the router motor off and unplug the router from the power source before making any adjustments or installing accessories. Failure to turn the router motor off and unplug the router could result in accidental starting, which can cause serious personal injury.

**To Install Router Motor in Fixed Base** (Fig. 9)

1. Turn the router motor off and unplug the router from the power source.
2. Place the fixed base on flat surface.
3. With the back of the fixed base facing you, open the router motor clamp (A).
4. Press in the Coarse Adjustment Knob (B) while aligning the router motor's slot with the pin in the fixed base.

Fig. 9

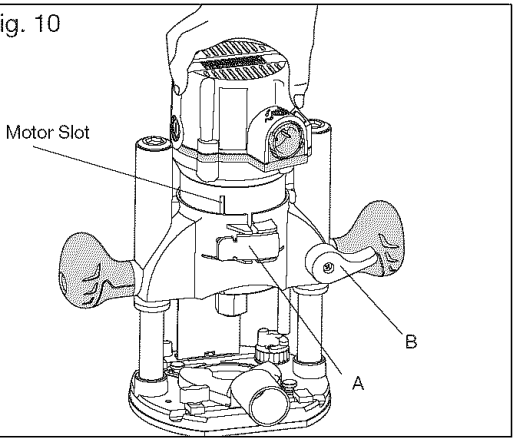



5. When the motor's slot is aligned and engaged into the base's pin, slide the router motor down into the fixed base.
6. When the coarse-adjustment knob is pressed in, the router motor can be moved up or down to set coarse adjustments.
7. After all adjustments are made, securely close the router-motor clamp.

**To Install Router Motor in Plunge Base** (Fig. 10)

1. Turn the router motor off and unplug the router from the power source.
2. Place the plunge base on a flat surface.
3. With the back of the plunge base facing you, open the router-motor clamp (A) and make sure that the plunge action is in the "UP" position, with the plunge lock lever (B) locked down.

Fig. 10




4. Align the router motor's slot with the pin in the plunge base, and lower the router motor into the plunge base.
5. Slide the router motor into the base as far as it will go.
6. Securely close the router-motor clamp.

**To Install Router Motor in D-Handle Base** (Fig. 11)

1. Turn the router motor off and unplug the router from the power source.
2. Place the D-handle base on a flat surface.
3. With the back of the D-handle base facing you, open the router-motor clamp (A).
4. Press in the Coarse Adjustment Knob (B) while aligning the router motor's slot with the pin in the fixed base. Engage the motor's slot with the pin in the base.
5. Slide the router motor down into the D-handle base.
6. When the coarse-adjustment knob is pressed in, the router motor can be moved up or down to set coarse adjustments.
7. After all adjustments are made, securely close the router-motor clamp.

**To Remove Router Motor From Fixed Base** (see Fig. 9)

1. Turn the router motor off and unplug the router from the power source.
2. Place the router on a flat surface.
3. With the back of router facing you, open the router-motor clamp (A).
4. Push in the coarse adjustment knob (B) to release the router motor "Position groove" (C) from the lock hook (D) in the base, while lifting the router motor free of the base.

5. Set the router motor upside down on its top cap with the collet/nut pointing up, and remove the cutting bit.
6. Store the router motor and base in the carry/storage case when not in use.

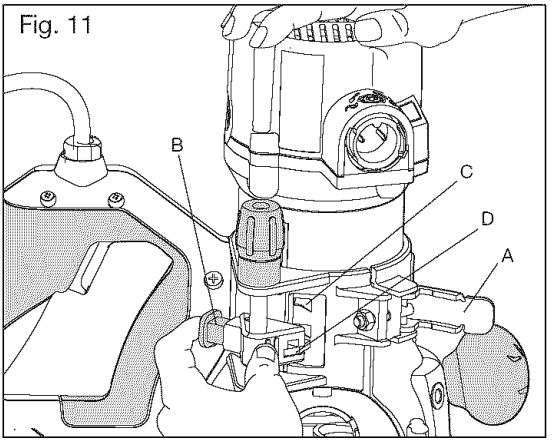
**To Remove Router Motor From Plunge Base** (see Fig. 10)

1. Turn the router motor off and unplug the router from the power source.
2. Place the router on a flat surface.
3. With the back of the plunge base facing you, open the router-motor clamp (A) and make sure that the plunge action is in the "UP" position with the plunge lock lever (B) locked down.
4. Lift the router motor straight up and out of the base, sliding the pin in the router motor free from the slot in the plunge base.
5. Set the router motor upside down on its top cap with the collet/nut pointing up, and remove the bit.
6. Store the router motor and base in the carry/storage case when not in use.

**To Remove Router Motor From D-handle Base** (see Fig. 11)

1. Turn the router motor off and unplug the router from the power source.
2. Place the router (D-handle base/router motor) on flat surface.
3. With the back of router facing you, open the router motor clamp (A).
4. Push in the coarse adjustment knob (B) to release the router motor "Position groove" (C) from the lock hook (D) in the base, while lifting router motor free of base.

Fig. 11



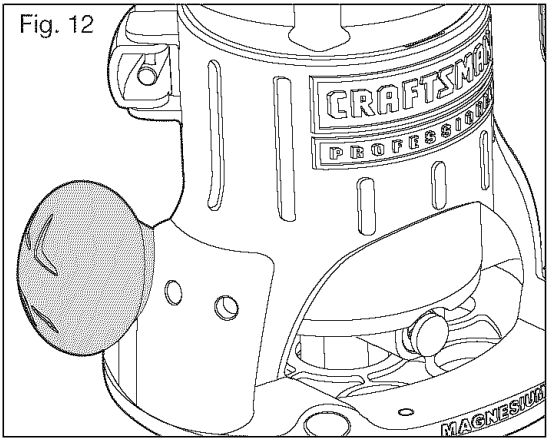

5. Set the router motor upside down on its top cap with the collet pointing up and remove the cutting bit.
6. Store the router motor and base in the carry/storage case when not in use.

**WARNING**: Always remove cutting bits from the collet/nut when the router is not being used. Leaving bits installed could result in an accident causing serious personal injury.

**Three Mounting Positions For Auxiliary Handle Of D-Handle Base** (Fig. 12)

There are three mounting positions on D-handle base for auxiliary handle (Fig. 12); you can choose the desired position to install the auxiliary handle for ease of operation.

Fig. 12




1. Turn the auxiliary handle counterclockwise to loosen it and remove the auxiliary handle from the base.
2. Align the screw on the auxiliary handle with the desired mounting hole located on the left side of the D-handle base.
3. Turn the auxiliary handle clockwise until it is firmly tightened.

**ADJUSTING DEPTH OF CUT**

**WARNING:** Your router should never be turned on or connected to the power source when you are assembling parts, making adjustments, installing or removing collets/nuts or cutting bits, cleaning, or when it is not in use. Disconnecting the router will prevent accidental starting, which could cause serious personal injury.

**NOTE:** All depth adjustments on the Fixed Base or D-Handle Base must be made with the router motor clamp open.

**NOTE:** For the Fixed Base or D-Handle Base, the cutting bit depth equals the amount of the cutter that is exposed below the surface of the sub-base.

## DEPTH ADJUSTMENT WITH FIXED BASE (Figs. 13 and 14)

The fixed base is designed with a micrometer-fine adjustment system. When the bit is lowered to the approximate position desired (coarse setting), the system may then be micro adjusted to the precise depth desired.

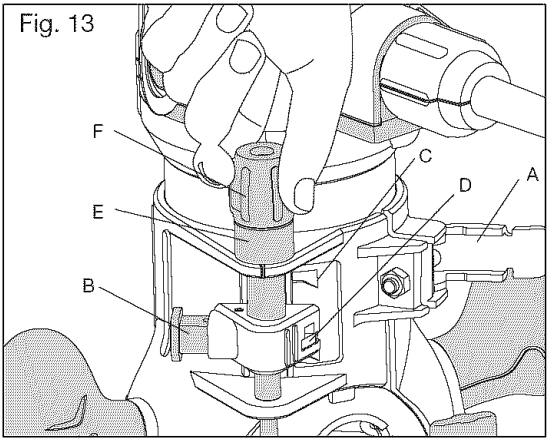


Fig. 13

### Coarse Adjustment:

Depressing the Coarse Adjustment Knob (B) allows you to quickly lower or raise the cutting bit to one of three depth settings.

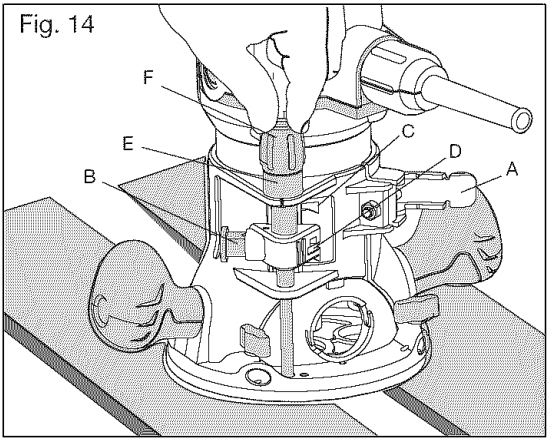


Fig. 14

### Fine Adjustments:

**NOTE:** Before making fine adjustments, reset the Depth Indicator Ring to "0" (zero) (E, Fig. 9).

The Depth Indicator Ring (E), located on the Fine Adjustment Dial (F, Fig. 9) is marked in 1/64-in. increments. Turning the fine adjustment dial clockwise 180° (1/2 turn), lowers the cutting bit 1/16 inch. One full turn clockwise (360) to "0" (zero) lowers the bit 1/8 in.

The Depth Indicator Ring may be reset to "0" (zero) without moving the Fine Adjustment Dial. This allows the user to begin adjustments from any reference point.

### To Adjust Cutting Depth (Figs. 13 and 14)

1. Turn the router motor off and unplug it from the power source.
2. Place the router on a flat, level surface with the back of the fixed base facing you. Open the Router Motor Clamp (A).
3. With the cutting bit installed, press in the Coarse Adjustment Knob (B).
4. Lower the router motor into the base until the cutting bit is very close to the surface on which the base is sitting.
5. Turn the Fine Adjustment Dial (F) until the cutting bit just touches the flat surface on which the base is sitting.

6. Lock the Router Motor Clamp (A).
7. While continuing to press the Coarse Adjustment Knob (B), turn the Fine Adjustment Dial (F) until the "0" (zero) mark on Depth Indicator Ring (E) is lined up with the "I" mark on the base.
8. Release the Coarse Adjustment Knob, making sure that the "0" stays lined up with the mark.
9. Place the router on two, level, scrap workpieces, positioned side by side with a space between them so that the cutting bit can be lowered below the sub-base.
10. Turn the Fine Adjustment Dial (F) counterclockwise to lower the bit to the desired depth of cut. Turn the dial clockwise to raise the cutting bit.
11. Once the depth of cut is set, securely close the router motor clamp (A).

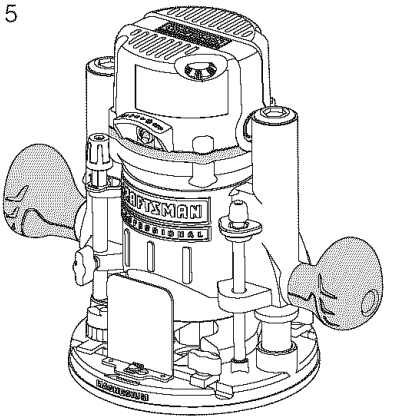
**NOTE:** Making a single deep cut is never advisable. Small-diameter cutting bits are easily broken by too much side thrust and torque. Large cutting bits will cause a rough cut and be difficult to guide and control. For these reasons, do not exceed 1/8-in. depth of cut in a single pass.

## DEPTH ADJUSTMENT WITH THE PLUNGE BASE

⚠ **WARNING:** The router should never be turned ON or be connected to the power source when you are assembling parts, making adjustments, installing or removing collets/nuts or cutting bits, cleaning, or when it is not in use. Disconnecting the router will prevent accidental starting, which could cause serious personal injury.

**PLUNGE ACTION** (Fig. 15)

Fig. 15

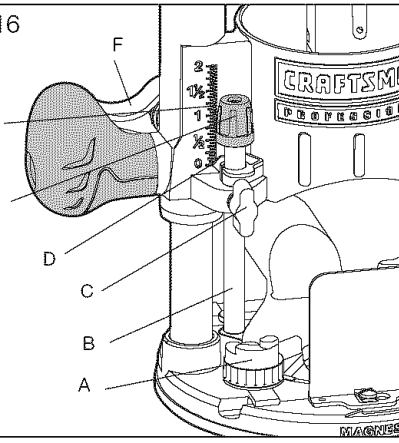


The plunge-base feature simplifies depth adjustments and allows the cutting bit to be accurately lowered into the workpiece for more precise set-ups.

1. To lower the cutting bit, release the plunge-lock lever by moving it "up" to the unlocked position.
2. Apply an even, downward pressure on the plunge action until the cutting bit reaches the desired depth.
3. Move the plunge-lock lever "down" to the locked position.
4. To raise the bit and the plunge action, unlock the plunge-lock lever. The plunge action will automatically retract from the workpiece and return to the raised position.
5. Always have the plunge action in the raised position and locked when the bit is not cutting in the workpiece.

**DEPTH-STOP ROD AND DEPTH-STOP TURRET** (Figs. 16 and 17)

Fig. 16




**NOTE:** The router motor clamp should always be closed securely when making depth adjustments on the plunge base.

Control the cutting depth with the Depth-Stop Rod and the Depth-Stop Turret as follows:

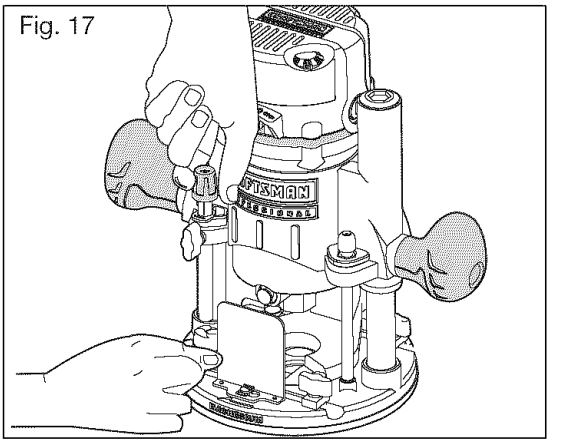
1. Turn the router motor off and unplug the router from the power source.
2. Place the router, with the cutting bit installed, on a flat, level surface.
3. Lower the plunge action until the cutting bit makes contact with the surface on which the router is sitting.

4. Lock the Plunge-Depth Locking Lever (F). This position is now "0" (zero), the point from which further depth adjustments can be made.
5. Rotate the depth-stop turret until the lowest step of the turret (A) is aligned directly under the Depth-Stop Rod (B) (see Fig.16).
6. Loosen the Depth-Rod Locking Knob (C) and lower the Depth-Stop Rod until it contacts the lowest step on the turret.
7. Slide the Clear Plastic Depth-Indicator (D) until the red line on the indicator is lined up with "0" (zero) on the bottom of the depth scale. This is now indicating point at which the bit makes contact with the workpiece.
8. To set a desired cutting depth, slide the Depth-Stop Rod up until the Red Line on the Clear Plastic Depth-Indicator points to the desired cutting depth on the Depth Scale (E). Secure the Depth-Stop Rod at this position by tightening the Depth Rod Locking Knob.
9. Unlock the Plunge Lock Lever (F) to allow the bit to automatically retract to the UP position.
10. The desired depth-of-cut may now be achieved by plunging the router down until the depth-stop rod contacts the selected step on the depth-stop turret.

**Making Deep Cuts with the Depth-Stop Turret (Fig. 17)**

**NOTE:** Making a single, deep cut is never advisable. Smaller diameter cutting bits are easily broken by too much side thrust and torque. Larger cutting bits will cause a rough cut and be difficult to guide and control. For these reasons, do not exceed 1/8-in. depth of cut in a single pass.

Fig. 17



To produce deep cuts, always make several, progressively deeper cuts by starting with the Highest Step on the depth-stop turret, and, after each cut, rotate the turret to the next lowest step until the final Lowest or Last step is reached.

The 5 steps progress by 1/8th-in. increments. The 5 steps represent a range of 3/8 in. to 7/8 in. with a full 360° rotation of the turret. Repeat this process if necessary.

### Micro Adjustments with the Depth-Stop Rod and Depth-Stop Turret

The Depth-Stop Rod has a Micro Adjustment Knob (G) that turns a screw inside the rod (B) to raise or lower the Depth-Stop Rod on the Turret (A) for micro-fine adjustments of the plunge depth.

Each complete revolution of the Micro Adjustment Knob adjusts the plunging depth 5/127 inch.

When micro-adjusting the plunge depth, always make sure that the micro-adjustment screw has been turned down (clockwise) several revolutions from its top, or starting position, before setting the Depth-Stop Rod and Depth-Stop turret.

Always set the micro adjustments with the plunge action in the raised (or up) position and locked down.

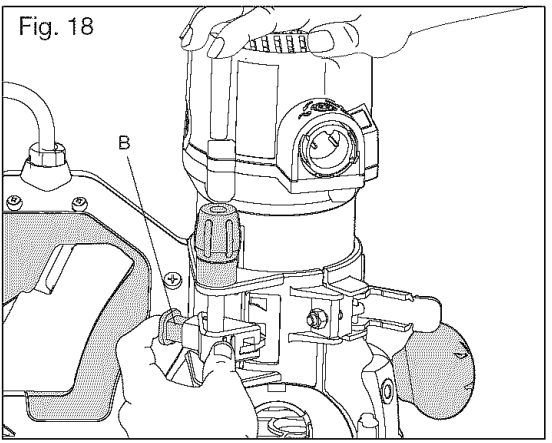
To use the micro-adjustment knob after the depth rod and the turret have been set, check the final depth setting and micro adjustment as follows:

- To micro-increase the plunge depth, raise the micro-adjustment screw by turning the knob counterclockwise the desired amount.
- To micro-reduce the plunge depth, lower the micro-adjustment screw by turning the knob clockwise the desired amount.

### DEPTH ADJUSTMENT WITH D-HANDLE BASE (Figs. 18 and 19)

The D-handle base is designed with a micrometer fine-adjustment system. When the bit is lowered to the approximate setting (the coarse setting), the system can then be micro-adjusted to the precise depth.

Fig. 18




### Coarse Adjustment:

Depressing the Coarse Adjustment Knob (B) allows you to quickly lower or raise the cutting bit to one of three depth settings.

### Fine Adjustments:

**NOTE:** Reset the Depth Indicator Ring (E) to "0" (zero) before making fine adjustments.

The **Depth Indicator Ring (E)** located on the Fine Adjustment Dial is marked in 1/64-in. increments. Turning the Fine Adjustment Dial clockwise 180° (1/2 turn), lowers the cutting bit 1/16-inch. One full turn clockwise (360°) to "0" (zero) lowers the bit 1/8-in.

The Depth Indicator Ring may be reset to "0" (zero) without moving the Fine Adjustment Dial. This allows the user to begin adjustments from any reference point.

**To Adjust Depth (Figs. 18 and 19)**

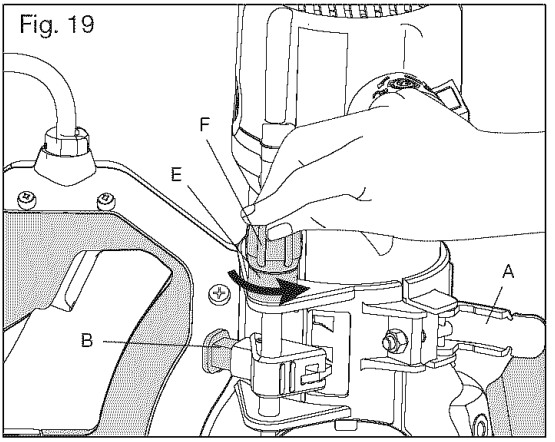


Fig. 19

1. Turn the router motor off and unplug the router from the power source.
2. Place the router, with the cutting bit installed, on a flat, level surface with the back of the fixed base facing you.
3. Open the Router-Motor Clamp (A).
4. Press in Coarse Adjustment Knob (B), and lower the router motor into the base until the cutting bit is very close to the flat surface on which the the base is sitting.
5. Turn Fine Adjustment Dial (F) until the cutting bit "just" touches the flat surface on which the base is sitting.
6. Lock Router motor Clamp (A).
7. While continuing to press the Coarse Adjustment Knob (B), turn the Fine Adjustment Dial (F) until the "0" (zero) mark on the Depth Indicator Ring (E) is lined up with the "I" mark on base.
8. Release the Coarse Adjustment Knob, making sure that the "0" continues to line up with the "0" mark.
9. Place the router on two, level, scrap workpieces, positioned side by side with a space between them so that the cutting bit can be lowered below the sub-base.
10. Turn the Fine Adjustment Dial (F) counterclockwise to lower the bit to the desired depth of cut. Turn the dial clockwise to raise the cutting bit.
11. Once the depth of cut is set, close the router motor clamp (A) securely.

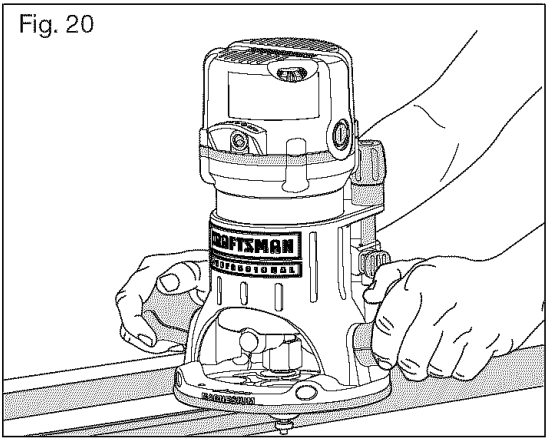
**NOTE:** Making a single, deep cut is never advisable. Smaller diameter cutting bits are easily broken by too much side thrust and torque. Larger cutting bits will cause a rough cut and be difficult to guide and control. For these reasons, do not exceed 1/8-in. depth of cut in a single pass.

**Deep Cuts** (Fig. 20)

The proper cutting depth for each pass is always determined by the material, the cutting bit size, and the type and power of the motor.

Always make several, progressively deeper cuts by starting at one depth and then making several more passes, each time increasing the cutting depth until the desired depth is reached.

Fig. 20



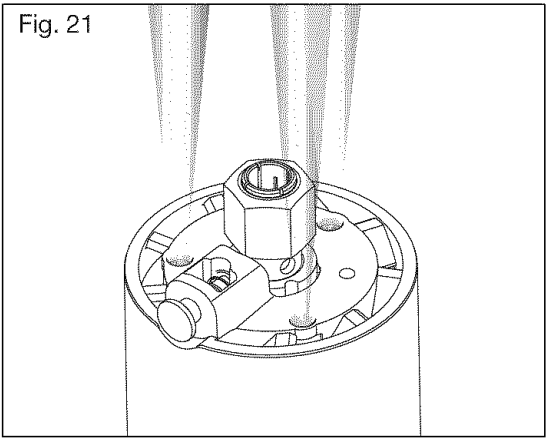

Making a cut that is too deep will stress the router motor and the cutting bit, and it may burn the workpiece and dull the cutting bit. It could also "grab" too much of the workpiece and cause loss of control of the router, causing a serious accident.

Always make test cuts in scrap material similar to the workpiece before beginning the final cutting. Remember, knowing the right depth for each cut comes with routing experience.

**LED WORKLIGHTS (Fig. 21)**

The router motor has 3 built-in worklights located around the collet/nut for high visibility of workpiece when cutting. These lights are always "ON" when the toggle switch/trigger switch is in the "ON" position.

Fig. 21



## HEAVY-DUTY EDGE GUIDE (Figs. 22, 22a and 22b)

The Router Combo comes with a Heavy-Duty Edge Guide. This edge guide can be used as an aid in routing applications such as decorative edging, straight edge planning and trimming, grooving, dadoing and slotting.

To attach the edge guide to the fixed, plunge, or D-handle base, simply insert the edge-guide rods into edge-guide mounting slots, adjust it to the desired position, and lock down with the edge-guide locking knobs.

Fig. 22

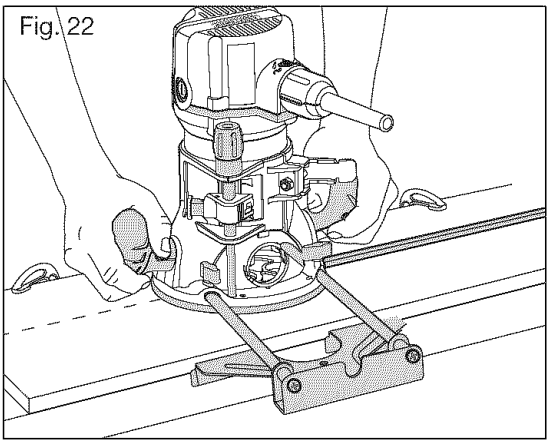


Fig. 22a

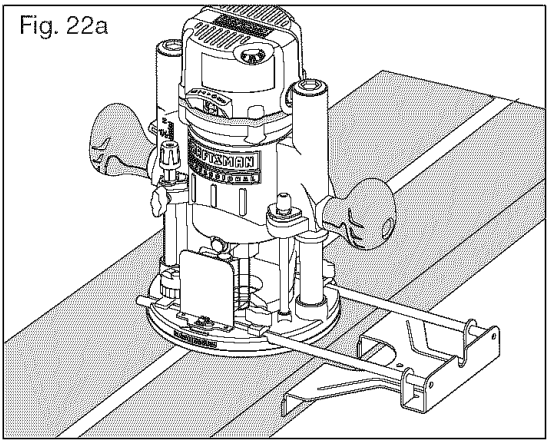
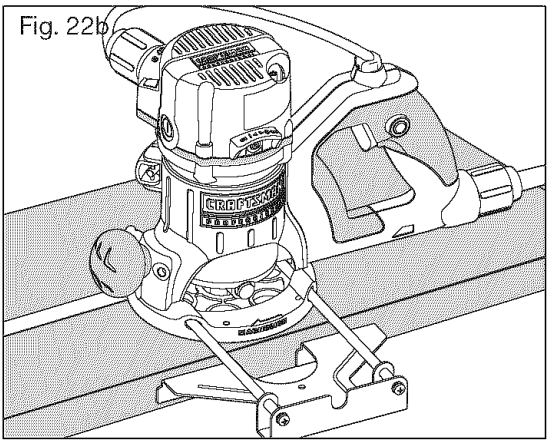


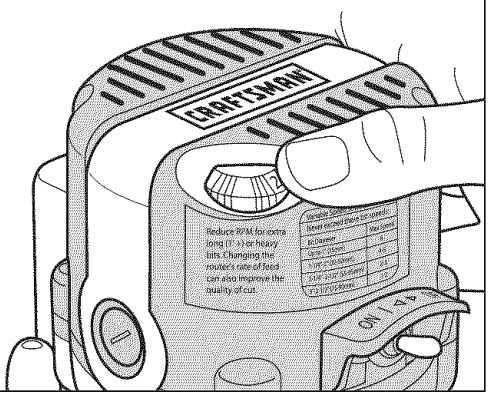
Fig. 22b



## Electronic Variable Speed Control (Fig. 23)

The electronic speed control feature allows router motor speed to be matched to cutter size and workpiece-material hardness for an improved finish and extended bit life.

Fig. 23




Speed changes are made by rotating the Speed Control Dial to the "LEFT," starting at "1," to increase the speed and to the "RIGHT" to decrease the speed, as indicated on the Dial.

The router motor top cap has a "Variable Speed Selection Chart" located above the "ON/OFF" toggle switch to help determine the correct speed for the cutting bit being used.

⚠ **WARNING:** Before operating the router follow all safety instructions in this manual. Failure to do so could result in serious personal injury.

| Variable Speed Selection Chart | |
|---|---|
| Never exceed these bit speeds | |
| Cutting-Bit Diameter | Max. Speed |
| Up to 1 in. (25mm) | 6 |
| 1-1/4 in. to 2 in. (30-50mm) | 4 - 5 |
| 2-1/4 in. to 2-1/2 in. (55-65 mm) | 2 - 3 |
| 3 in. to 3-1/2 in. (75-90mm) | 1 - 2 |

Reduce the speed when using extra large bits (1-inor more in cutting diameter) or heavy cutting bits. Changing the router's rate of feed can also improve the quality of the cut.

| DIAL SETTING | RPM | APPLICATION |
|---|---|---|
| 1 | 12,000 | Non-ferrous metal, hardwoods, larger diameter cutting bits |
| 2 | 14,000 | |
| 3 | 16,000 | |
| | | |
| 4 | 18,000 | Softwoods, plastics, countertops, smaller diameter cutting bits |
| 5 | 20,000 | |
| 6 | 25,000 | |

The speed charts above indicate the relationship between the speed setting and the cutting application. Exact settings are determined through operator experience and preference, and by recommendations by the cutting-bit manufacturer.

## ELECTRONIC FEEDBACK CIRCUITRY

Electronic feedback circuitry monitors and adjusts power in order to maintain the desired RPM for consistent performance and control, providing constant speed under load for a quality finish in all materials

## PLACING THE ROUTER ONTO THE WORKPIECE AND STARTING THE CUT

⚠ **WARNING:** Before operating the router, follow all safety instructions in this manual. Failure to do so could result in serious personal injury.

**NOTE:** Making test cuts is essential with most routing applications. A test cut will give a feel for the set-up, the router's speed, the depth of cut, and how the cutting bit reacts to the workpiece.

Much of routing is a trial-and-error process of making various adjustments, followed by test cuts. To avoid ruining good material, make test cuts on scrap materials.

**EDGE ROUTING** (Figs. 24, 24a and 24b)

1. With the depth-of-cut set, place the router on the edge of the workpiece, making sure that the cutter does not contact the workpiece. (With the plunge base, lock the plunge action in the DOWN position, ready to cut).
2. Have an edge guide (or a board or a metal straightedge) clamped in place to help guide router's base when making the edge cut.
3. Turn the router "ON," and allow the router motor to reach the selected speed.
4. To begin the cut, gradually feed the cutting bit into the edge of the workpiece.
5. When the cut is complete, turn router motor "OFF" and allow the cutting bit come to a complete stop before removing it from the workpiece.
6. Unplug the router from the power source, place the fixed base or D-handle base and router upside down on a worktable, and inspect the finished cut. Place the plunge router on worktable, and inspect finished cut in workpiece.

Fig. 24

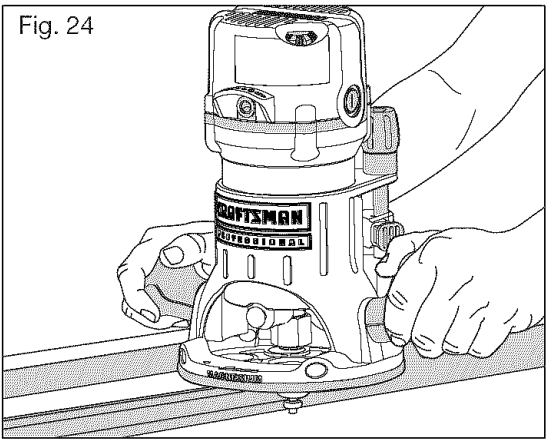


Fig. 24a

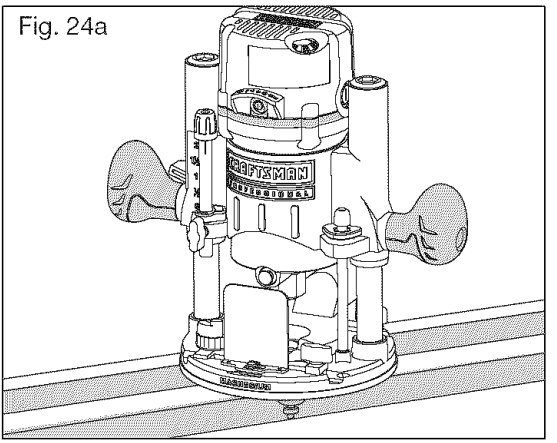
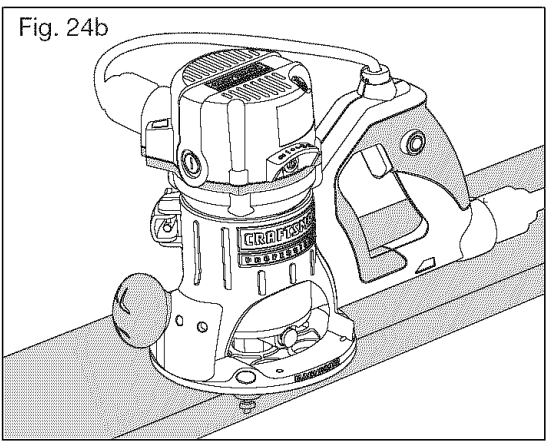


Fig. 24b



**⚠ WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control causing possibly serious personal injury.

**WARNING**: Removing the cutting bit from the workpiece while it is still rotating could damage the workpiece and result in loss of control, causing serious personal injury.

**INTERNAL ROUTING WITH FIXED BASE** (Figs. 25, 25a, 25b)

1. With the depth-of-cut set, tilt the router and place it on the workpiece with only the leading edge of the sub-base contacting workpiece (Fig.25).
2. Turn the router motor "ON" and allow the router motor to reach the selected speed, being careful not to allow the cutting bit to contact the workpiece.
3. To begin the cut, gradually lower the router until the sub-base is level with the workpiece to feed the cutting bit into the workpiece (see Fig 25a, 25b).
4. When the cut is complete, turn the router motor "OFF" and allow the cutting bit come to a complete stop before removing it from the workpiece.
5. Unplug the router from the power source, place the router upside down on the worktable, and inspect the finished cut in the workpiece.

Fig. 25

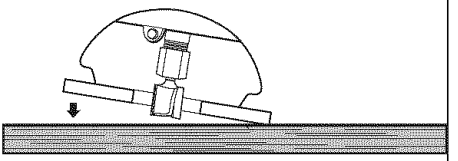


Fig. 25a

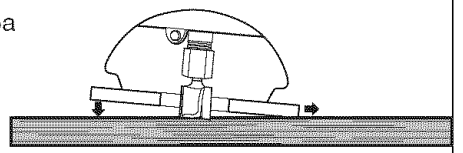


Fig. 25b

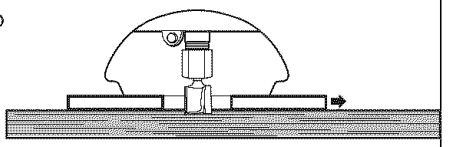
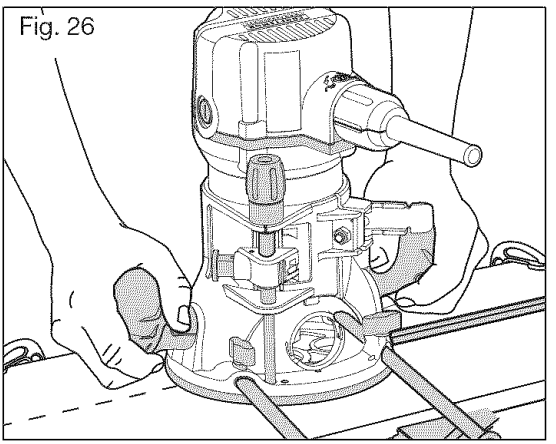


Fig. 26



**WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing possibly serious personal injury.

**WARNING:** Removing the cutting bit from workpiece while it is still rotating could damage the workpiece and result in loss of control, causing serious personal injury.

**NOTE:** Making test cuts is essential with most routing applications. A test cut will give you a feel for the set-up, the router's speed, the depth of cut, and how the cutting bit reacts to the workpiece.

**INTERNAL ROUTING WITH PLUNGE BASE** (Figs. 27 and 27a)

1. With the depth-of-cut set, and the plunge action locked in the raised (UP) position, turn the router motor "ON" and allow the router motor to reach the selected speed (see Fig. 27).
2. Unlock the plunge-lock lever and gently and evenly lower the plunge action into the workpiece. (see Fig. 27a).
3. When the plunge action is fully lowered, lock the plunge lock lever (DOWN) and proceed to make the cut (see Fig. 27a).
4. When the cut is completed, turn the router motor "OFF" and allow the cutting bit come to a complete stop.
5. When the cutting bit has come to a complete stop, unlock the plunge lock lever (UP), and the plunge action will automatically retract the cutting bit from the workpiece.

Fig. 27

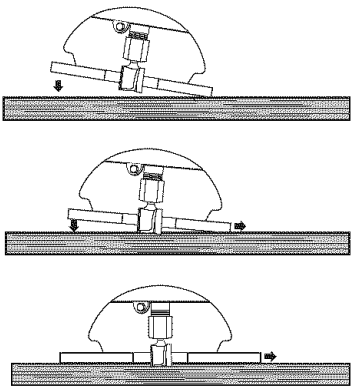
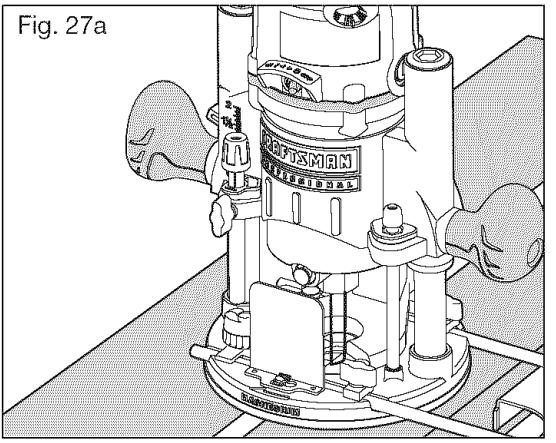


Fig. 27a




6. Unplug the router from power source, place the router on the worktable, and inspect the finished cut in the workpiece.

⚠ **WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing serious personal injury.

**NOTE:** Making test cuts is essential with most routing applications. A test cut will give you a feel for the set-up, the router's speed, the depth of cut, and how the cutting bit reacts to the workpiece.

**INTERNAL ROUTING WITH D-HANDLE BASE** (Figs. 28, 28a, 28b and 29)

1. With the depth-of-cut set, tilt the router and place it on the workpiece with only the leading edge of the sub-base contacting workpiece (Fig.28).
2. Turn the router motor "ON" and allow the router motor to reach the selected speed, being careful not to allow the cutting bit to contact the workpiece.
3. To begin the cut, gradually lower the router until the sub-base is level with the workpiece to feed the cutting bit into the workpiece (see Fig 28a, 28b).
4. When the cut is complete, turn the router "OFF" and allow the cutting bit come to a complete stop before removing it from the workpiece.
5. Unplug the router from the power source, place the router upside down on the worktable, and inspect the finished cut in the workpiece.

Fig. 28

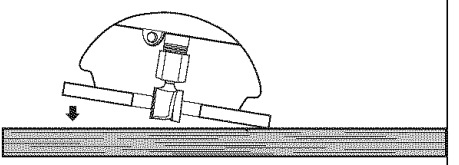


Fig. 28a

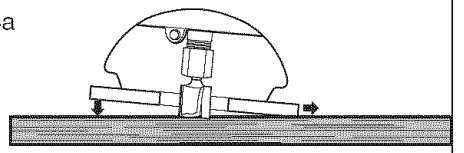


Fig. 28b

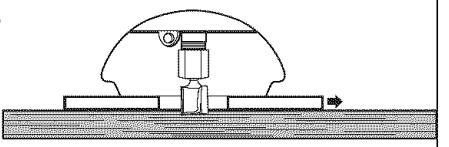
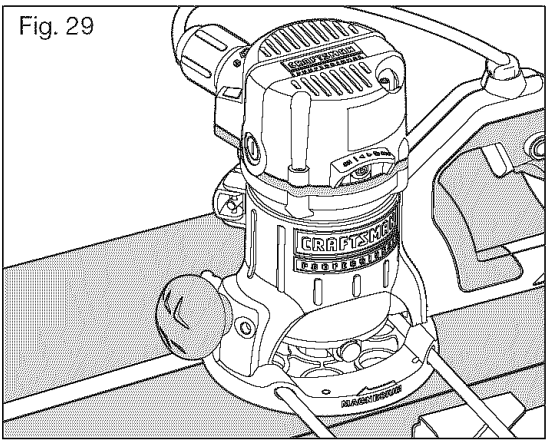


Fig. 29




⚠ **WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing possibly serious personal injury.

⚠ **WARNING:** Removing the cutting bit from workpiece while it is still rotating could damage the workpiece and result in loss of control, causing serious personal injury.

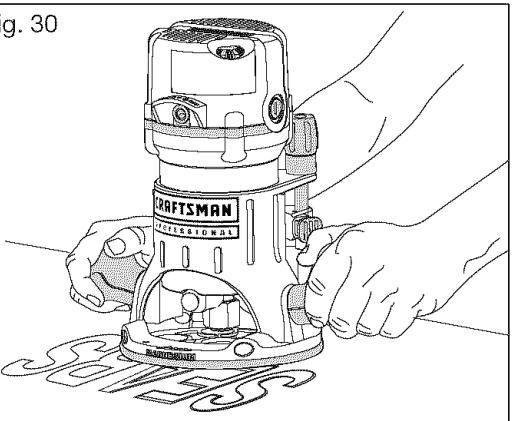
**WARNING:** Removing the cutting bit from workpiece while it is still rotating could damage the workpiece and result in loss of control, causing serious personal injury.

**NOTE:** Making test cuts is essential with most routing applications. A test cut will give a feel for the set-up, the router's speed, the depth of cut, and how the cutting bit reacts to the workpiece.

**FREEHAND ROUTING** (Fig. 30)

**WARNING:** Do not use large cutting bits for freehand routing. Using large cutting bits when freehand routing could cause loss of control or create other hazardous conditions that could result in personal injury. If using a router table, large bits should be used for edging only.

Fig. 30




When used freehand, the router becomes a flexible and versatile tool. This flexibility makes it possible to easily rout signs, relief sculptures, etc.

When freehand routing:

1. Draw or layout the pattern on the workpiece.
2. Choose the appropriate bit.
3. Rout the pattern in two or more passes. Do not exceed 1/8-in. depth of cut in a single pass. This will help provide better control, as well as serve as a guide on the next passes.

**NOTE:** A core-box bit or V-groove bit is often used for routing letters and engraving objects. Straight bits and ball mills are often used to make relief carvings. Veining bits are used to carve small, intricate details.

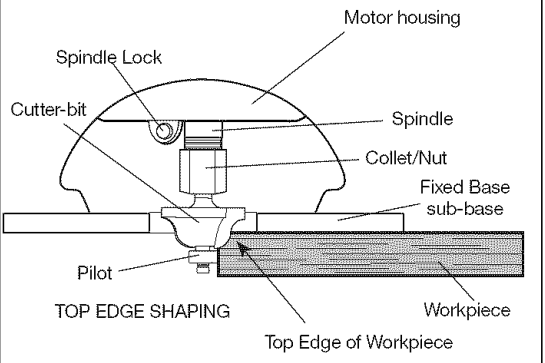
**NOTE:** Making a single, deep cut is never advisable. Smaller-diameter bits are easily broken by too much side thrust and torque. Larger bits will cause a rough cut and be difficult to guide and control. For these reasons, do not exceed 1/8-in. depth of cut in a single pass.

**WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control causing possible serious personal injury.

**EDGING WITH A PILOT BIT** (Figs. 31 and 31a)

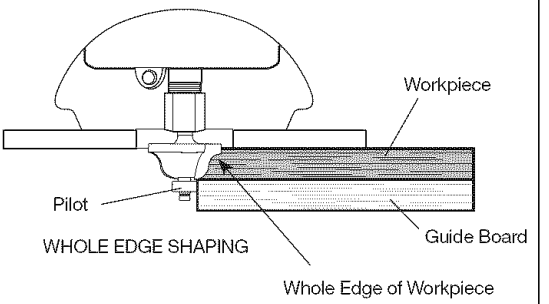
Arbor-type bits with pilots are excellent for edge shaping any workpiece edge that is straight or is curved with a curvature that is equal to or greater than the radius of the bit that is used. The pilot prevents the bit from making a cut that is too deep; holding the pilot firmly in contact with the workpiece edge throughout the cutting process prevents the cut from becoming too shallow.

Fig.31




When the workpiece thickness and the desired depth of cut are such that only the top part of the edge will be shaped, leaving at least a 1/16-in. thick uncut portion below, the pilot can ride against the uncut portion of the workpiece. (See Fig. 31.)

Fig. 31a

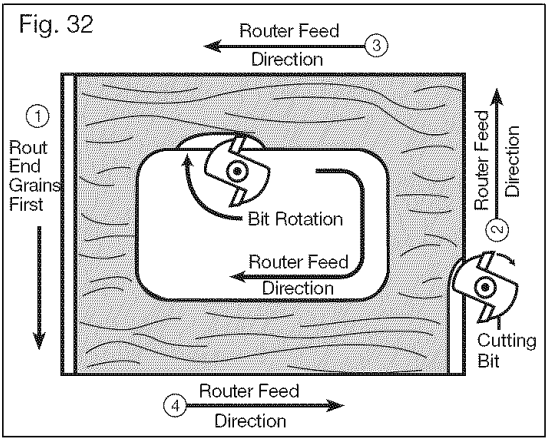



If the workpiece is too thin or the bit is set so low so that there will be no uncut edge against which to ride the pilot, an extra board must be placed under the workpiece to act as a guide (see Fig. 30a). This "guide" board must have exactly the same shape as the workpiece edge. If it is positioned so that its edge is flush with the workpiece edge, the bit will make a full cut. If the guide board is positioned as shown in Fig. 15a (extending beyond the workpiece edge), the bit will make less than a full cut, altering the shape of the finished edge.

⚠ **WARNING**: Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control causing possible serious personal injury.

## FEEDING THE ROUTER (Fig. 32)

The secrets to professional-looking routing are careful set-up for the cut, proper depth-of-cut selection, knowing how the cutting bit reacts in the workpiece, and the rate and direction of feed of the router.




### DIRECTION OF FEED - EXTERNAL CUTS (Fig. 32)

The router motor and cutting bit rotate clockwise. This requires the feed of the cutting bit to be from left to right (see Fig. 32). Feeding the bit from left to right will cause the bit to pull the router towards (up against) the workpiece.

If the router is fed in the opposite direction (right to left), the rotating force of the cutting bit will tend to throw the bit away from the workpiece, making it hard to control. This is called "Climb-Cutting:" cutting in the opposite direction of the proper feed direction. "Climb Cutting" increases the chance of loosing control, resulting in possible personal injury. When "Climb Cutting" is required (backing around a corner, for example), exercise extreme caution to maintain control of the router.

### KICKBACK

Because of the high speed of the cutting bit during a proper feeding operation (left to right), there is very little kickback under normal conditions. However, if the cutting bit strikes a knot, an area of hard grain in the workpiece, or a foreign object, the normal cutting action could be affected and cause "Kickback."

This Kickback may cause damage to your workpiece, and could cause you to lose control of the router, causing possible personal injury. Kickback is always counterclockwise: the opposite direction of the clockwise cutting bit rotation.

**To guard against and help prevent Kickback**, plan the set-up and direction of feed so that the router is always moving, and keep the sharp edges of the cutting bit so that they are biting straight into new (uncut) wood (workpiece). Also, always inspect the workpiece for knots, hard grain, and foreign objects that could cause a kickback problem.

**DIRECTION OF FEED - INTERNAL CUTS** (Figs. 33 and 33a)

When making an internal cut, such as a groove, dado, or slot, the edge guide, straight edge, or board guide must always be positioned on the right-hand side of the router as you make the cut (Fig. 33).

When the guide is positioned on the right hand side of the router, the router travel should be from left to right and "counterclockwise" around curves (see Fig. 33). This counterclockwise action around the curve could cause "Climb cutting". Always be alert and exercise extreme caution to maintain control of the router when making this type of cut around curves.

When the guide is positioned as shown in Fig. 33a, the router travel should be from left to right and clockwise around curves.

If there is a choice, the set-up in Fig. 33 is easier to use, but there is the possibility of "Climb Cutting" around curves. In either case, Fig. 30 or Fig. 33a, the sideways thrust of the router cutting is always against the guide, as is proper.

Fig. 33

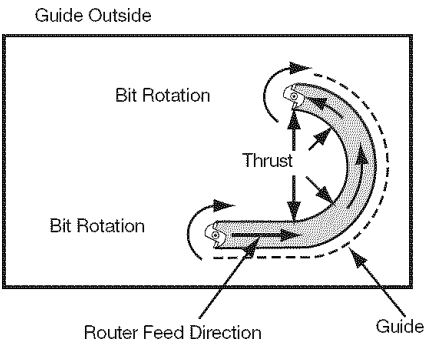
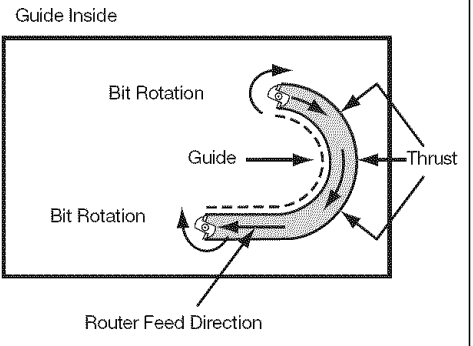



Fig. 33a

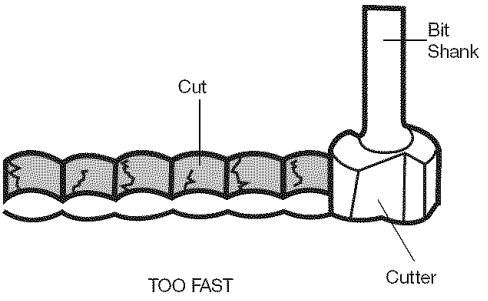



⚠ **WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control causing possible serious personal injury.

**RATE OF FEED** (Figs. 34 and 34a)

The proper rate of feed depends on several factors: the hardness and moisture content of the workpiece, the depth of cut, and the cutting diameter of the bit. When cutting shallow grooves in soft woods such as pine, you may use a faster rate of feed. When making deep cuts in hardwoods such as oak, you should use a slower rate of feed.

Fig. 34

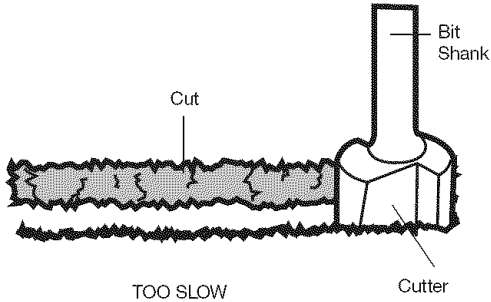



**FEEDING TOO RAPIDLY** (Fig. 34)

Clean and smooth finished cuts can only be achieved when the cutting bit is rotating at a relatively high speed and taking very small bites, producing tiny, clean-cut chips.

Forcing the feed of the cutting bit forward too rapidly slows the RPM of the cutting bit, and the bit takes larger bites as it rotates. Larger bites mean larger chips and a rough finish. This forcing action can also cause the router motor to overheat.

Fig. 34a




Under extreme force-feeding conditions, the RPMs can become so slow and the bites become so large that chips become partially cut off, causing splintering and gouging of the workpiece.

The router will make clean, smooth cuts if it is allowed to run freely without the overload of forced feeding. You can detect forced feeding by the sound of the motor. Its usual high-pitched whine will sound lower and stronger as it loses speed. Holding the router against the workpiece will also be more difficult to do.

**FEEDING TOO SLOWLY** (Fig. 34a)

When you feed the cutting bit too slowly, the rotating cutting bit does not cut into new wood rapidly enough to take a bite. Instead, it scrapes away sawdust-like particles. This scraping produces heat, which can glaze, burn, and mar the cut in the workpiece and, in extreme cases, overheat the cutting bit.

When the cutting bit is scraping instead of cutting, the router is more difficult to control as you feed it.

With almost no load on the motor, the cutting bit has a tendency to bounce off the sides of the cut in the workpiece, producing a cut with a rippled finish instead of clean, straight sides.

**CHIP SHIELDS** (Figs. 35, 35a and 35b)

⚠ **WARNING:** Always wear eye protection. The chip shields are not intended as safety guards.

⚠ **WARNING:** Always turn the router motor off and unplug the router from its power source before making any adjustments or installing accessories. Failure to turn the router motor off and unplug the router could result in accidental starting, which can cause serious personal injury.

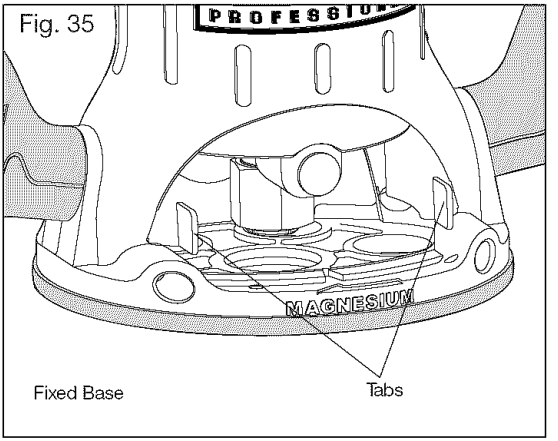


Fig. 35

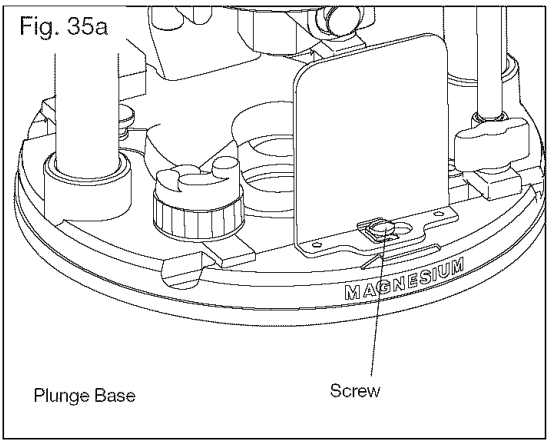


Fig. 35a

To remove the chip shield from the fixed base, press inward on the tabs until the chip shield releases from the base, and remove the chip shield. To attach the chip shield, place the chip shield in position, and flex the sides while pushing it in, until it snaps back into place (See Fig. 35).

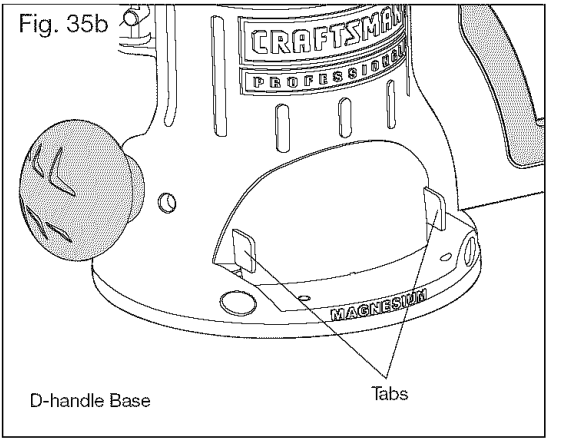
The chip shield on the plunge base is held in position by a screw. To remove the chip shield from the plunge base, simply remove the screw and take the chip shield off the base (See Fig. 35a).

To remove the chip shield from the D-handle base, press inward on the tabs until the chip shield releases from the base and remove the chip shield. To attach, place chip shield in position, and flex sides while pushing it in until it snaps back into place (See Fig. 35b).

**⚠ WARNING:** The chip shield deflectors help keep dust and chips away from the operator; they will not stop objects larger than woodchips thrown from the bit.

**⚠ CAUTION:** Always have the chip shield deflector in place on the base when operating the router.

Fig. 35b




## DUST EXTRACTION HOODS

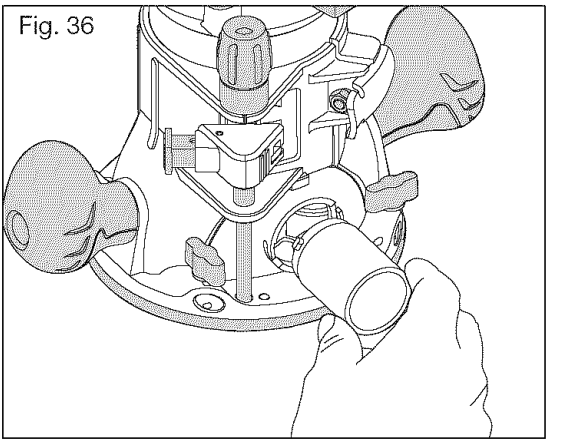
(Figs. 36, 36a and 36b)

Two dust-extraction hoods included with the three router bases. Each hood is sized to accept a 1-1/4-in. vac hose adapter, sold separately.

### Dust Extraction Hood for Fixed Base (Fig. 36)

To attach the hood onto the fixed base, align the two tabs on the hood with the two slots on the port at back of the base, and secure it by turning it clockwise (Fig. 36).

Fig. 36

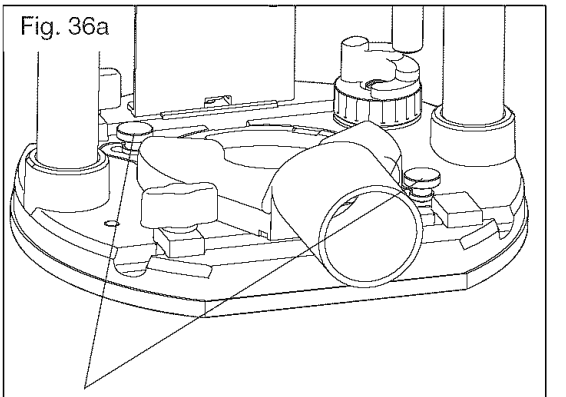


### Dust Extraction Hood for Plunge Base (Fig. 36a)

To attach the hood onto the plunge base, position and secure it to the back of the base with the two screws (included), as shown in Fig. 36a.

The dust extraction hood can also be installed with the hose outlet facing the front of the plunge base by removing the chip shield and attaching the hood at the front of the base.

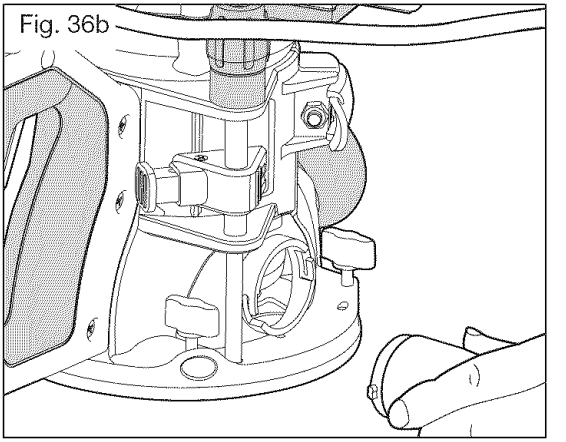
Fig. 36a




### Dust Extraction Hood for D-Handle Base (Fig. 36b)

To attach the hood onto the D-handle base, align the two tabs on the hood with the two slots on the port at back of the base, and secure it by turning it clockwise (Fig. 36b).

Fig. 36b



⚠ **WARNING:** Always turn the router motor off and unplug the router from the power source before making any adjustments or installing accessories. Failure to turn router motor off and unplug the router could result in accidental starting, which can cause serious personal injury.

**TO ADJUST DEPTH WITH DEPTH-ADJUSTMENT WRENCH** (Figs. 37, 37a and 37b)

Fig. 37

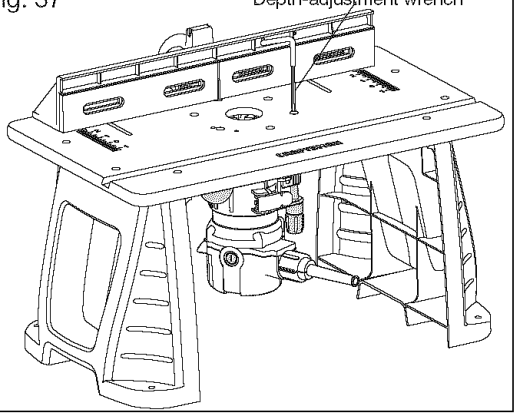
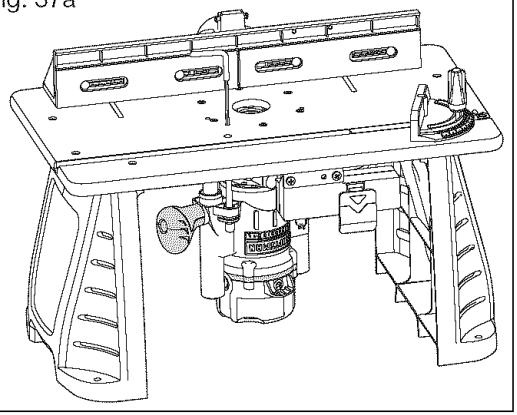



Fig. 37a



**NOTE:** The Depth-Adjustment Wrench supplied is used to adjust the depth when the router is fixed to the router table (Model No. 320. 28180), sold separately.

⚠ **WARNING:** Always read and follow all directions for mounting the router to a router table and for use of the router table.

⚠ **WARNING:** Always turn the router motor off and unplug the router from the power source before making any adjustments or installing accessories. Failure to turn router motor off and unplug the router could result in accidental starting, which can cause serious personal injury.

⚠ **WARNING:** Only use router tables with proper guarding for the cutting bit and with "on-board," switch-controlled receptacles. Failure to use router tables with appropriate safety features could result in serious personal injury.

When using either the fixed base or D-handle base to attach the router to the router table, the bit depth can be adjusted by turning the Micro Adjustment Dial clockwise or counterclockwise with the wrench supplied. (Fig. 37 and Fig. 37a)

The depth of the cut can be read on the scale dial. Each mark on the scale indicates a 1/64-in. change in depth setting.

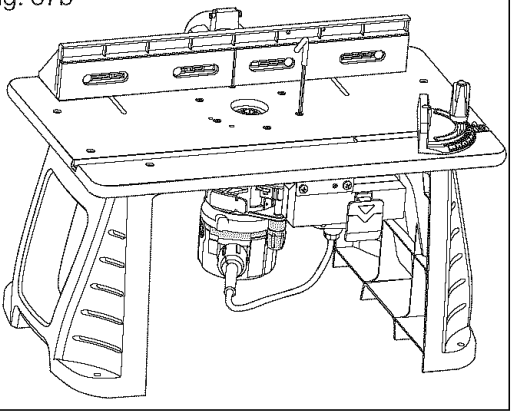
1. Turn off the router.
2. Loosen the router motor clamp.
3. Insert the wrench into the adjusting hole on the tabletop. Turn the adjustment bolt on the router clockwise with the wrench to move the collet/nut up, or counterclockwise to move the collet/nut down.

4. When the desired depth of cut is set, tighten the clamping lever.

The precise depth of cut can be measured with a ruler.

When using the plunge base to attach the router to the router table, the bit depth can be adjusted by turning the depth rod clockwise or counterclockwise with the wrench supplied (Fig. 37b).

Fig. 37b



1. Turn off the router.
2. Lock the Plunge Depth Locking Lever.
3. Insert the wrench into the adjusting hole on the tabletop. Turn the depth rod on the router clockwise with the wrench to move the collet/nut up, or counterclockwise to move the collet/nut down.
4. When the desired depth of cut is set, tighten the clamping lever.

The precise depth of cut can be measured with a ruler

# MAINTENANCE

**⚠ WARNING:** To ensure safety and reliability, all repairs should be performed by a qualified service technician at a Sears Service Center.

## GENERAL

Only the parts shown on the parts list are intended for repair or replacement by the customer. All other parts represent an important part of the double-insulation system and should be serviced only by a qualified Craftsman service technician.

**⚠ WARNING:** For your safety, Always turn off the switch and unplug the router motor from the power source before performing any maintenance or cleaning.

It has been found that electric tools are subject to accelerated wear and possible premature failure when they are used to work on fiberglass boats and sports cars, wallboard, spackling compounds or plaster. The chips and grindings from these materials are highly abrasive to electrical tool parts, such as bearings, brushes, commutators, etc. Consequently, it is not recommended that this tool be used for extended work on any fiberglass material, wallboard, spackling compound, or plaster. During any use on these materials, it is extremely important that the tool is cleaned frequently by blowing with an air jet.

**⚠ WARNING:** Always wear safety goggles or safety glasses with side shields during power tool operations, or when blowing dust. If operation is dusty, also wear a dust mask.

## ROUTINE MAINTENANCE

**⚠ WARNING:** Do not at any time allow brake fluids, gasoline, petroleum-based products, penetrating oils, etc. come in contact with plastic parts. Chemicals can damage, weaken, or destroy plastic, which may result in serious personal injury.

- When work has been completed, clean the tool to allow smooth functioning of the tool over time.
- Use clean, damp cloths to wipe the tool.
- Check the state of all electrical cables.
- Keep the router-motor air openings free from oil, grease, and sawdust or woodchips, and store the tool in a dry place.
- Be certain that all moving parts are well lubricated, particularly after lengthy exposure to damp and/or dirty conditions.
- For collet/nut care, see the Operation section of this manual

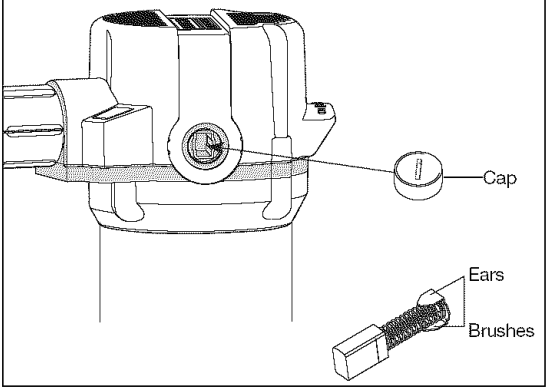
**⚠ WARNING:** For your safety, always turn off the switch and unplug the router motor from the power source before performing any maintenance or cleaning.

Refer to "Collet/Nut Care and Cutting bits" for cleaning care.

## REPLACEMENT OF CARBON BRUSHES (Fig. 38)

Replacement brush sets are available through Craftsman Parts and Repair Centers.

Fig. 38




1. Unplug the router motor before inspecting or replacing brushes.
2. Replace both carbon brushes when either has less than 1/4-in. length of carbon remaining, or if the spring or wire is damaged or burned.
3. Using a slotted screwdriver, remove the black, plastic cap on each side of the router motor (Fig. 38), and carefully withdraw the spring-loaded brush assemblies. Keep brushes clean and sliding freely in their guide channels.

**NOTE:** To reinstall the same brushes, make sure that the brushes go back in the same way they came out. This will avoid the need for a break-in period.

4. Insert new brush assemblies into the guide channels with the carbon part going in first, being certain to fit the two metal "ears" into their slots in the channel (Fig. 38).
5. Remember to replace both end caps after inspecting or servicing brushes. Tighten the caps snugly, but do not over-tighten. The router should be allowed to "RUN IN" (run at no load without a cutting bit) for 5 minutes before use to seat the new brushes properly.

⚠ **WARNING**: For your safety, always turn off the switch and unplug the router motor from the power source before performing any maintenance or cleaning.

## LUBRICATION

All of the bearings in this tool are lubricated with a sufficient amount of high-grade lubricant for the life of the tool under normal operating conditions. Therefore, no further lubrication is required.

## TROUBLESHOOTING

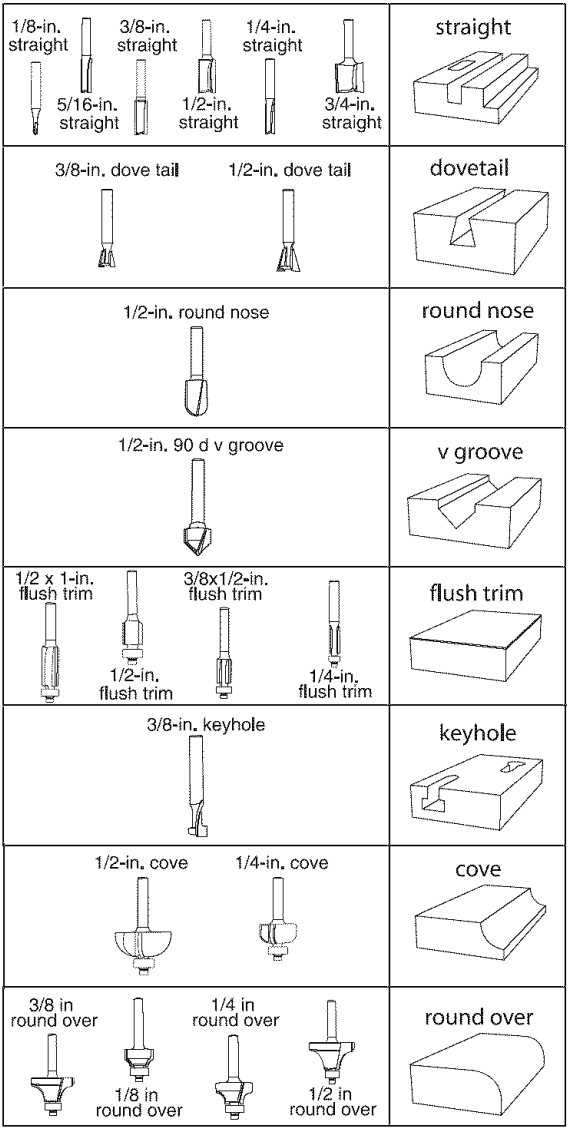
| Trouble | Probable Cause | Solution |
|---|---|---|
| •The router does not work | •Plug is not plugged into the power source. | •Plug the detachable cord into the power source. |
| | •Plug is not plugged into the Router socket. | •Plug the detachable cord into the Router. |
| | •Switch is in "OFF" position. | •Pull the switch to "ON" position. |
| | •The carbon brushes have worn out completely. | •Open the brush cap, and replace the old brushes with suitable new brushes. |
| •The surface of the work piece is not smooth after cutting | •The bit is dull. | •Change to a sharp bit. |
| | •Routing at an inappropriate bit speed. | •Refer to "Variable Speed Selection Chart" label on the Router Motor cap, and select an appropriate bit speed. |
| •Bit can not be installed | •Bit size is inappropriate for the collet/nut | •Use only 1/2 in. or 1/4 in. diameter bits. |

# ACCESSORIES

**⚠ WARNING:** The use of attachments or accessories that are not recommended for this tool might be dangerous and could result in serious injury.

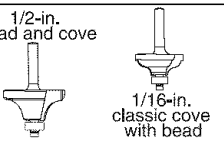
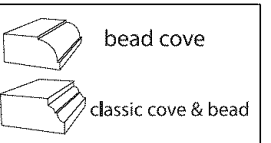
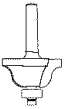
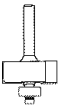
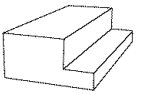
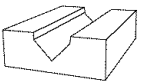
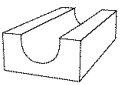
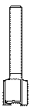
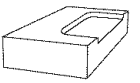
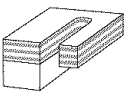
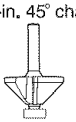
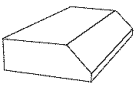
Sears and other Craftsman outlets offer a large selection of Craftsman router accessories designed for specific routing applications.

There is a large selection of Craftsman Router Cutting bits available in High-Speed Steel or Carbide Tipped High-Speed Steel for all your routing needs.



In addition to a wide variety of router bits, Sears also offers accessories such as: Router tables, various template sets, universal router fence with lock knobs (64181), 11 pc. bushing set (64180) and clear sub-base sets; 6pc. fixed base (64182) 6 pc. plunge base (64183).

**⚠ WARNING:** Only use router tables with proper guarding for the cutting bit and with "on-board" switch controlled receptacles. Failure to use router tables with appropriate safety features could result in serious personal injury.

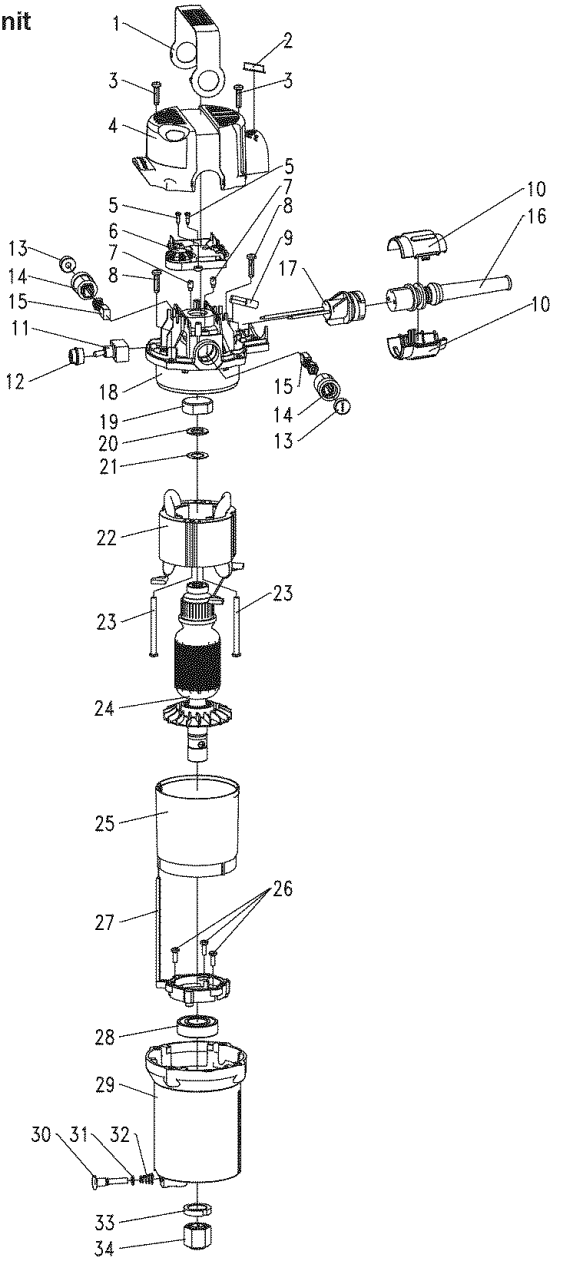
| | |
|---|---|
| 1/2-in. bead and cove<br>  <br>1/16-in. classic cove with bead |  <br>bead cove<br>classic cove & bead |
| 1/4-in. roman ogee<br>  | Roman ogee<br>  |
| 3/8-in. rabbeting<br>  | rabbeting<br>  |
| 1/4-in. veining<br>  | veining<br>  |
| 1/2-in. core box<br>  | core box<br>  |
| 1/2-in. mortising<br>  | mortising<br>  |
| 1/4-in. panel pilot<br>  | panel pilot<br>  |
| 1 3/8-in. 45° chamfer<br>  | chamfer<br>  |

## 12.5 Amp / Variable Speed / 2- 1/4 Peak HP MODEL NUMBER 320.28084

The Model Number will be found on the Nameplate.

Always mention the Model Number in all correspondence regarding your tool.

**Router Motor Unit**



**12.5 Amp / Variable Speed / 2-1/4 Peak HP MODEL NUMBER 320.28084**

The Model Number will be found on the Nameplate.

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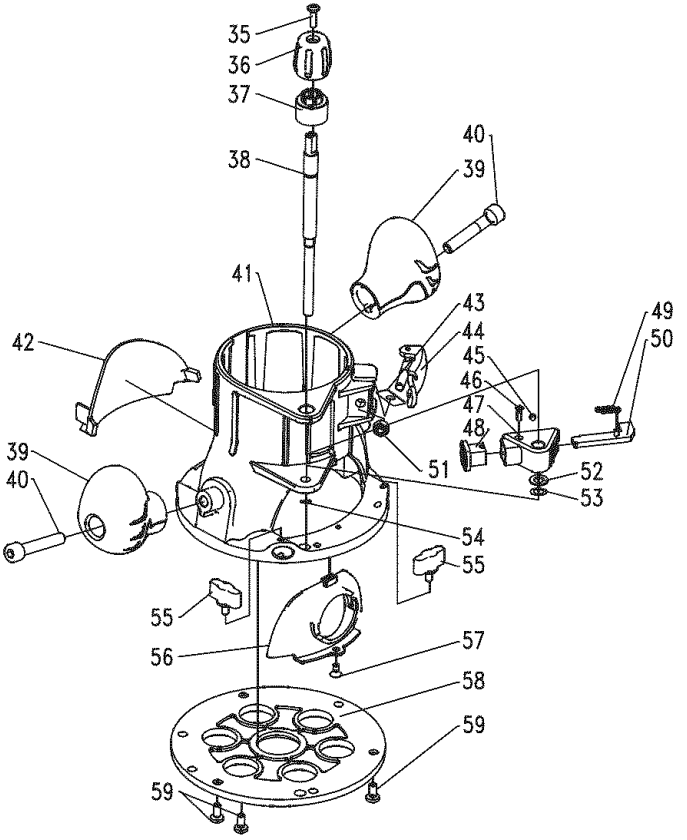
**FIXED BASE**

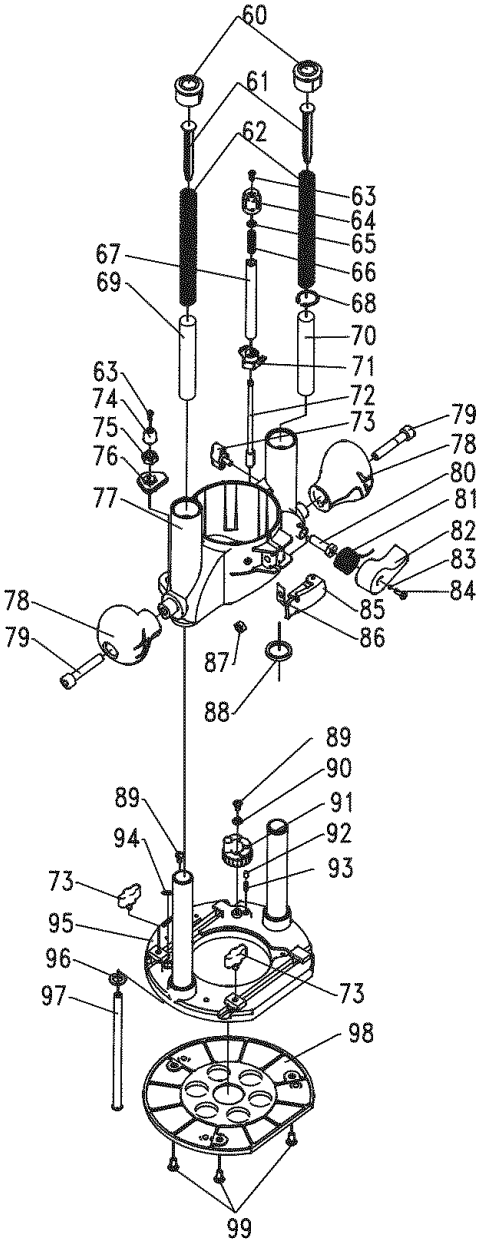


## 12.5 Amp / Variable Speed / 2-1/4 Peak HP Fixed Base Router MODEL NUMBER 320.28084

The Model Number will be found on the Nameplate.

Always mention the Model Number in all correspondence regarding ` tool.

**PLUNGE BASE**

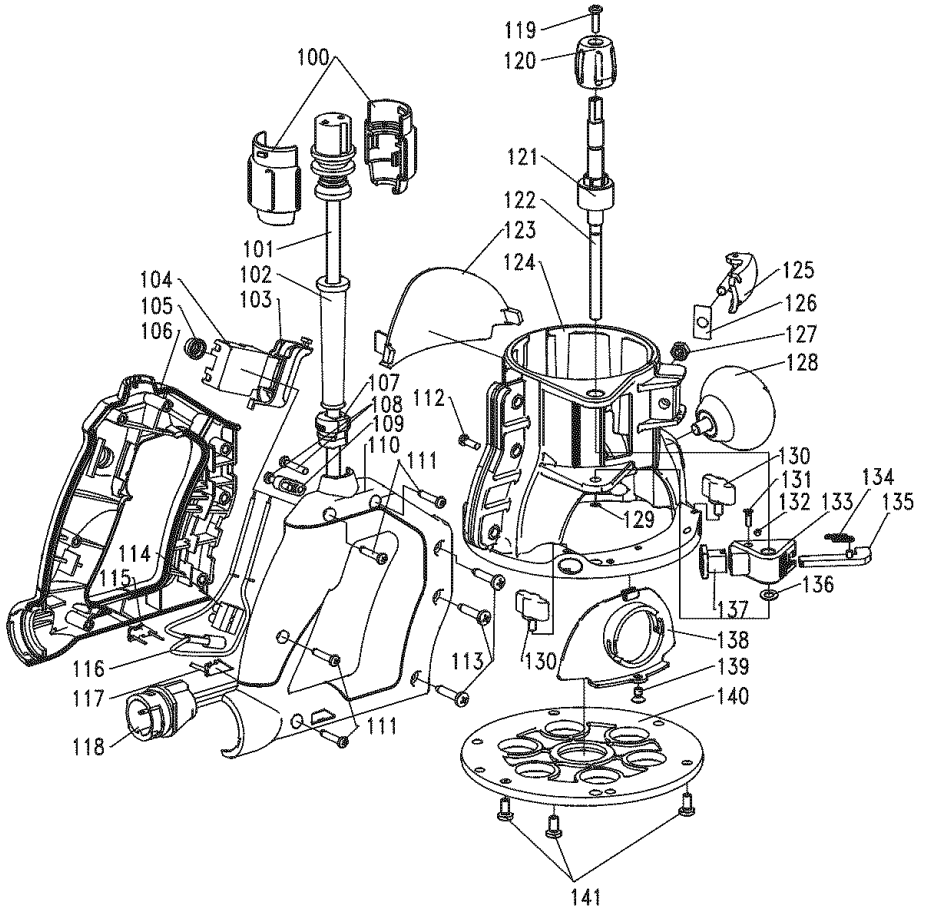


**12.5 Amp / Variable Speed / 2-1/4 Peak HP MODEL NUMBER 320.28084**

The Model Number will be found on the Nameplate.

Always mention the Model Number in all correspondence regarding your tool.

**D-HANDLE BASE**

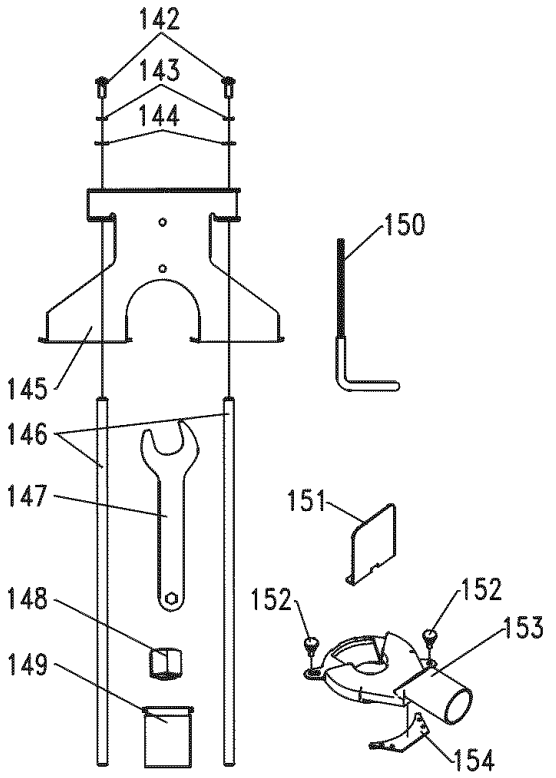


**12.5 Amp / Variable Speed / 2-1/4 Peak HP MODEL NUMBER 320.28084**

The Model Number will be found on the Nameplate.

Always mention the Model Number in all correspondence regarding your tool.

**ACCESSORIES**



**12.5 Amp / Variable Speed / 2-1/4 Peak HP Fixed Base Router MODEL NUMBER 320.28084**

The Model Number will be found on the Nameplate.

Always mention tool's model number when ordering parts.

| No. | Part No. | Part Name | Quantity |
|---|---|---|---|
| Motor Unit | | | |
| 1 | 3703841000 | Decorate Cover | 1 |
| 2 | 3123313000 | Transparent Cap | 1 |
| 3 | 5610220000 | Thread Forming Screw | 2 |
| 4 | 3123278000 | Rear Cover | 1 |
| 5 | 5610017000 | Tapping Screw | 2 |
| 6 | 4900256000 | Speed Adjustor | 1 |
| 7 | 5620017000 | Hexagon Socket Screw | 2 |
| 8 | 5610059000 | Thread Forming Screw | 2 |
| 9 | 4540017000 | Power Indicator Light | 1 |
| 10 | 3123329000 | Lock Ring | 2 |
| 11 | 4870073000 | Switch | 1 |
| | 4930008000 | Sleeve | 2 |
| | 4930038000 | Receptacle | 2 |
| 12 | 3122851000 | Seal Ring | 1 |
| 13 | 3120537000 | Brush Cap | 2 |
| 14 | 2800005000 | Brush Holder | 2 |
| 15 | 4960019000 | Carbon Brush | 2 |
| 16 | 2822257000 | Power Cord ASSY | 1 |
| 17 | 4930314000 | Receptacle | 1 |
| | 4930008000 | Sleeve | 2 |
| | 4930038000 | Receptacle | 2 |
| 18 | 3123279000 | Middle Housing | 1 |
| 19 | 3520130000 | Bearing Holder | 1 |
| 20 | 3121049000 | Rubber Ring | 1 |
| 21 | 3700249000 | Washer | 1 |
| 22 | 2740240000 | Stator | 1 |
| 23 | 5610065000 | Tapping Screw | 2 |

| No. | Part No. | Part Name | Quantity |
|---|---|---|---|
| 24 | 2750839000 | Rotor | 1 |
| | 5700008000 | Ball Bearing | 1 |
| 25 | 3123280000 | Fan Baffle | 1 |
| 26 | 5620040000 | Screw | 3 |
| 27 | 2822255000 | LED Holder ASSY | 1 |
| 28 | 5700056000 | Ball Bearing | 1 |
| 29 | 3420557000 | Motor Housing | 1 |
| 30 | 3550855000 | Spindle Lock | 1 |
| 31 | 5660005000 | E Ring | 1 |
| 32 | 3660174000 | Stop Spring | 1 |
| 33 | 5630179000 | Nut | 1 |
| 34 | 5630187000 | Collet Nut | 1 |
| | 3550721000 | Collet | 1 |
| Fixed Base | | | |
| 35 | 5620041000 | Screw | 1 |
| 36 | 3320460000 | Adjusting Knob | 1 |
| 37 | 3123281000 | Indicator | 1 |
| 38 | 3550854000 | Shaft | 1 |
| 39 | 3320274000 | Handle | 2 |
| 40 | 5620024000 | Hexagon Socket Screw | 2 |
| 41 | 3420558000 | Mounting | 1 |
| | 5670040000 | Located Pin | 1 |
| 42 | 3121637000 | Chip Shield | 1 |
| 43 | 3703872000 | Plate | 1 |
| 44 | 3703863000 | Clamping Lever | 1 |
| | 5670026000 | Pin | 1 |
| | 3550577000 | Mitre Lock Bolt | 1 |
| 45 | 3123651000 | Rubber Insert | 1 |
| 46 | 5620064000 | Screw | 1 |
| 47 | 3420562000 | Adjustor Block | 1 |
| 48 | 3123282000 | Button | 1 |
| 49 | 3660293000 | Spring | 1 |
| 50 | 2822361000 | Sliding Block | 1 |

| No. | Part No. | Part Name | Quantity |
|---|---|---|---|
| 51 | 5630015000 | Prevailing Torque Hexagon Nut | 1 |
| 52 | 3700352000 | Washer | 1 |
| 53 | 5650172000 | Wave Washer | 1 |
| 54 | 5660005000 | E Ring | 1 |
| 55 | 3400189000 | Lock Bolt | 2 |
| 56 | 3123294000 | Dust Bracket | 1 |
| 57 | 5620067000 | Screw | 1 |
| 58 | 3122924000 | Base Plate | 1 |
| 59 | 5620049000 | Screw | 3 |
| Plunge Base | | | |
| 60 | 3123338000 | Lock Cap | 2 |
| 61 | 3123337000 | Knighthead | 2 |
| 62 | 3660312000 | Spring | 2 |
| 63 | 5620032000 | Screw | 2 |
| 64 | 3123435000 | Adjusting Knob | 1 |
| 65 | 5650014000 | Plain Washer | 1 |
| 66 | 3660313000 | Spring | 1 |
| 67 | 3550913000 | Depth Stop Bar | 1 |
| 68 | 3703949000 | Clip | 1 |
| 69 | 3123453000 | Sleeve | 1 |
| 70 | 3123756000 | Sleeve | 1 |
| 71 | 3123434000 | Depth Indicator | 1 |
| 72 | 3550083000 | Depth Adjusting Bolt | 1 |
| 73 | 3400189000 | Lock Bolt | 3 |
| 74 | 3123498000 | Cap | 1 |
| 75 | 5630016000 | Hexagon Nut/1 | 1 |
| 76 | 3123497000 | Cover | 1 |
| 77 | 3420566000 | Plunge Frame | 1 |
| | 3520261000 | Bush | 1 |
| | 3520260000 | Bush | 1 |
| | 5670040000 | Located Pin | 1 |
| 78 | 3320274000 | Handle | 2 |
| 79 | 5620024000 | Hexagon Socket Screw | 2 |

| No. | Part No. | Part Name | Quantity |
|---|---|---|---|
| 80 | 5640045000 | Bolt | 1 |
| 81 | 3660254000 | Torsion Spring | 1 |
| 82 | 3420398000 | Plunge Lock Lever | 1 |
| 83 | 5650007000 | Spring Washer | 1 |
| 84 | 5620039000 | Screw | 1 |
| 85 | 5670026000 | Pin | 1 |
| | 3703863000 | Clamping Lever | 1 |
| | 3550577000 | Mitre Lock Bolt | 1 |
| 86 | 3703872000 | Plate | 1 |
| 87 | 5630015000 | Prevailing Torque Hexagon Nut | 1 |
| 88 | 5690138000 | O Ring | 1 |
| 89 | 5620103000 | Slotted Shoulder Screw | 2 |
| 90 | 3700078000 | Wave Washer | 1 |
| 91 | 3420570000 | TurnTable | 1 |
| 92 | 3700191000 | Cap | 1 |
| 93 | 3660274000 | Spring | 1 |
| 94 | 5660139000 | E Ring | 1 |
| 95 | 3420567000 | Mounting | 1 |
| | 3550870000 | Plunge Rod | 1 |
| | 3550869000 | Long Plunge Rod | 1 |
| | 5670010000 | Spring Pin | 2 |
| 96 | 5650023000 | Plain Washer | 1 |
| 97 | 3550929000 | Bolt | 1 |
| 98 | 3122923000 | Base Plate | 1 |
| 99 | 5620049000 | Screw | 3 |
| D-Handle Base | | | |
| 100 | 3123329000 | Lock Ring | 2 |
| 101 | 2822345000 | Internal Wire ASSY | 1 |
| 102 | 3121064000 | Cord Guard | 1 |
| 103 | 3320518000 | Switch Trigger | 1 |
| 104 | 4870349000 | Trigger Switch | 1 |
| 105 | 3123513000 | Switch Button | 1 |
| 106 | 3320516000 | Left Handle Cover | 1 |

| No. | Part No. | Part Name | Quantity |
|---|---|---|---|
| 107 | 3123530000 | Cord Guard | 1 |
| 108 | 5610106000 | Tapping Screw | 2 |
| 109 | 3120234000 | Cord Anchorage | 1 |
| 110 | 3320517000 | Right Handle Cover | 1 |
| 111 | 5610106000 | Tapping Screw | 4 |
| 112 | 5610031000 | Tapping Screw | 1 |
| 113 | 5610060000 | Tapping Screw | 3 |
| 114 | 4930004000 | Connector | 1 |
| 115 | 3121475000 | Left Power Indicator | 1 |
| 116 | 2822388000 | Internal Wire ASSY | 1 |
| 117 | 3121424000 | Right Power Indicator | 1 |
| 118 | 4930314000 | Receptacle | 1 |
| | 4930064000 | Shark Teeth Terminal | 2 |
| 119 | 5620041000 | Screw | 1 |
| 120 | 3320460000 | Adjusting Knob | 1 |
| 121 | 3123281000 | Indicator | 1 |
| 122 | 3550854000 | Shaft | 1 |
| 123 | 3121637000 | Chip Shield | 1 |
| 124 | 3420587000 | Mounting | 1 |
| | 5670040000 | Located Pin | 1 |
| 125 | 5670026000 | Pin | 1 |
| | 3550577000 | Mitre Lock Bolt | 1 |
| | 3703863000 | Clamping Lever | 1 |
| 126 | 3703872000 | Plate | 1 |
| 127 | 5630015000 | Prevailing Torque Hexagon Nut | 1 |
| 128 | 3402219000 | Front Handle | 1 |
| 129 | 5660005000 | E Ring | 1 |
| 130 | 3400189000 | Lock Bolt | 2 |
| 131 | 5620064000 | Screw | 1 |
| 132 | 3123651000 | Rubber Insert | 1 |
| 133 | 3420562000 | Adjustor Block | 1 |
| 134 | 3660293000 | Spring | 1 |
| 135 | 2822361000 | Sliding Block | 1 |

| No. | Part No. | Part Name | Quantity |
|---|---|---|---|
| 136 | 3700352000 | Washer | 1 |
| 137 | 3123282000 | Button | 1 |
| 138 | 3123294000 | Dust Bracket | 1 |
| 139 | 5620067000 | Screw | 1 |
| 140 | 3122924000 | Base Plate | 1 |
| 141 | 5620049000 | Screw | 3 |
| Accessories | | | |
| 142 | 5620050000 | Screw | 2 |
| 143 | 5650015000 | Spring Washer | 2 |
| 144 | 5650013000 | Plain Washer | 2 |
| 145 | 3703925000 | Fence | 1 |
| 146 | 3550588000 | Guiding Rod | 2 |
| 147 | 3700807000 | Wrench | 1 |
| 148 | 5630187000 | Collet Nut | 1 |
| | 3550595000 | Collet | 1 |
| 149 | 3123286000 | Vaccum Adapter | 1 |
| 150 | 3402220000 | Depth Adjusting Lever | 1 |
| 151 | 3123344000 | Chip Shield | 1 |
| 152 | 5620353000 | Knurled Thumb Screw | 2 |
| 153 | 3123454000 | Vaccum Adapter | 1 |
| 154 | 3123500000 | Support Plate | 1 |

# NOTES

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