

**SEARS**

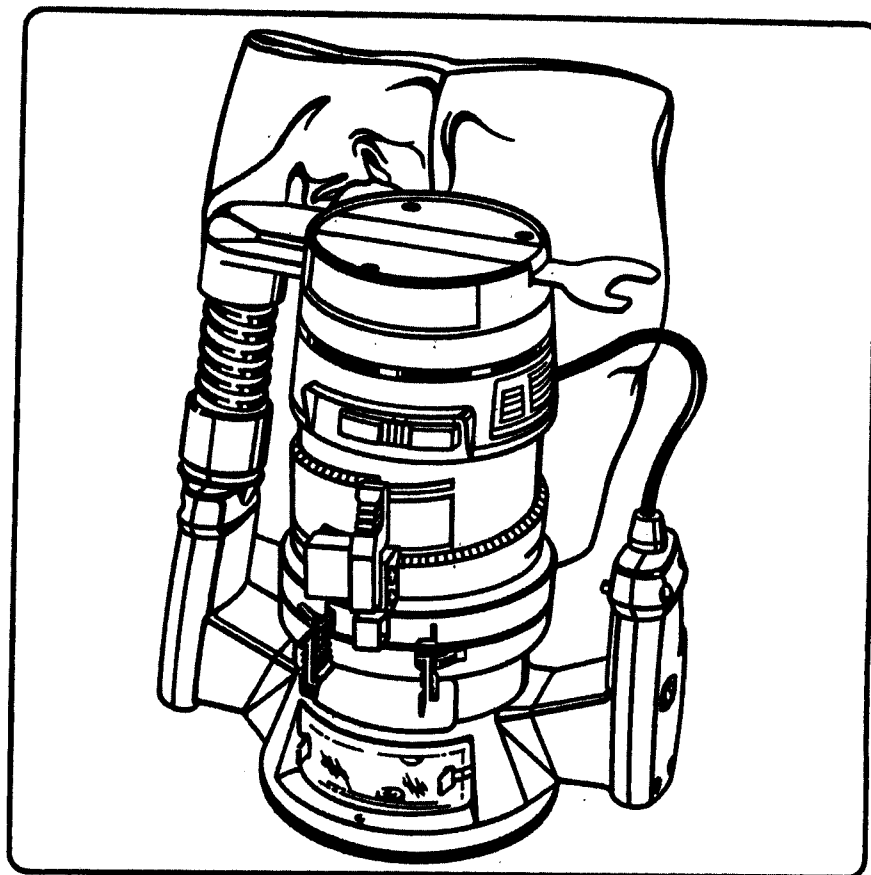
OWNER'S  
MANUAL

MODEL NO.  
315.174730

**CAUTION:**  
Read Rules for  
Safe Operation  
and All Instruc-  
tions Carefully

**Save This Manual  
For Future Reference**

**Thank You for Buying  
Craftsman Tools**



**CRAFTSMAN®**  
**Electronic Router**  
**Double Insulated**

Warranty  
Introduction  
Operation  
Maintenance  
Repair Parts



Sold only by  
SEARS, ROEBUCK AND CO., Hoffman Estates, IL 60179

612547-817  
3-95

Printed In U.S.A.

## **FULL ONE YEAR WARRANTY ON CRAFTSMAN ELECTRONIC ROUTER**

If this Craftsman Electronic Router fails to give complete satisfaction within one year from the date of purchase **RETURN IT TO THE NEAREST SEARS SERVICE CENTER / DEPARTMENT THROUGHOUT THE UNITED STATES** and Sears will repair it, free of charge.

If this router is used for commercial or rental purposes this warranty applies for only 90 days from the date of purchase.

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

SEARS, ROEBUCK AND CO.  
DEPT. 817WA  
HOFFMAN ESTATES, IL 60179

# **INTRODUCTION**

**DOUBLE INSULATION** is a concept in safety, in electric power tools, which eliminates the need for the usual three wire grounded power cord and grounded supply system. Wherever there is electric current in the tool there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from internal metal motor components with protecting insulation.

**IMPORTANT** - Servicing of a tool with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For service we suggest you return the tool to your nearest Sears Store for repair. Always use original factory replacement parts when servicing.

## **RULES FOR SAFE OPERATION**

**WARNING: DO NOT ATTEMPT TO OPERATE THIS TOOL UNTIL YOU HAVE READ THOROUGHLY AND UNDERSTAND COMPLETELY ALL INSTRUCTIONS, SAFETY RULES, ETC. CONTAINED IN THIS MANUAL. FAILURE TO COMPLY CAN RESULT IN ACCIDENTS INVOLVING FIRE, ELECTRIC SHOCK, OR SERIOUS PERSONAL INJURY. SAVE OWNERS MANUAL AND REVIEW FREQUENTLY FOR CONTINUING SAFE OPERATION, AND INSTRUCTING OTHERS WHO MAY USE THIS TOOL.**

### **READ ALL INSTRUCTIONS**

1. **KNOW YOUR POWER TOOL** - Read owner's manual carefully. Learn its applications and limitations as well as the specific potential hazards related to this tool.
2. **GUARD AGAINST ELECTRICAL SHOCK BY PREVENTING BODY CONTACT WITH GROUNDED SURFACES.** For example: Pipes, radiators, ranges, refrigerator enclosures.
3. **KEEP GUARDS IN PLACE** and in working order.
4. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
5. **AVOID DANGEROUS ENVIRONMENT.** Don't use power tool in damp or wet locations or expose to rain. Keep work area well lit.
6. **KEEP CHILDREN AND VISITORS AWAY.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord.
7. **STORE IDLE TOOLS.** When not in use tools should be stored in a dry, high or locked-up place - out of the reach of children.
8. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
9. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended - for example -  
Don't use a circular saw for cutting tree limbs or logs.
10. **WEAR PROPER APPAREL.** No loose clothing or jewelry to get caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Also, wear protective hair covering to contain long hair and keep it from being drawn into air vents.
11. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses have only impact-resistant lenses; they are **NOT** safety glasses.
12. **PROTECT YOUR LUNGS.** Wear a face or dust mask if cutting operation is dusty.
13. **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
14. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
15. **SECURE WORK.** Use clamps or a vise to hold work. Both hands are needed to operate the tool.
16. **DON'T OVERREACH.** Keep proper footing and balance at all times. Do not use on a ladder or unstable support.
17. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp at all times, and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

## RULES FOR SAFE OPERATION (Continued)

18. **DISCONNECT TOOLS.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, etc., all tools should be disconnected from power supply.
19. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
20. **AVOID ACCIDENTAL STARTING.** Don't carry plugged-in tools with finger on switch. Be sure switch is off when plugging in.
21. **MAKE SURE YOUR EXTENSION CORD IS IN GOOD CONDITION.** When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. A wire gage size (A.W.G.) of at least 14 is recommended for an extension cord 100 feet or less in length. A cord exceeding 100 feet is not recommended. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.
22. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords suitable for use outdoors. Outdoor approved cords are marked with the suffix W-A, for example - SJTW-A or SJOW-A.
23. **KEEP CUTTERS CLEAN AND SHARP.** Sharp cutters minimize stalling and kickback.
24. **KEEP HANDS AWAY FROM CUTTING AREA.** Keep hands away from cutters. Do not reach underneath work while cutter is rotating. Do not attempt to remove material while cutter is rotating.
25. **NEVER USE IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.
26. **INSPECT TOOL CORDS PERIODICALLY** and if damaged, have repaired at your nearest Sears Repair Center. Stay constantly aware of cord location.
27. **INSPECT EXTENSION CORDS PERIODICALLY** and replace if damaged.
28. **KEEP HANDLES DRY, CLEAN, AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products or any strong solvents to clean your tool.
29. **STAY ALERT.** Watch what you are doing and use common sense. Do not operate tool when you are tired. Do not rush.
30. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless indicated elsewhere in this instruction manual.
31. **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by an authorized service center.
32. Inspect for and remove all nails from lumber before routing.
33. **DO NOT USE TOOL UNDER "BROWN-OUT" OR OTHER LOW VOLTAGE CONDITIONS.** Also, do not use with any device that could cause the power supply voltage to change.
34. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol, or any medication.
35. **WHEN SERVICING USE ONLY IDENTICAL CRAFTSMAN REPLACEMENT PARTS.**
36. **POLARIZED PLUGS.** To reduce the risk of electric shock, this tool has 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 the proper outlet. Do not change the plug in any way.
37. **SAVE THESE INSTRUCTIONS.** Review them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also.

### 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 shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields, available at Sears Retail Stores.

# OPERATION

Your electronic router is a versatile woodworking tool which will give you years of trouble-free performance. It is engineered with the professional in mind, but its ease of operation allows the amateur to produce work which is beautiful and precise. Your new router has advanced electronic features which are designed to assist you in getting the maximum use from your router. By making proper speed selections, your router can be adjusted to your specific routing needs. This eliminates much of the guess work previously needed to perform a given job. Both the experienced and inexperienced router users benefit, obtaining professional like results with fewer job errors.

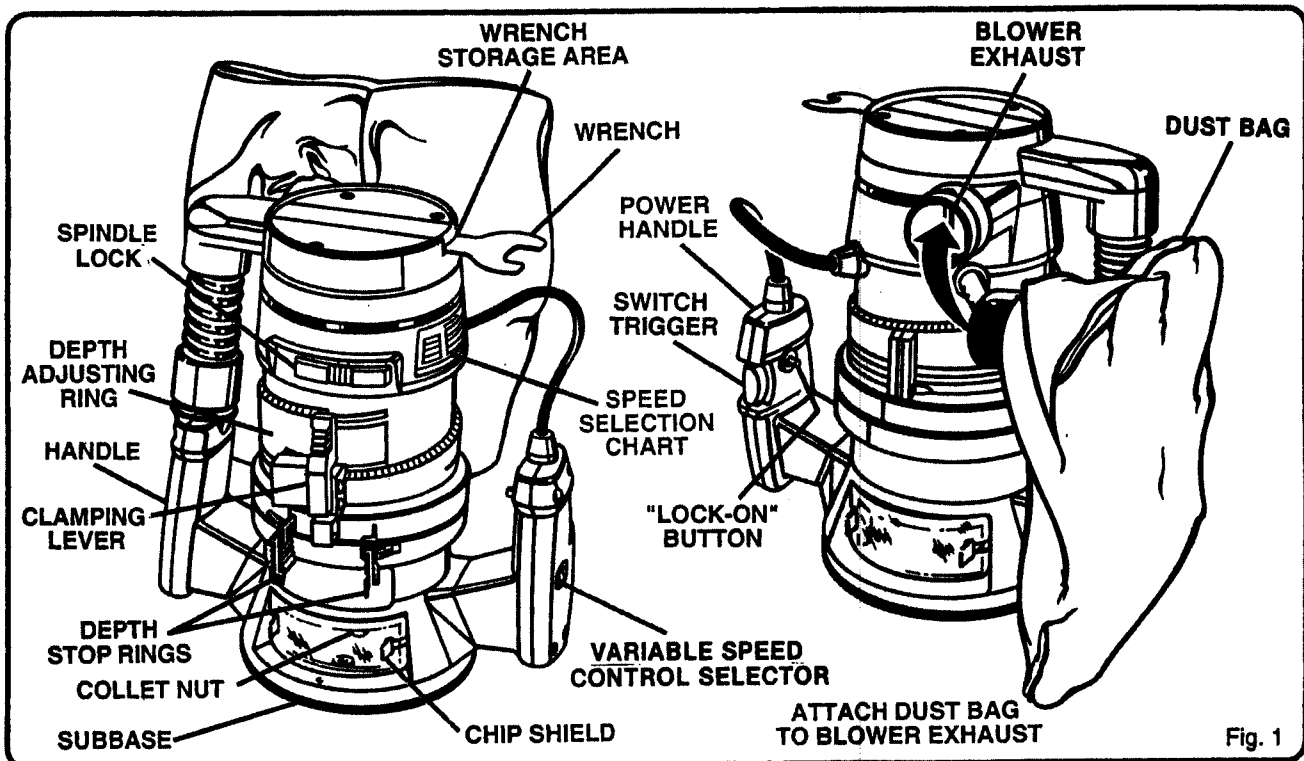
The electronic feature of your router introduces the flexibility of adjusting the motor speed to the required job conditions. Speed can be set according to the approximate cutter diameter you will be using and to the hardness of the material being cut. Also, the best cuts are made when the cutter is fed through the material at the proper rate. When possible, you should make practice cuts on a scrap piece of wood to get a "feel" of how fast to "feed" your router.

## KNOW YOUR ELECTRONIC ROUTER

Before attempting to use your router, familiarize yourself with all operating features and safety requirements. *See Figure 1.*

**WARNING: IF ANY PARTS ARE MISSING DO NOT OPERATE YOUR ROUTER UNTIL THE MISSING PARTS ARE REPLACED. FAILURE TO DO SO COULD RESULT IN POSSIBLE SERIOUS PERSONAL INJURY.**

Features include electronic feedback switch; easily operated depth of cut adjustment mechanism; depth stop rings; spindle lock; "lock-on" switch; variable speed control selector; speed selection chart; dust pick-up; and wrench storage area.



## "LOCK-ON" BUTTON

The switch of your router is equipped with a "lock-on" feature which is convenient when operating for extended periods of time. To lock on, depress the trigger, push in the lock button located on the side of the handle, then while holding the lock button pushed in, release the trigger. To release the lock, depress the trigger and release it. *See Figure 1.*

## VARIABLE SPEED

Your router has a variable speed control selector designed to allow operator control of speed and torque limits. *See Figure 1.* To increase the speed and torque of your router, turn the variable speed control selector to a higher setting. Turn to a lower setting to decrease speed and torque. **NOTE:** If you do not want to use the variable speed control selector, turn to the highest possible setting, and the feature will not be active.

**WARNING: DO NOT ALLOW FAMILIARITY WITH YOUR ROUTER TO MAKE YOU CARELESS. REMEMBER THAT A CARELESS FRACTION OF A SECOND IS SUFFICIENT TO INFLICT SEVERE INJURY.**

# OPERATION

**WARNING: YOUR ROUTER SHOULD NEVER BE CONNECTED TO POWER SUPPLY WHEN YOU ARE ASSEMBLING PARTS, MAKING ADJUSTMENTS, INSTALLING OR REMOVING CUTTERS, OR WHEN NOT IN USE. DISCONNECTING YOUR ROUTER WILL PREVENT ACCIDENTAL STARTING THAT COULD CAUSE SERIOUS INJURY.**

## WRENCH STORAGE AREA

Your router has a wrench storage area located on the top end cap portion of the motor housing. When installing or removing cutters remove the wrench from its storage area. Proper storage of wrench when not in use will help reduce the possibility of losing wrench. See Figure 1.

## INSTALLING/REMOVING CUTTERS

See Figure 2.

### 1. UNPLUG YOUR ROUTER.

**WARNING: FAILURE TO UNPLUG YOUR ROUTER COULD RESULT IN ACCIDENTAL STARTING CAUSING SERIOUS INJURY.**

2. Remove dust bag from router.
3. Remove one of the clear plastic chip shields from router. To remove, press on tabs and pull outward.
4. A spindle lock is located on the front of the motor housing. See Figure 1. To activate lock, push spindle lock in and slide into lock position.

**WARNING: TO PREVENT DAMAGE TO THE SPINDLE OR SPINDLE LOCK, ALWAYS ALLOW MOTOR TO COME TO A COMPLETE STOP BEFORE ENGAGING SPINDLE LOCK.**

5. Place your router upside down on table, then turn collet nut with wrench until lock mechanism interlocks. See Figure 2. **NOTE:** Spindle lock is spring loaded and will snap into position when lock mechanism interlocks.

**WARNING: IF YOU ARE CHANGING A CUTTER IMMEDIATELY AFTER USE, BE CAREFUL NOT TO TOUCH THE CUTTER OR COLLET WITH YOUR HANDS OR FINGERS. THEY WILL GET BURNED BECAUSE OF THE HEAT BUILDUP FROM CUTTING. ALWAYS USE THE WRENCH PROVIDED.**

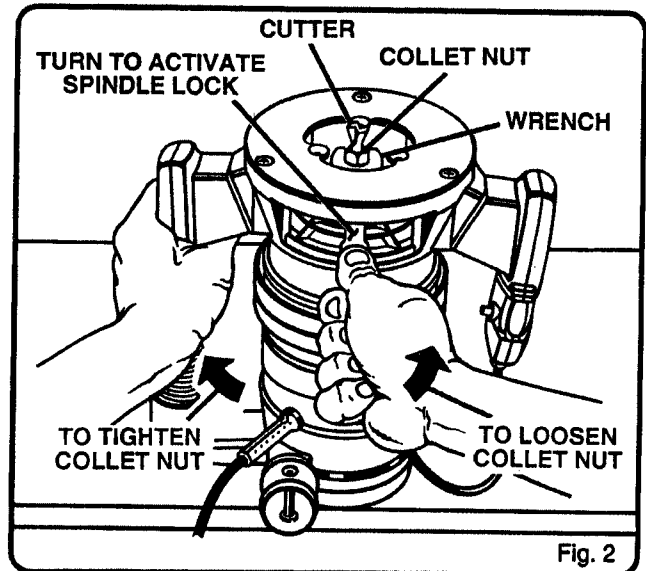
6. Remove cutters by turning collet nut counterclockwise enough to allow cutter to slip easily from collet. See Figure 2. The collet is machined to precision tolerances to fit cutters with 1/4 in. diameter shank size.
7. With your router still upside down on table, insert shank of cutter into collet. The shank of your cutter should be close to but not touching bottom of collet.
8. Tighten the collet nut securely by turning clockwise with the wrench provided. See Figure 2. Put spindle lock back in unlock position. Otherwise, the interlocking mechanism of the spindle lock will not let you turn your router on.

**WARNING: DO NOT USE CUTTERS WITH UNDERSIZED SHANKS. UNDERSIZED SHANKS WILL NOT TIGHTEN PROPERLY AND COULD BE THROWN FROM TOOL CAUSING INJURY.**

9. Install dust bag.

## CHIP SHIELD

Clear plastic chip shields are installed on the base of your router for protection against flying dust and chips. The chip shields are designed to fit the front and rear openings of the router base. See Figure 1. If necessary to remove, squeeze tabs on each end and pull outward. To replace, squeeze tabs at each end, fit into the opening, then release. **FOR YOUR PROTECTION DO NOT USE ROUTER WITHOUT CHIP SHIELDS PROPERLY IN PLACE.**



## DUST BAG ASSEMBLY

See Figure 1.

**Do not connect router to power supply before installing dust bag or connecting it to a dust collection system.**

**WARNING: TO PREVENT THE POSSIBILITY OF SAWDUST OR FOREIGN OBJECTS BEING THROWN INTO YOUR FACE AND EYES, NEVER ATTEMPT TO USE YOUR ROUTER WITHOUT DUST BAG PROPERLY INSTALLED. SAWDUST OR FOREIGN OBJECTS BEING THROWN INTO YOUR FACE AND EYES COULD RESULT IN POSSIBLE SERIOUS INJURY.**

### TO INSTALL BAG:

The dust bag should be installed by slipping it with a twisting motion over the blower exhaust. The bag should be installed with the zipper down when router is in upright position.

The bag should be emptied when half full.

### TO EMPTY BAG:

Remove bag from router, open zipper and shake out dust. Occasionally turn the dust bag inside out and brush the accumulation of dust from the inside of the bag. This will permit the air to flow through the bag better.

# OPERATION

**WARNING: BEFORE CONNECTING YOUR ROUTER TO POWER SUPPLY SOURCE, ALWAYS CHECK TO BE SURE SWITCH IS NOT IN "LOCK-ON" POSITION. FAILURE TO DO SO COULD RESULT IN ACCIDENTAL STARTING OF YOUR ROUTER RESULTING IN POSSIBLE SERIOUS INJURY.**

## DEPTH OF CUT ADJUSTMENTS

See Figures 3 and 4.

We recommend that cuts be made at a depth not exceeding 1/8 in. and that several passes be made to reach depths of cut greater than 1/8 in.

### 1. UNPLUG YOUR ROUTER.

**WARNING: FAILURE TO UNPLUG YOUR ROUTER COULD RESULT IN ACCIDENTAL STARTING CAUSING SERIOUS INJURY.**

2. Place your router on a flat surface, unlock clamping lever, and adjust until cutter is inside subbase. See Figure 3.
3. Turn the depth adjusting ring until tip of cutter touches flat surface. See Figure 4.
4. Position your router so that the cutter can extend below the subbase for desired depth setting.
5. Turn the depth adjusting ring to obtain the desired depth of cut. The distance the cutter moves can be read on the depth adjusting ring. Use reference point on motor housing to measure depth of cut. Each mark on the depth adjusting ring indicates 1/64 inch change in depth setting.
6. Lock clamping lever, securing depth adjusting ring to motor housing and base.

**WARNING: ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS WHEN USING YOUR ROUTER. FAILURE TO DO SO COULD RESULT IN DUST, SHAVINGS, CHIPS, OR LOOSE PARTICLES BEING THROWN IN YOUR EYES RESULTING IN POSSIBLE SERIOUS INJURY. IF THE OPERATION IS DUSTY, ALSO WEAR A FACE OR DUST MASK.**

## DEPTH STOP RINGS

See Figures 5 and 6.

Your router is equipped with depth stop rings that will allow you to set positive stops for operating your router at two desired depths of cut.

1. Release depth stop rings. To release: grasp depth stop ring tab with your thumb and index finger, and pull away from router as shown by the arrow. See Figure 5.
2. Using depth adjusting ring, set cutter at lowest desired depth of cut. Lock clamping lever. Position bottom depth stop ring against depth adjusting ring. Hold depth stop ring against depth adjusting ring and lock. See Figure 6. **Note:** Depth stop ring ends snap together to lock.
3. Unlock clamping lever and move depth adjusting ring to set cutter at second desired depth of cut. Lock clamping lever. Position top depth stop ring against depth adjusting ring. Hold depth stop ring against depth adjusting ring and lock. See Figure 6. **Note:** Depth stop ring ends snap together to lock.

Depth stop rings will now provide a positive stop allowing you to operate your router at two cutter depths.

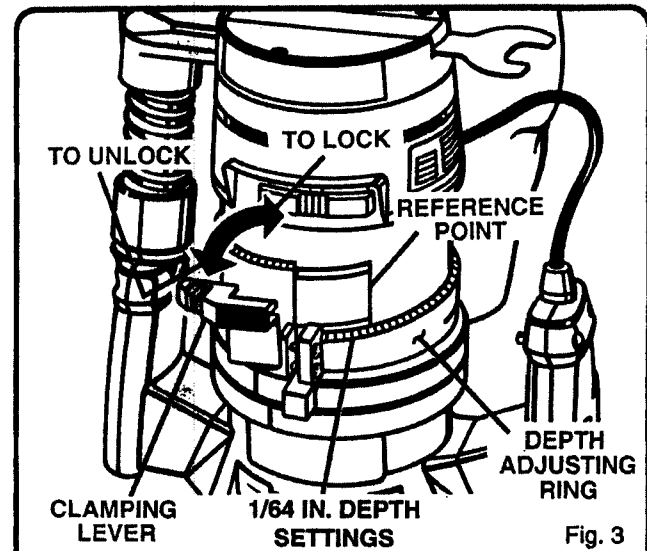


Fig. 3

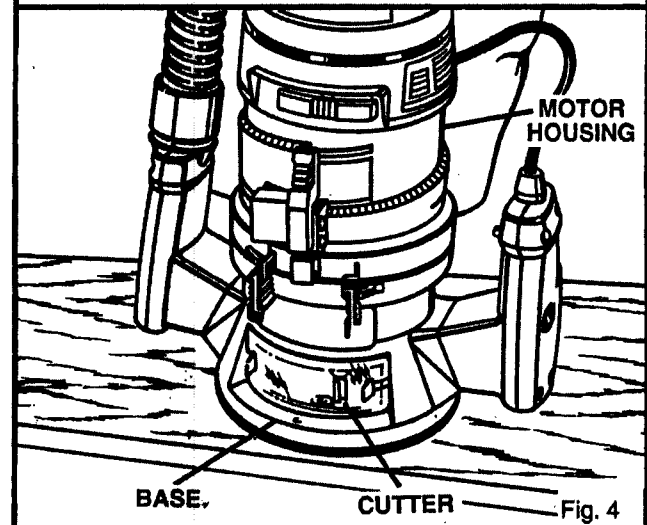


Fig. 4

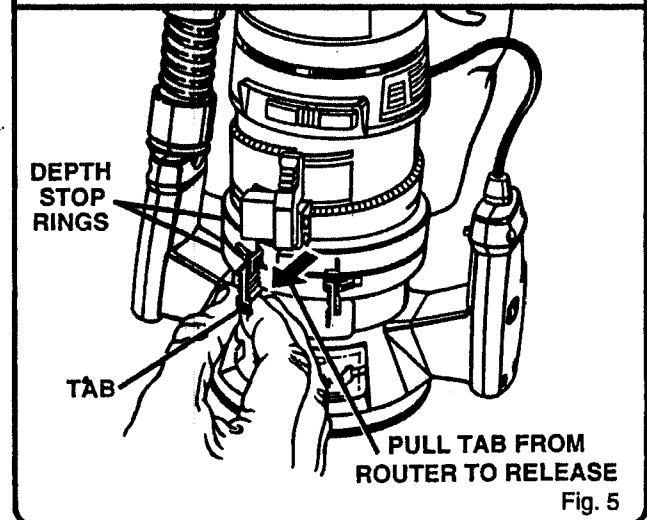


Fig. 5

# OPERATION

## PRACTICE BEFORE ACTUAL USE

See Figure 7.

We suggest that you practice with the variable speed feature of your router before installing a cutter and making cuts in wood. **CHECK THE FOLLOWING BEFORE CONNECTING ROUTER TO POWER SUPPLY:**

1. Make sure power supply is 120 volts, 60 Hz, AC only.
2. Make sure the spindle lock is in the unlocked position.
3. Make sure the trigger is not in the "lock-on" position.
4. Make sure there is not a cutter in the collet.
5. Make sure the collet does not extend below the subbase.
6. Choose the desired speed from the speed selection chart.
7. Turn the variable speed control selector to the desired setting.
8. Plug your router into power supply source.
9. Grasp your router firmly with both hands and turn on.

## ROUTING

See Figure 8.

For ease of operation and maintaining proper control, your router has two handles, one on each side of the router base. When using your router hold it firmly with both hands as shown in figure 8. Turn router on and let motor build to its full speed, then gradually feed cutter into workpiece. Remain alert and watch what you are doing. **DO NOT** operate router when fatigued.

## ELECTRICAL CONNECTION

Your router has a precision built electric motor. It should be connected to a power supply that is 120 volts, 60 Hz, AC only (normal household current). Do not operate this tool on direct current (DC). A voltage drop of more than 10 percent will cause a loss of power and overheating. If your tool does not operate when plugged into an outlet, double-check the power supply.

## HELPFUL HINTS

- ✓ Always clamp workpiece securely before routing.
- ✓ A safe operator is one who thinks ahead.
- ✓ Always wear eye protection when routing.
- ✓ Make set-up adjustments carefully. Then double check. Measure twice and cut once.
- ✓ Keep cutters clean and properly sharpened.
- ✓ Don't let familiarity make you careless.
- ✓ Study all safety rules and do the job safely.
- ✓ **NEVER** place your hands in jeopardy.
- ✓ Make certain clamps can't loosen while in use.
- ✓ Test difficult set-ups on scrap—Don't waste lumber.
- ✓ Plan each operation before you begin.
- ✓ Clean your router frequently. This will provide smoother operation of depth adjusting ring and clamping lever areas. Shake router or blow with an air jet to remove sawdust build-up.
- ✓ **THINK SAFETY BY THINKING AHEAD.**

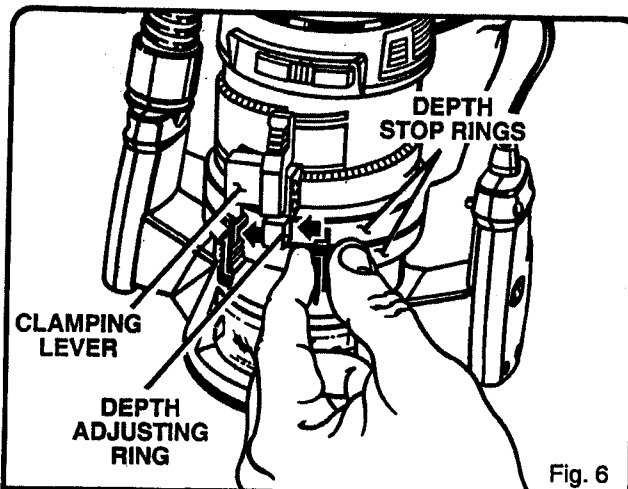


Fig. 6

MATL.	CUTTER SIZE			
	1/4	3/8	1/2	3/4
SOFT	8	7	3-4	1-2
MED.	7	6-7	2	1
HARD	6	3-4	1	1
VERY HD.	7	6-7	5	4

SPEED SELECTION CHART

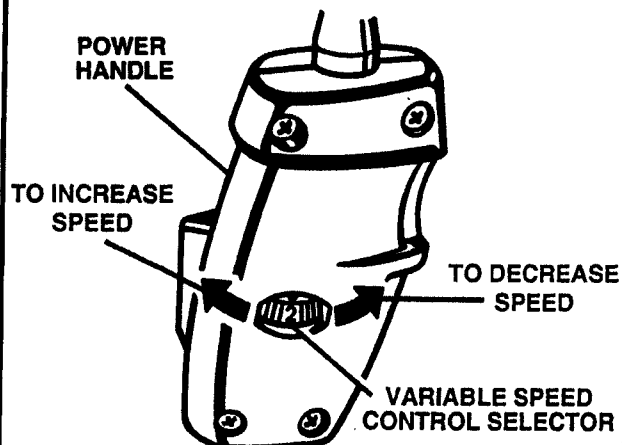


Fig. 7

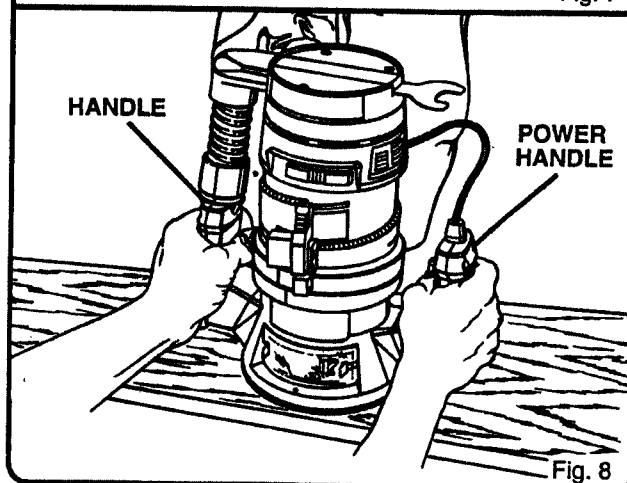


Fig. 8

# OPERATION

## PROPER FEEDING

The right feed is neither too fast nor too slow. It is the rate at which the bit is being advanced firmly and surely to produce a continuous spiral of uniform chips — without hogging into the wood to make large individual chips or, on the other hand, to create only sawdust. If you are making a small diameter, shallow groove in soft, dry wood, the proper feed may be about as fast as you can travel your router along your guide line. On the other hand, if the bit is a large one, the cut is deep or the wood is hard to cut, the proper feed may be a very slow one. Then, again, a cross-grain cut may require a slower pace than an identical with grain cut in the same workpiece.

There is no fixed rule. You will learn by experience. . . by listening to the router motor and by feeling the progress of each cut. If at all possible, always test a cut on a scrap piece of the workpiece wood, beforehand.

## SPEED SELECTION

In general, if the material being cut is hard, the cutter size is large, or the depth of cut is deep (maximum 1/8 in.), then your router should be run at slower speeds. When these situations exist, turn the variable speed control selector until the desired speed is reached. **NOTE:** Carbide cutters cut at higher speeds than steel cutters and should be used when cutting very hard materials.

## RATE OF FEED

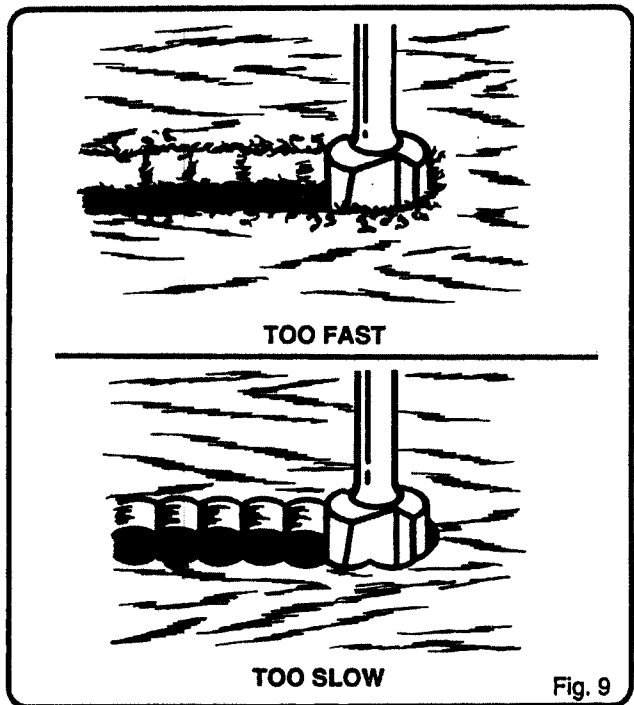
**IMPORTANT:** The whole "secret" of professional routing and edge shaping lies in making a careful set-up for the cut to be made and in selecting the proper rate of feed.

## FORCE FEEDING

Clean, smooth routing and edge shaping can be done only when the bit is revolving at a relatively high speed and is taking very small bites to produce tiny, cleanly severed chips. If your router is forced to move forward too fast, the RPM of the bit becomes slower than normal in relation to its forward movement. As a result, the bit must take bigger bites as it revolves. "Bigger bites" mean bigger chips, and a rougher finish. Bigger chips also require more power, which could result in the router motor becoming overloaded.

Under extreme force-feeding conditions the relative RPM of the bit can become so slow—and the bites it has to take so large—that chips will be partially knocked off (rather than fully cut off), with resulting splintering and gouging of the workpiece. See Figure 9.

Your Craftsman Router is an extremely high-speed tool (25,000 RPM no-load speed), and will make clean, smooth cuts if allowed to run freely without the overload of a forced (too fast) feed. Three things that cause "force feeding" are bit size, depth-of-cut, and workpiece characteristics. The larger the bit or the deeper the cut, the more slowly the router should be moved forward. If the wood is very hard, knotty, gummy or damp, the operation must be slowed still more.



You can always detect "force feeding" by the sound of the motor. Its high-pitched whine will sound lower and stronger as it loses speed. Also, the strain of holding the tool will be noticeably increased.

## TOO SLOW FEEDING

It is also possible to spoil a cut by moving the router forward too slowly. When it is advanced into the work too slowly, a revolving bit does not dig into new wood fast enough to take a bite; instead, it simply scrapes away sawdust-like particles. Scraping produces heat, which can glaze, burn, or mar the cut—in extreme cases, can even overheat the bit so as to destroy its hardness.

In addition, it is more difficult to control a router when the bit is scraping instead of cutting. With practically no load on the motor the bit will be revolving at close to top RPM, and will have a much greater than normal tendency to bounce off the sides of the cut (especially, if the wood has a pronounced grain with hard and soft areas). As a result, the cut produced may have rippled, instead of straight sides. See Figure 9.

"Too-slow feeding" can also cause your router to take off in a wrong direction from the intended line of cut. **Always grasp and hold your router firmly with both hands when routing.**

You can detect "too-slow feeding" by the runaway too-highly pitched sound of the motor; or by feeling the "wobble" of the bit in the cut.



# OPERATION

## DEPTH OF CUT

As previously mentioned, the depth of cut is important because it affects the rate of feed which, in turn, affects the quality of a cut (and, also, the possibility of damage to your router motor and bit). A deep cut requires a slower feed than a shallow one, and a too deep cut will cause you to slow the feed so much that the bit is no longer cutting, it is scraping, instead.

Making a deep cut is never advisable. The smaller bits—especially those only 1/16 inch in diameter—are easily broken off when subjected to too much side thrust. A large enough bit may not be broken off, but if the cut is too deep a rough cut will result—and it may be very difficult to guide and control the bit as desired. For these reasons, we recommend that you do not exceed 1/8 inch depth of cut in a single pass, regardless of the bit size or the softness or condition of the workpiece. See Figure 10.

To make deeper cuts it is therefore necessary to make as many successive passes as required, lowering the bit 1/8 inch for each new pass. In order to save time, do all the cutting necessary at one depth setting, before lowering the bit for the next pass. This will also assure a uniform depth when the final pass is completed. See Figure 11.

## DIRECTION OF FEED AND THRUST

The router motor and bit revolve in a clockwise direction. This gives the tool a slight tendency to twist (in your hands) in a counterclockwise direction, especially when the motor revs up (as at starting).

Because of the extremely high speed of bit rotation during a "proper feeding" operation, there is very little kickback to contend with under normal conditions. However, should the bit strike a knot, hard grain, foreign object, etc. that would affect the normal progress of the cutting action, there will be a slight kickback—sufficient to spoil the trueness of your cut if you are not prepared. Such a kickback is always in the direction opposite to the direction of bit rotation.

To guard against such a kickback, plan your set-up and direction of feed so that you will always be thrusting the tool—to hold it against whatever you are using to guide the cut—in the same direction that the leading edge of the bit is moving. In short, the thrust should be in a direction that keeps the sharp edges of the bit continuously biting straight into new (uncut) wood.

## ROUTING

Whenever you are routing a groove, your travel should be in a direction that places whatever guide you are using at the right-hand side. In short, when the guide is positioned as shown in the first part of Figure 12, tool travel should be left to right and counterclockwise around curves. When the guide is positioned as shown in the second part of Figure 12 tool travel should be right to left and clockwise around curves. If there is a choice, the first set-up is generally the easiest to use. In either case, the sideways thrust you use is against the guide.

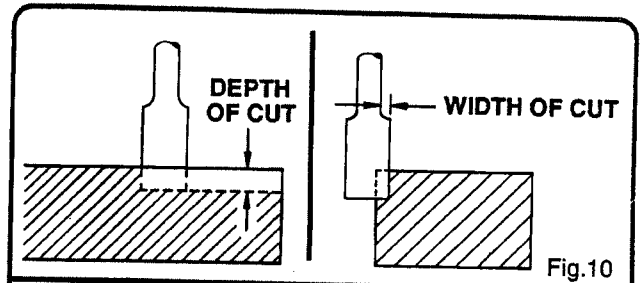


Fig.10

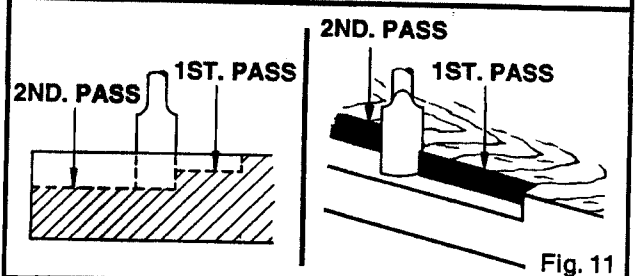


Fig. 11

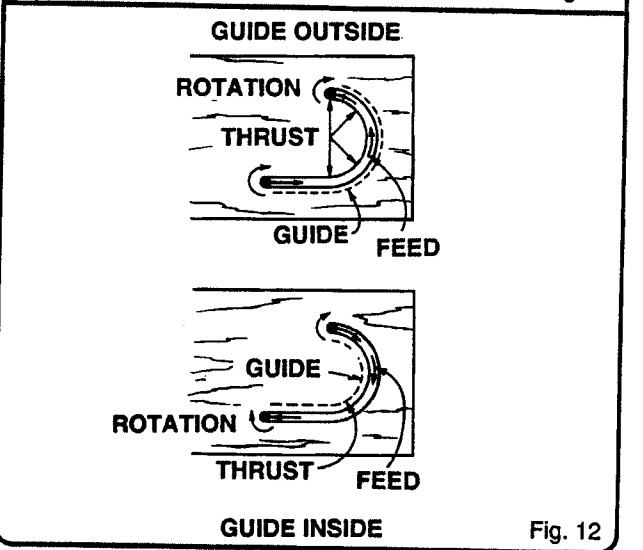


Fig. 12

## ROUTING WITH GUIDE BUSHINGS

When using the Template Guide Bushings Item No. 9-25082 with your router, you must visually center the bit with the bushing before beginning your cut. Your router subbase may be adjusted by loosening the screws holding the subbase to your router. Be sure clamping lever is securely locked before centering bit in bushing. After centering bit with bushing tighten screws firmly.

**WARNING: FAILURE TO CENTER BIT WITH BUSHING OR TO FIRMLY TIGHTEN SCREWS AFTER CENTERING COULD CAUSE BIT TO COME IN CONTACT WITH BUSHING RESULTING IN SERIOUS INJURY.**

# OPERATION

## STARTING AND ENDING A CUT

### INTERNAL ROUTING

Tilt router and place on workpiece, letting edge of subbase contact workpiece first. Be careful not to let router bit contact workpiece. Turn router on and let motor build to its full speed. Gradually feed cutter into workpiece until subbase is level with workpiece.

**WARNING: KEEP A FIRM GRIP ON ROUTER WITH BOTH HANDS AT ALL TIMES. FAILURE TO DO SO COULD RESULT IN LOSS OF CONTROL LEADING TO POSSIBLE SERIOUS INJURY.**

Upon completion of cut, turn motor off and let it come to a complete stop before removing router from work surface.

**WARNING: NEVER PULL ROUTER OUT OF WORK AND PLACE UPSIDE DOWN ON WORK SURFACE BEFORE THE CUTTER STOPS.**

### EDGING WITH PILOT BITS

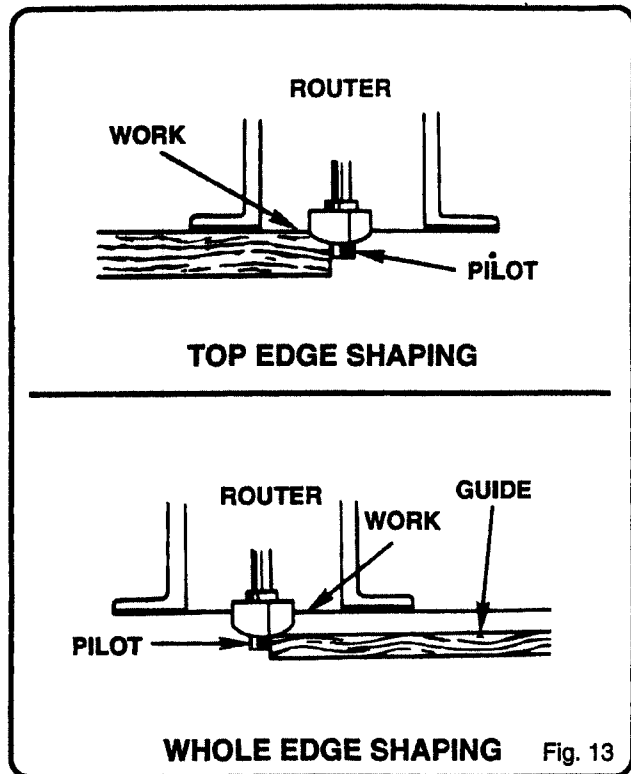
The arbor-type bits with pilots are excellent for quick, easy, edge shaping of any workpiece edge that is either straight or curved at a curvature as great or greater than the radius of the bit to be used. The pilot prevents the bit from making too deep a cut; and holding the pilot firmly in contact with the workpiece edge throughout prevents the cut from becoming too shallow.

Whenever the workpiece thickness together with the desired depth of cut (as adjusted by router depth setting) are such that only the top part of the edge is to be shaped (leaving at least a 1/16 in. thick uncut portion at bottom), the pilot can ride against the uncut portion, which will serve to guide it. See Figure 13. However, if the workpiece is too thin or the bit set too low so that there will be no uncut edge to ride the pilot against, an extra board to act as a guide must be placed under the workpiece. This "guide" board must have exactly the same contour—straight or curved—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 (in as far as the bit radius). On the other hand, if the guide is positioned as shown in Figure 13 (out from the workpiece edge), the bit will make less than a full cut—which will alter the shape of the finished edge.

**NOTE:** Any of the piloted bits can be used without a pilot for edge shaping with guides, as preceding. The size (diameter) of the pilot that is used determines the maximum cut width that can be made with the pilot against the workpiece edge (the small pilot exposes all of the bit; the large one reduces this amount by 1/16 inch).

### EXTENSION CORDS

The use of any extension cord will cause some loss of power. To keep the loss to a minimum and to prevent tool overheating, follow the recommended cord sizes on the chart at the right. When tool is used outdoors, use only extension cords suitable for outdoor use and so marked. Extension cords are available at Sears Retail Stores.



### EDGE ROUTING

Place router on workpiece, making sure the router bit does not contact workpiece. Turn router on and let motor build to its full speed. Begin your cut, gradually feeding cutter into workpiece.

**WARNING: KEEP A FIRM GRIP ON ROUTER WITH BOTH HANDS AT ALL TIMES. FAILURE TO DO SO COULD RESULT IN LOSS OF CONTROL LEADING TO POSSIBLE SERIOUS INJURY.**

Upon completion of cut, turn motor off and let it come to a complete stop before removing router from work surface.

**WARNING: NEVER PULL ROUTER OUT OF WORK AND PLACE UPSIDE DOWN ON WORK SURFACE BEFORE THE CUTTER STOPS.**

#### Extension Cord Length

#### Wire Size A.W.G.

0-25 Feet	18
25-50 Feet	16
50-100 Feet	14

**WARNING: CHECK EXTENSION CORDS BEFORE EACH USE. IF DAMAGED, REPLACE IMMEDIATELY. NEVER USE TOOL WITH A DAMAGED CORD SINCE TOUCHING THE DAMAGED AREA COULD CAUSE ELECTRICAL SHOCK RESULTING IN SERIOUS INJURY.**

# MAINTENANCE

**WARNING: WHEN SERVICING USE ONLY IDENTICAL CRAFTSMAN REPLACEMENT PARTS. USE OF ANY OTHER PARTS MAY CREATE A HAZARD OR CAUSE PRODUCT DAMAGE.**

## GENERAL

Only the parts shown on parts list, page 15, are intended to be repaired or replaced by the customer. All other parts represent an important part of the double insulation system and should be serviced only by a qualified Sears service technician.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc.

**WARNING: DO NOT AT ANY TIME LET BRAKE FLUIDS, GASOLINE, PETROLEUM-BASED PRODUCTS, PENETRATING OILS, ETC. COME IN CONTACT WITH PLASTIC PARTS. THEY CONTAIN CHEMICALS THAT CAN DAMAGE, WEAKEN, OR DESTROY PLASTIC.**

## PROPER CARE OF CUTTERS

Get faster more accurate cutting results by keeping cutters clean and sharp. Remove all accumulated pitch and gum from cutters after each use.

A cutter sharpening kit (Item No. 9-66501) is available from Sears Retail Stores.

When sharpening cutters, sharpen only the inside of the cutting edge. Never grind the outside diameter. Be sure when sharpening the end of a cutter to grind the clearance angle the same as originally ground.

## LIGHT BULB REPLACEMENT

See Figure 14.

### 1. UNPLUG YOUR ROUTER.

**WARNING: FAILURE TO UNPLUG YOUR ROUTER COULD RESULT IN ACCIDENTAL STARTING CAUSING SERIOUS INJURY.**

2. Remove cutter from router.
3. Adjust router to maximum height.
4. Remove screws (A) and subbase (B). See Figure 14.
5. Remove screw (C) and work light lens (D).
6. With bulb (E) pointing toward you, push bulb in and turn to the left to remove from bulb socket. **NOTE:** Light bulb removal and installation is similar to removing and installing a standard automotive bulb.
7. Install new bulb by reversing the above procedure.
8. Reassemble all parts and tighten screws securely.

When electric tools are used on fiberglass boats, sports cars, wallboard, spackling compounds, or plaster, it has been found that they are subject to accelerated wear and possible premature failure, as the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutator, etc. Consequently, it is not recommended that this tool be used for extended work on any fiberglass material, wallboard, spackling compounds, or plaster. During any use on fiberglass 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 OPERATION OR WHEN BLOWING DUST. IF OPERATION IS DUSTY ALSO WEAR A DUST MASK.**

## PROPER CARE OF COLLET

From time to time, it also becomes necessary to clean your collet and collet nut. To do so, simply remove collet nut from collet and clean the dust and chips that have collected. Then return collet nut to its original position.

## LUBRICATION

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

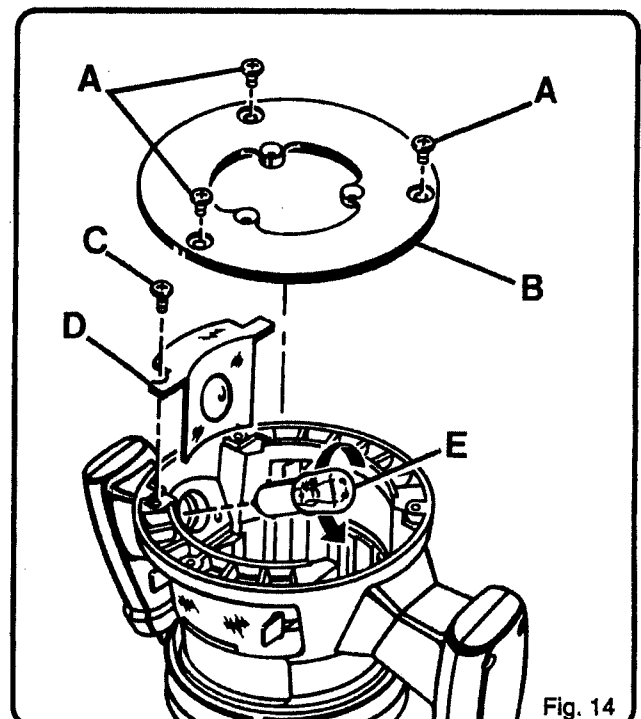


Fig. 14

# MAINTENANCE

## SWITCH REPLACEMENT

See Figures 15 & 16.

### 1. UNPLUG YOUR ROUTER.

**WARNING: FAILURE TO UNPLUG YOUR ROUTER COULD RESULT IN ACCIDENTAL STARTING CAUSING SERIOUS INJURY.**

2. Remove screws (A) and handle cover (B). See Fig. 15.
3. **NOTE THE LOCATION OF MOLDED BEND RELIEF (C) ON POWER HANDLE CORD AND ALL WIRING IN HANDLE. ALSO NOTE HOW EACH LEAD IS CONNECTED TO SWITCH. The side of the variable speed control switch is marked with identification numbers. Connections and wiring position must be identical when installing new switch.** See Figure 16.
4. Remove leads from switch (D) by inserting a 1/32 in. diameter nail or pin into switch lead receptacle and pulling on lead as shown in figure 16. Remove nail or pin with a twisting, pulling motion.
5. Make lead connections to the new switch. Push each lead as far as possible into proper receptacle in switch. Pull on leads to check lead connections with lead receptacles.
6. Locate switch in handle and place leads so they won't be pinched or contact screws when handle cover is replaced.
7. Make sure molded bend relief (C) is correctly positioned in switch handle, then replace handle cover and screws.
8. Tighten all screws securely.

## DEPTH ADJUSTING RING ADJUSTMENTS OR REPLACEMENT

Tension on the depth adjusting ring has been factory set for properly tightening depth of cut settings. However, extended use may require that adjustments or replacement be made to depth adjusting ring. See Figures 17 - 19.

### 1. UNPLUG YOUR ROUTER.

**WARNING: FAILURE TO UNPLUG YOUR ROUTER COULD RESULT IN ACCIDENTAL STARTING CAUSING SERIOUS INJURY.**

#### To make adjustments to depth adjusting ring:

2. Tighten or loosen top screw in depth adjusting ring. See Figure 17. Make adjustments with top screw only.

**WARNING: THE DEPTH ADJUSTING RING SECURES THE MOTOR HOUSING TO THE BASE, PREVENTING THEM FROM SEPARATING DURING USE. IMPROPER ADJUSTMENT OF SCREWS COULD CAUSE MOTOR HOUSING TO SEPARATE FROM BASE RESULTING IN POSSIBLE SERIOUS INJURY.**

#### To replace depth adjusting ring:

3. Remove depth stop rings. To remove: Depress lip on depth stop ring and slide end of depth stop ring over lip. See Figure 17.
4. Remove screw from rear of depth adjusting ring. See Figure 18.

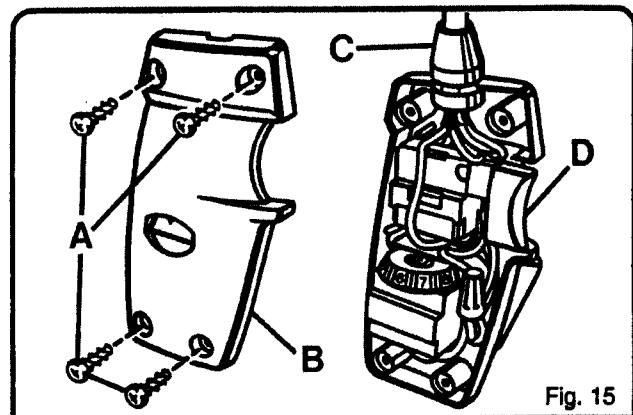


Fig. 15

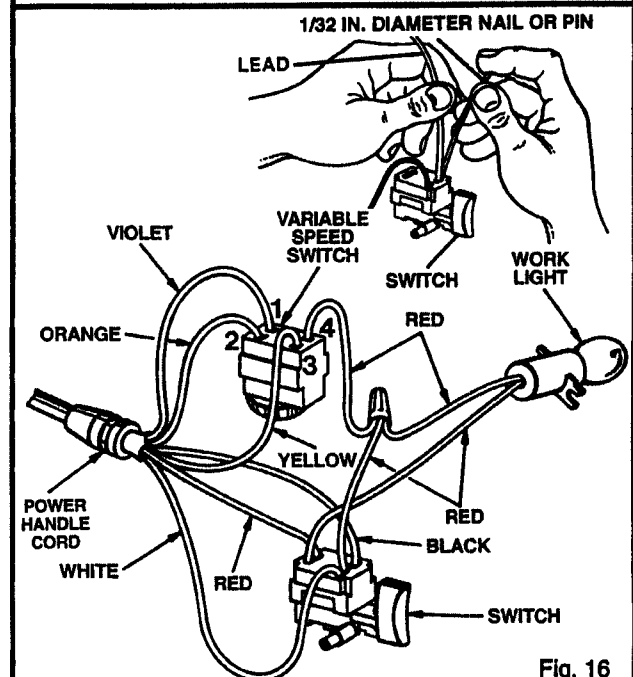


Fig. 16

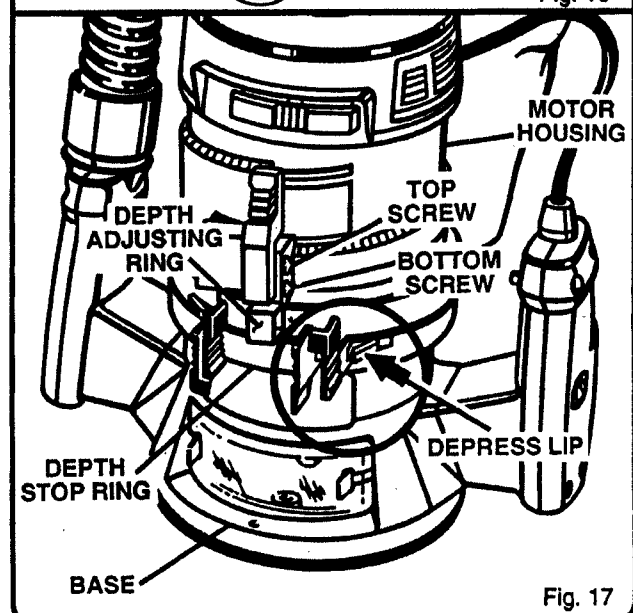


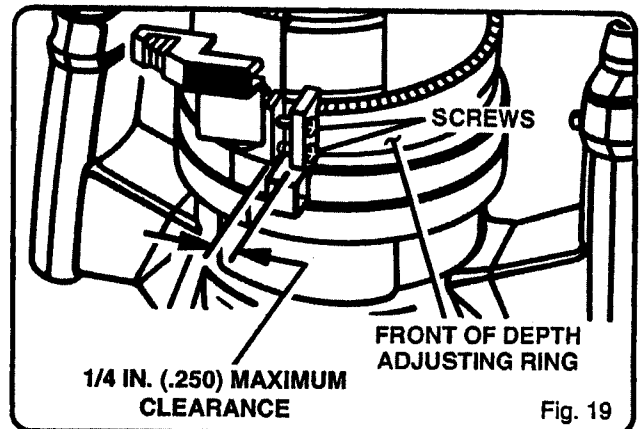
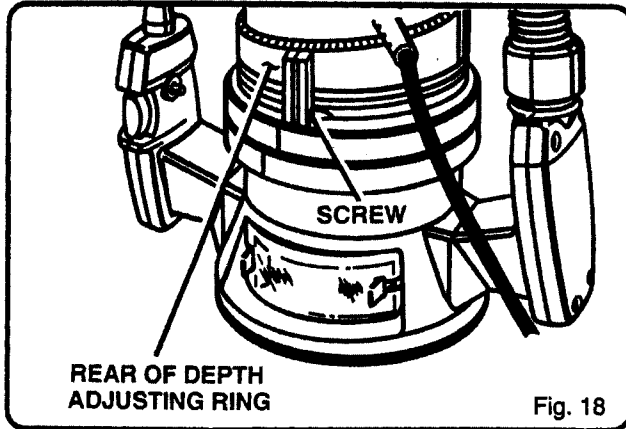
Fig. 17

# MAINTENANCE

## DEPTH ADJUSTING RING

### ADJUSTMENTS OR REPLACEMENT (Continued)













5. Remove two screws on front of depth adjusting ring. Also remove slide nut from pocket inside clamping lever. **NOTE: Depth adjusting ring replacement is the only time bottom screw should be removed.**
6. Remove depth adjusting ring.
7. Position new depth adjusting ring in place and secure with the same screws and slide nut used to secure old depth adjusting ring.
8. Make all adjustments with top screw (#10-32 x 15/16 In. Fil. Hd.) as mentioned previously. **Bottom screw (#6-19 x 1/2 In. Pan Hd.) should have up to a maximum 1/4 in. (.250) clearance, allowing flexibility for top screw adjustments. See Figure 19.**



# ACCESSORIES

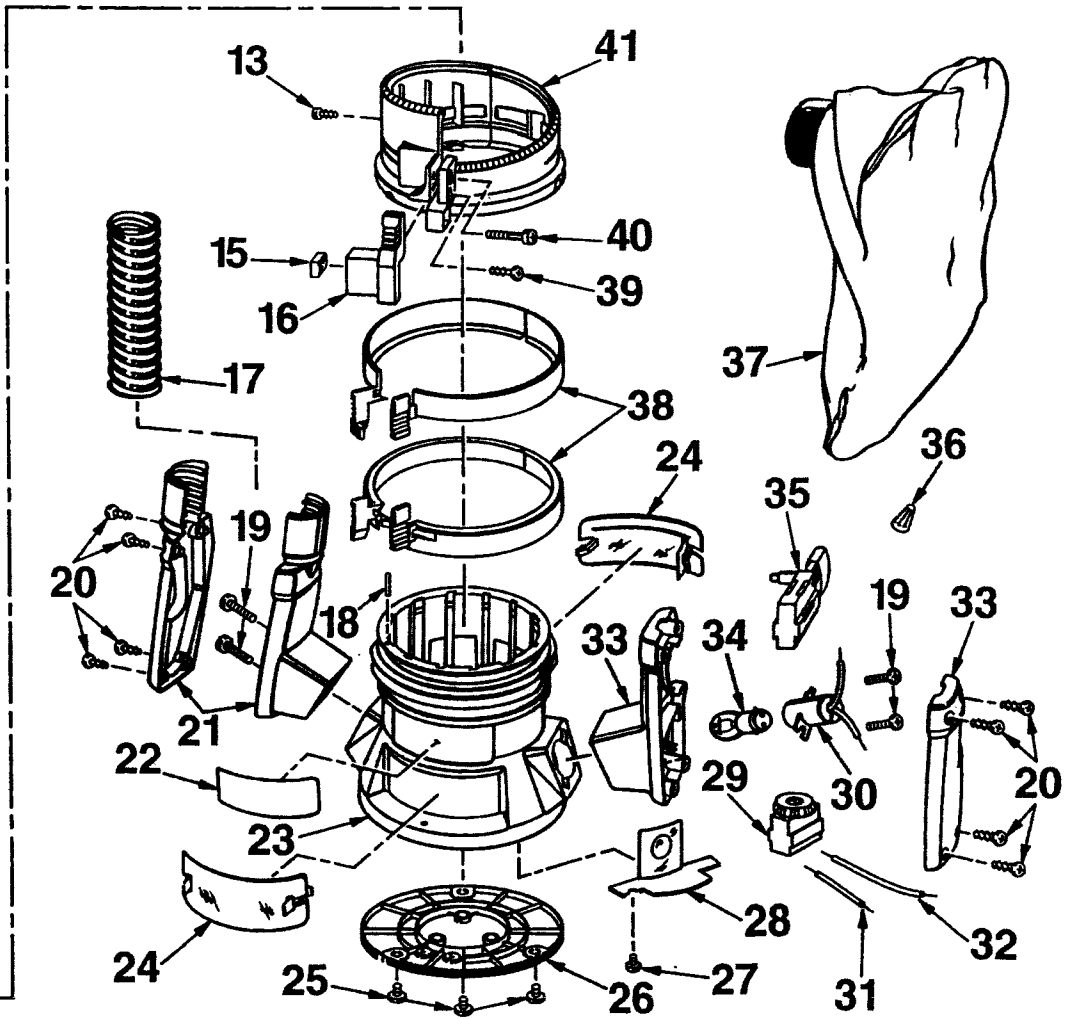
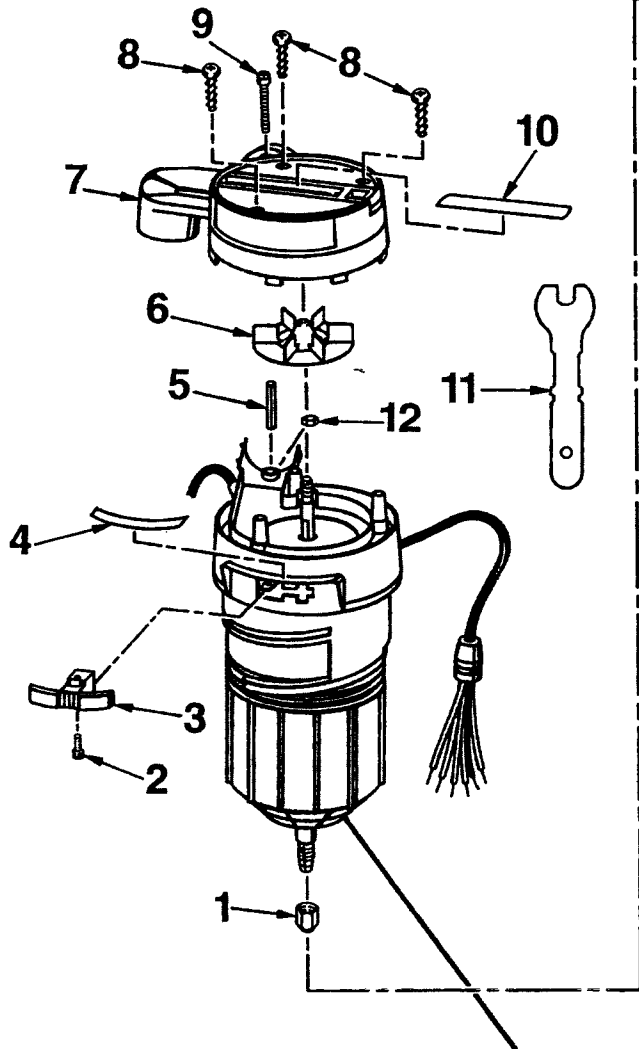
THE FOLLOWING RECOMMENDED ACCESSORIES ARE CURRENT AND WERE AVAILABLE AT THE TIME THIS MANUAL WAS PRINTED.

Dovetail Template	(9-2579)	Template Guide Bushings	(9-25082)
Box Joint Template	(9-2580)	Rout-A-Form Pantograph	(9-25187)
Mill-Works Molding Maker	(9-25254)	Template Set	(9-2573)
Bis-Kit Plate Jointer Kit	(9-25423)	Sharpening Kit	(9-66501)
Multi-Purpose Router Guide	(9-25179)	Full View Router Base	(9-25086)

COMBI-NATION PANEL CUTTER	VEINING BITS	CORE BOX BIT	STRAIGHT FACE BITS	COMBI-NATION STRAIGHT, BEVEL CUTTER	HINGE MORTISING BIT	DOVETAIL CUTTER BITS	RABBET BIT	OGEE	COVE BIT	BEAD QUARTER-ROUND BITS	ARBOR
											
26335-1/4" *25541-3/8"	26330-1/8" 26329-3/16" 26328-7/32" 26327-1/4"  DOUBLE END 45°, 60° V-GROOVE 26333	26325-1/4" 26326-1/2"  V-GROOVE CHAMFER  26322-1/2" *25578-1/2"	26317-1/16" 26316-1/8" 26315-1/4" 26314-3/8" 26313-1/2" 26312-3/4"  *25524-1/4" *25525-5/16" *25826-3/8" *25827-1/2" *25506-3/4"	FOR FORMICA *2541  VENEER CUTTER  STRAIGHT *25413  BEVEL *25412	1/2" 26336	26319-1/4" 26318-1/2"  *25582	1/4", 5/16", 3/8" 26310	3/16" 26305  ROMAN O 26304-5/32" 26306-1/4"  *25507-5/32" *25504-1/4"	26301-3/8" 26300-1/2"  *25576-3/8" *25575-1/2"  45° CHAMFER BIT  26303	26309-1/4" 26308-3/8" 26307-1/2"  *25503-1/4" *25566-3/8" *25565-1/2"	2589     WITH 2 BALL BEARINGS (1/2 & 5/8")  *25895
*CARBIDE TIPPED BITS											

**WARNING:** The use of attachments or accessories not listed above might be hazardous.

CRAFTSMAN ROUTER - MODEL NUMBER 315.174730



SEE NOTE "A" PAGE 15

## CRAFTSMAN ROUTER - MODEL NUMBER 315.174730

The model number will be found on a plate attached to the motor housing. Always mention the model number in all correspondence regarding your ROUTER or when ordering repair parts.

### SEE BACK PAGE FOR PARTS ORDERING INSTRUCTIONS

## PARTS LIST

Key No.	Part Number	Description	Quan.	Key No.	Part Number	Description	Quan.
1	989985-003	Collet Nut (1/4 In.) .....	1	22	970702-001	Logo Plate .....	1
2	612866-001	Cap Screw (#5-40 x 1/4 In. Soc. Hd.) .....	1	23	970503-204	Base .....	1
3	970510-001	Lock Button .....	1	24	606688-002	Chip Shield .....	2
4	970692-002	Label .....	1	25	998586-001	* Screw (#10-32 x 1/4 In. Pan Hd.) .....	3
5	607433-003	Spacer .....	1	26	612191-004	Subbase .....	1
6	610958-001	Blower .....	1	27	989684-001	* Screw (#6-32 x 1/4 In. Pan Hd. T. C.) .....	1
7	970517-001	End Cap .....	1	28	970516-001	Work Light Lens .....	1
8	617966-011	* Screw (#8-10 x 3/4 In. Pan Hd.) .....	3	29	990822-002	Variable Speed Control Selector .....	1
9	622931-007	* Screw (#6-32 x 1-5/16 In. Fil. Hd.) .....	1	30	610930-002	Light Housing .....	1
10	970701-001	Data Plate .....	1	31	970793-007	Red Lead (2 In.) .....	1
11	989935-006	Wrench (9/16 In.) .....	1	32	970793-008	Red Lead (4 In.) .....	1
12	706404-004	* Hex Nut (#6-32) **STD541006 .....	1	33	970698-000	Power Handle Assembly .....	1
13	970855-001	* Screw (#5-20 x 3/8 In. Hi-Lo Fil. Hd.) .....	1	34	610951-001	Light Bulb .....	1
15	973109-001	Slide Nut (#10-32) .....	1	35	623814-007	Switch .....	1
16	970511-002	Clamping Lever .....	1	36	623173-002	Wire Nut .....	1
17	610966-001	Vacuum Hose .....	1	37	971788-001	Dust Bag Assembly .....	1
18	622832-014	Roll Pin .....	1	38	970505-001	Stop Ring .....	2
19	606066-004	* Screw (#10-32 x 3/4 In. Pan Hd.) .....	4	39	968700-007	* Screw (#6-19 x 1/2 In. Pan Hd.) .....	1
20	617966-028	* Screw (#8-10 x 1/2 In. Pan Hd.) .....	8	40	990146-002	* Screw (#10-32 x 15/16 In. Fil. Hd.) .....	1
21	970699-000	Handle Assembly .....	1	41	970504-001	Depth Adjusting Ring .....	1
					612547-817	Owner's Manual	

**NOTE: "A"-- The assembly shown represents an important part of the Double Insulated System. To avoid the possibility of alteration or damage to the system, service should be performed by your nearest Sears Repair Center. Contact your nearest Sears Retail Store.**

- \* Standard Hardware Item — May Be Purchased Locally
- \*\* Available From Div.98 — Source 980.00

**SEARS**

OWNER'S  
MANUAL

SERVICE

MODEL NO.  
315.174730

HOW TO ORDER  
REPAIR PARTS

**CRAFTSMAN®**

## Electronic Router Double Insulated

Now that you have purchased your router, should a need ever exist for repair parts or service, simply contact any Sears Service Center and most Sears, Roebuck and Co. stores. Be sure to provide all pertinent facts when you call or visit.

The model number of your router will be found on a plate attached to the motor housing.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- PART NUMBER
- PART DESCRIPTION
- MODEL NUMBER  
315.174730
- NAME OF ITEM  
Electronic Router

All parts listed may be ordered from any Sears Service Center and most Sears stores.

If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for handling.



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