DEWALT®

INSTRUCTION MANUAL

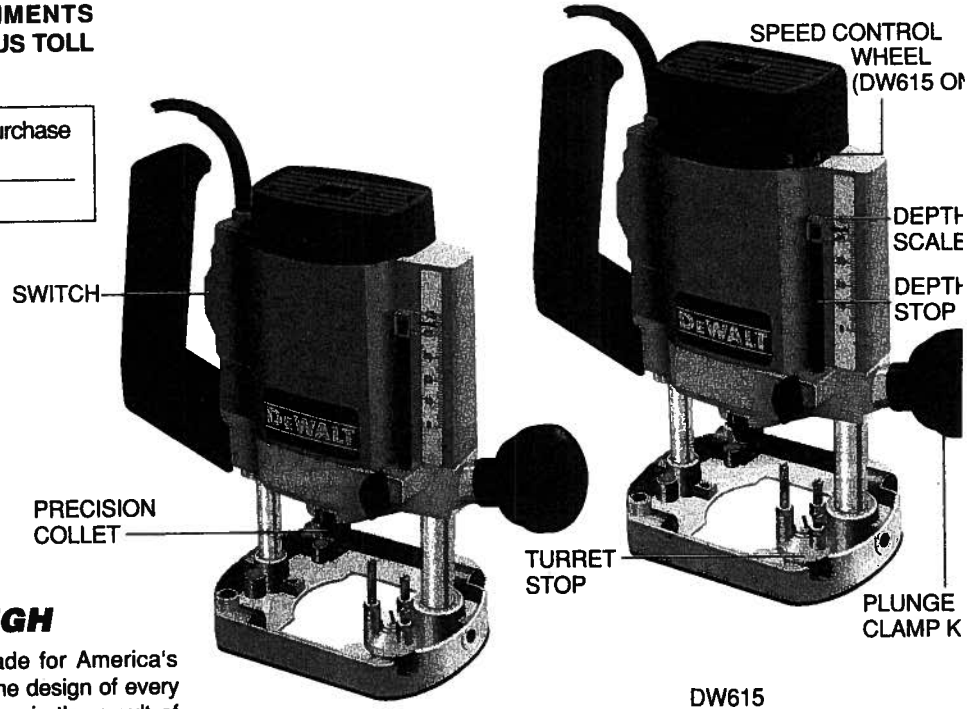
DW614 Plunge Cut Router

DW615 Electronic Plunge Cut Router

IF YOU HAVE ANY QUESTIONS OR COMMENTS ABOUT THIS, OR ANY DEWALT TOOL, CALL US TOLL FREE AT 1-800-4-DEWALT (1-800-433-9258).

Serial Number from Nameplate	Date of Purchase
_____	_____

Save this information for future reference.



DW614

DW615

DEWalt...BUILT JOBSITE TOUGH

DeWalt high performance industrial tools are made for America's toughest industrial and construction applications. The design of every tool in the line – from drills to sanders to grinders – is the result of rigorous use on jobsites and throughout industry. Each tool is produced with painstaking precision using advanced manufacturing systems and intense quality control. Every tool is checked before it leaves the factory to make sure that it meets your standards for durability, reliability and power.

DEWalt Built Jobsite Tough...WE GUARANTEE IT.

Important Safety Instructions

* **WARNING:** When using Electric Tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the following:
* Read all Instructions.
* KEEP WORK AREA CLEAN. Cluttered areas and benches invite injuries.
* CONSIDER WORK AREA ENVIRONMENT. Don't expose power tools to rain. Don't use power tools In damp or wet locations. Keep work area well lit.
* GUARD AGAINST ELECTRIC SHOCK. Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
* KEEP CHILDREN AWAY. All visitors should be kept away from work area. Do not let visitors contact tool or extension cord.
* STORE IDLE TOOLS. When not in use, tools should be stored in dry, and high or locked-up place – out of reach of children.
* DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was intended.
* 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 circular saw for cutting tree limbs or logs.
* DRESS PROPERLY. Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
* USE SAFETY GLASSES. Also use face or dustmask if operation is dusty.
* DON'T ABUSE CORD. Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
* SECURE WORK. Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
* DON'T OVERREACH. Keep proper footing and balance at all times.
* MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged have repaired by DeWalt certified service center. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.*
* DISCONNECT TOOLS. When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
* REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
* AVOID UNINTENTIONAL STARTING. Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging In.
* OUTDOOR USE EXTENSION CORDS. When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
* STAY ALERT. Watch what you are doing. Use common sense. Do not operate tool when you are tired.
* 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 a DeWalt certified service center unless otherwise Indicated elsewhere in this instruction manual. Have defective switches replaced by a DeWalt certified service center. Do not use tool if switch does not turn it on and off.
* DO NOT OPERATE portable electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite fumes.

SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Double Insulation

DOUBLE-INSULATED tools are constructed throughout with TWO separate "layers" of electrical insulation between you and the tool's electrical system.

Tools built with this insulation system are not intended to be grounded. As a result, your tool is equipped with a two-prong plug which permits you to use extension cords without concern for maintaining a ground connection.

NOTE: DOUBLE INSULATION does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

CAUTION: When servicing all tools, USE ONLY IDENTICAL REPLACEMENT PARTS. Repair or replace damaged cords.

Motor

Your DeWalt tool is powered by a DeWalt-built motor. Be sure your power supply agrees with the nameplate marking.

Volts 50/60 Hz or "AC only" means your tool must be operated only with alternating current and **never** with direct current. Volts DC-60Hz or AC/DC means your tool may be operated with either alternating or direct current.

Voltage decrease of more than 10% will cause loss of power and overheating. All DeWalt tools are factory tested; if this tool does not operate, check the power supply.

Extension Cords

Double insulated tools have 2-wire cords and can be used with 2-wire or 3-wire extension cords. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (U.L.). If the extension will be used outside, the cord must be suitable for outdoor use. Any cord marked as outdoor can also be used for indoor work. The letters "WA" on the cord jacket indicate that the cord is suitable for outdoor use.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety, and to prevent loss of power and overheating. The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size.

To determine the minimum wire size required, refer to the chart below.

CHART FOR MINIMUM WIRE SIZE (AWG) OF EXTENSION CORDS

NAMEPLATE RATING-AMPS	TOTAL EXTENSION CORD LENGTH-FEET							
	25	50	75	100	125	150	175	200
0 - 10.0	18	18	16	16	14	14	12	12
10.1 - 13.0	16	16	14	14	14	12	12	12
13.1 - 15.0	14	14	12	12	12	12	12	—

Before using an extension cord, inspect it for loose or exposed wires, damaged insulation, and defective fittings. Make any needed repairs or replace the cord if necessary.

Special Instructions For Electronic Router Cat. #DW615

Your router incorporates a state of the art electronic motor control. The control system governs the motor to give you ramp start-up, smooth cutting, and constant speed. These unique capabilities give you a router which is responsive to your needs.

The electronic motor control system has two basic features.

A. Ramp start - when you turn on the router, you will notice that it does not have the jerk from the rapid acceleration of the motor. This router has a starting circuit which accelerates the motor up to speed smoothly, without jerking, and allows you to maintain easier control o the router during the start up period.

Special Instructions For Model Number DW615 Electronic Router-Continued:

B. Constant speed cutting - as you load the router, the selected cutting speed does not slow down during normal use. The electronic control governs the motor and gives you a consistent finish to your work. Only under very heavy loading will the speed of the unit fall below the governed speed.

To set the router speed (from 8,000 rpm to 24,000 rpm) rotate the speed control wheel shown in FIG. A. The higher the number the higher the speed. Consult TABLE 1 below to help select the proper speed for your application.

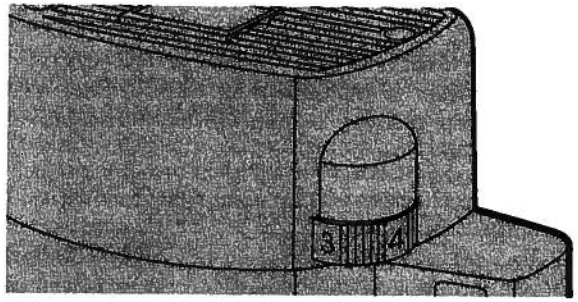


FIG. A

TABLE 1: RECOMMENDATION FOR THE CORRECT CHOICE OF SPEED

Material	Cutter Diam.	Electronic Control Settings				
Model #DW615		**Stage 1 8,000 rpm**	**Stage 2 10,500 rpm**	**Stage 3 16,000 rpm**	**Stage 4 21,000 rpm**	**Stage 5 24,000 rpm**
Hardwood, e.g., oak	Small (up to 1/2" Dia.)	–	–	O	X	XX
	Medium (1/2" to 1 1/8" Dia.)	–	–	O	XX	X
	Large (Larger than 1/8" Dia.)	X	XX	O	–	–
Softwood, e.g., pine	Small	–	–	O	X	XX
	Medium	–	O	X	XX	XX
	Large	X	XX	O	O	–
Plastic-laminated chipboard	Small	–	–	O	X	XX
	Medium	–	O	X	XX	XX
	Large	O	XX	X	O	–
Plastics	Small	–	O	X	X	XX
	Medium	–	O	XX	XX	X
	Large	X	XX	O	–	–

This Table can serve only as a guide, since wood is a living material. Even with the same species of timber there will be large differences in hardness and density. When a high speed is employed, set the electronic control one step higher.

KEY: XX very good X good O Satisfactory – not recommended

This concludes the Special Instructions for the Model Number DW615 Electronic Router. The Rest of this manual covers both the

Specifications

PREPARATION FOR USE

The motor In this router is high-powered. Despite this, it is advisable to cut deep grooves or remove large amounts of material in two or more passes.

TECHNICAL DATA

Model	DW614, DW615
Voltage	120
Speed DW614	24,000 r.p.m.
Speed DW615	8,000–24,000 r.p.m.
Insulation	double insulated
Column	spring loated twin column
Plunging stroke	50 mm (1-15/16")
Routing depth	0–50 mm adjustable
Cutter mounting	precision collet, size 1/4"
Cutter cap	max. 30 mm
Rotary depth stop	3 stage depth position

THE FOLLOWING INSTRUCTIONS ARE FOR BOTH THE DW614 ROUTER AND THE DW615 ELECTRONIC SPEED CONTROLLED ROUTER.

Bit Installation and Removal

(TURN OFF AND UNPLUG ROUTER)

Before installing a router bit in your unit, position the tool so that the collet is easily accessible.

IMPORTANT NOTE: Always snap the collet firmly into the collet nut, (past the retainer spring) before installing a bit.

Depress the spindle lock button and use the supplied wrench as necessary to loosen (counterclockwise) the collet nut, as shown in Figure 1.

Insert the round shank of the desired router bit into the loosened collet as far as it will go and then pull it out about 1/16". Hold the spindle shaft by depressing the spindle lock button while firmly tightening the collet nut with the wrench, as shown in Figure 1.

Your router has a unique locking system for retaining the bit. When removing a bit, the collet nut must be loosened with the wrench.

The collet nut will turn approximately 3/4 of a turn and then become tight again. At this point the bit can't be removed. Using the same procedure, loosen the nut a second time.This lifts the collet and makes it very easy to remove the bit.

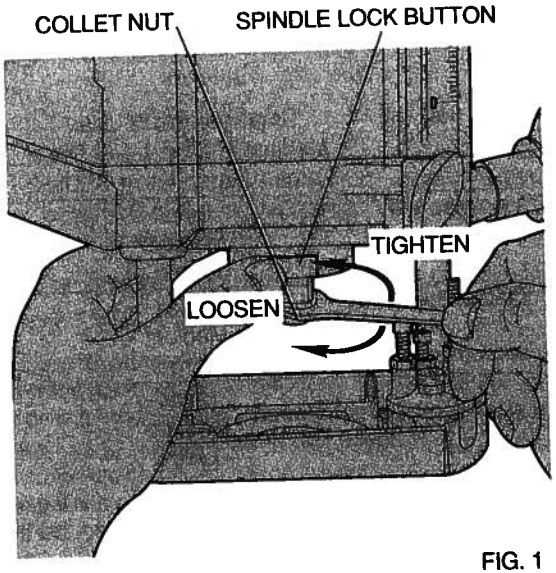


FIG. 1

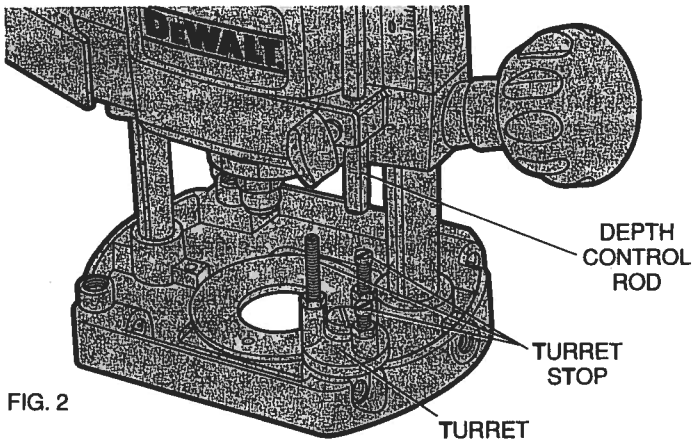


FIG. 2

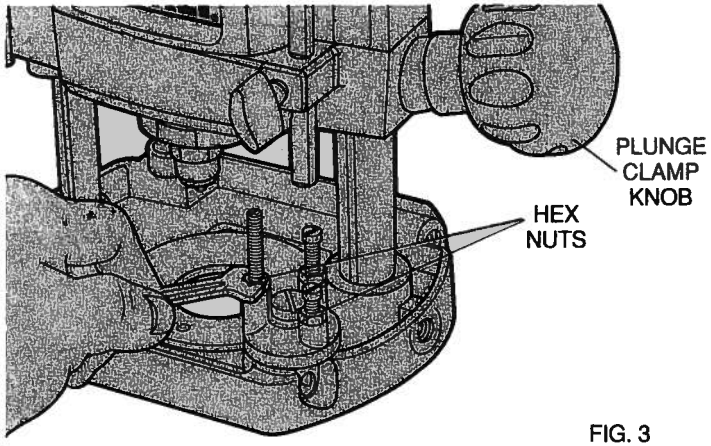


FIG. 3

Collets

NEVER TIGHTEN THE COLLET ON THIS TOOL WITHOUT FIRST INSTALLING A ROUTER BIT IN IT. TIGHTENING AN EMPTY COLLET CAN DAMAGE THE COLLET.

To change collets, unscrew the collet assembly, as described above, sharply pull the old collet out of the collet nut and insert the new collet. Push firmly so that it snaps past the retainer spring in the collet nut.

Controls

IMPORTANT NOTE: Before operating any of the controls, read this whole section.

Plunge CLAMP KNOB (Fig. 4)

The Plunge Clamp Knob controls the plunging action of the router. When tightened, the knob clamps the router in position, whether plunged fully down, fully up or anywhere in between. When loosened, the clamp is released and the router can be moved into and out of the workpiece.

Multi-Position Turret Stop

The Turret Stop limits the downward distance that the tool can be plunged. It consists of three screws of different lengths that serve to define the depth of cut by limiting the travel of the Depth Control Rod (see Figure 2). Routing depth can be set by selecting the screw of the appropriate length on the turret.

It is the interaction of the Depth Control Rod and the Turret Stop that determine the routing depth.

If none of the provided screws seems close to the desired height each can be adjusted by loosening the hex nut at the bottom and then turning the screw either in or out to make it the proper length. After adjusting this screw be sure to tighten the hex nut at the bottom. (See Figure 3.)

See the section "Setting the Routing Depth" for instructions on how to use the Turret Stop in an actual operation.

Depth CONTROL ROD and DEPTH SCALE

The Depth Control Rod is what contacts the selected screw in the Turret Stop to limit the routing depth. (See "Setting the Routing Depth".)

Familiarization

Please take a little time now and, without plugging the tool in, practice with these adjustments and controls and become familiar with their operation. Only with a complete, "hands on" understanding of these systems will you be able to get the most out of this quality router.

Setting the Routing Depth

(TURN OFF AND UNPLUG THE ROUTER)

To set the routing depth follow the steps below:

1. Install the desired router bit as described previously.
2. Loosen the Depth Control Rod Clamp Knob and raise the Depth Control Rod so that the red indicator line is at the 2 inch mark on the scale, as shown in Figure 4.
3. Rotate the Turret Stop until the shortest of the three screws is directly beneath the Depth Control Rod. Note: the Turret Stop has a detent in each of its positions so that you will feel it snap into place.
4. Loosen the Plunge Clamp Knob and push the router down until the bit just touches the surfaces to be routed. Lock the router down by tightening the Plunge Clamp Knob.
5. Loosen the Depth Control Rod Clamp Knob and permit the rod to fall and contact the screw in the Turret Stop that you just adjusted.
6. Read the scale by aligning the top or bottom of the red line with the 1/16" graduations on the scale. Note: It makes no difference whether you read the top or the bottom of the red line, as long as you consistently read the same side.
7. Using the reading you just took as the zero point, raise the rod by hand to a reading that will give the correct depth. Tighten the Depth Control Rod Clamp Knob. EXAMPLE: If the zero reading is 1-1/8" and you wish to rout at 1/2", set the red line to read 1 5/8".
8. Loosen the Plunge Clamp Knob and release the router to rise to its full height.

The router is now ready to cut to its set depth. When it reaches the set depth, The Depth Control Rod will contact the screw in the Turret Stop and stop the router's downward travel.

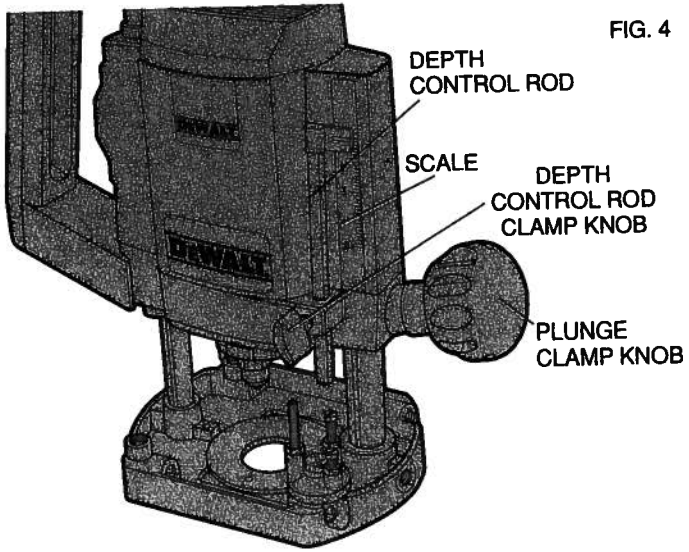


FIG. 4

Using the Turret Stop for Sequential Routing Depth Settings

TURN OFF AND UNPLUG ROUTER.

It is recommended that particularly deep grooves be cut with several passes rather than one deep pass. In order to do this and still maintain accuracy of depth when the job is finished, perform the following procedure.

1. Set the final desired routing depth as instructed above. For the purpose of this discussion, assume that the desired depth is 1/2".
2. With a depth of 1/2" set on the shortest screw in the Turret Stop, adjust the second shortest screw to a point about halfway between the bottom of the Depth Control Rod and the top of the shortest screw, as shown in Figure 5.

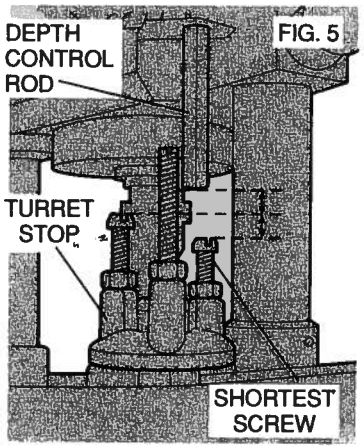


FIG. 5

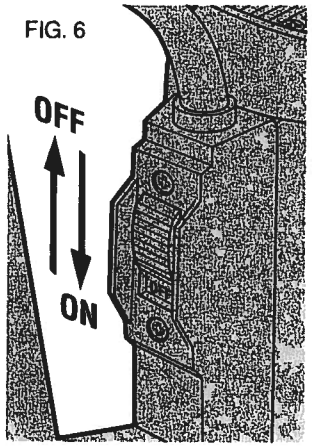


FIG. 6

3. Leave the vernier setting alone and turn the adjusted second shortest screw into position under the Depth Control Rod.
4. Make your first cut at this setting.
5. Rotate the Turret Stop so that the shortest screw is directly under the Depth Control Rod and make your final cut.

NOTE: The third screw in the Turret Stop is provided if your cut is even deeper and you want to make three cuts to achieve the final depth, or set final depth for multiple cuts at one time.

Switch

The slide switch on your router is located as shown in Figure 6. To turn the tool on, slide the switch down. To turn the tool off, slide the switch up.

Operation

After setting the cutting depth as described, locate the router such that the bit is directly over the place you will be cutting. Loosen the Plunge Clamp Knob. With the router running, lower the unit smoothly down into the workpiece. (DO NOT JAM THE ROUTER DOWN). When the tool reaches the pre-set depth, tighten the Plunge Clamp Knob. When you have finished routing, loosen the knob and let the spring lift the router directly out of the workpiece.

All common routing tasks can be performed with ease with the Plunge Cut Router: Grooving, rabbeting, recessing, veining, and profiling on all types of wood and plastic.

Always feed the router opposite to the direction in which the cutter is rotating.

Only carbide-tipped cutters should be used on panels faced with plastic laminates. The hard laminates will quickly dull steel cutters.

Your DeWalt certified Service center has a Router Craft Handbook available at extra cost which covers the use of routers in great detail and shows the various types of bits available.

Direction of Feed

The direction of feed is very important when routing and can make the difference between a successful job and a ruined project. Figures 7 and 8 show proper direction of feed for some typical cuts.

Mold the outside edge of a piece of stock by (A) mold the end grain, left to right, (B) do the straight grain side moving left to right. Always do end grains first.

The direction of feed is important in router usage. Be sure the cutter is rotating into the stock by moving left to right on outside edges and clockwise on the inside cuts.

Template Guide Adapter

Your router comes equipped with a Template Guide Adapter for use with two piece bushings and for a little extra base support.

The guide adapter will have to be removed when inserting some of the larger router bits. When not in use, remove the Template Guide Adapter and store it (and its mounting screws) in a safe place.

Accessories

Recommended accessories for use with your tool are available at extra cost from your local DeWalt certified service center. A complete listing of service centers is included on the owner's registration card packed with your tool.

If you need assistance in locating any accessory, please contact DeWalt Industrial Tool Company, P.O. Box 158, 626 Hanover Pike, Hampstead, MD 21074 or call 1-800-4-DEWALT (1-800-433-9258).

For best results, we recommend the use of only DeWalt accessories. (**CAUTION:** The use of any other accessory might be hazardous.)

FIG.7

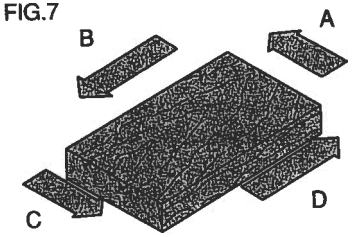


FIG. 8

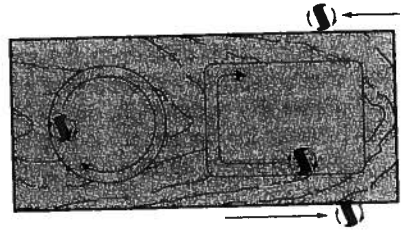
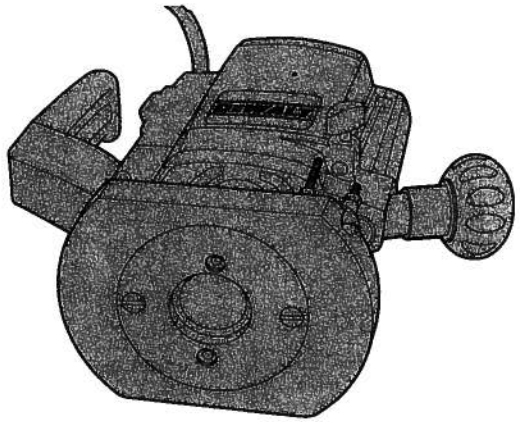


FIG. 9



ROUTER USING TEMPLATE AND GUIDE BUSHING

Important

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment should be performed by DeWalt certified service centers or other qualified service organizations. These service organizations service DeWalt tools always using DeWalt replacement parts.

Black & Decker (U.S.) Inc. industrial tool service centers are certified for servicing DeWalt industrial tools.

Full Warranty

DeWalt heavy duty Industrial tools are warranted for one year from date of purchase. We will repair, without charge, any defects due to faulty materials or workmanship. Arrangements have been made with the Industrial Tool Division of Black & Decker (U.S.) Inc. to provide warranty repairs for DeWalt tools. Please return the complete unit, transportation prepaid, to any Black & Decker (U.S.) Inc. Industrial Service Center or Authorized Service Station listed under "Tools, Electric" in the Yellow Pages. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

In addition to the warranty, DeWalt tools are covered by our:

30 DAY NO RISK SATISFACTION GUARANTEE

If you are not completely satisfied with the performance of your DeWalt heavy duty Industrial tool, simply return it to the participating seller within 30 days for a full refund. Please return the complete unit, transportation prepaid. Proof of purchase may be required.

Like most DeWalt tools, your router is listed by Underwriter's Laboratories to ensure that it meets stringent safety requirements.

This symbol on the nameplate means the product is listed by Underwriter's Laboratories, Inc.

See 'Tools-Electric'
–Yellow Pages–
for Service & Sales

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