Double Insulation

Your Drill is DOUBLE INSULATED to give you added safety. This means that it is constructed thoughout with two separate layers of electrical insulation, or one double thickness of insulation, between you and the tool's electrical system.

Tools built with this improved 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 any conventional 120 volt electrical outlet without concern for maintaining a ground connection.

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

CAUTION: When servicing Double Insulated Tools, use ONLY IDENTICAL REPLACEMENT PARTS. Replace or repair damaged cords.

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

Black & Decker's Full Two Year Home Use Warranty states that, in case of defect, you may return the tool to the place of purchase for a free replacement (if it is a participating retailer) or you may take it to a Black & Decker Service Center.

HOME USE WARRANTY (A Full Two Year Warranty)

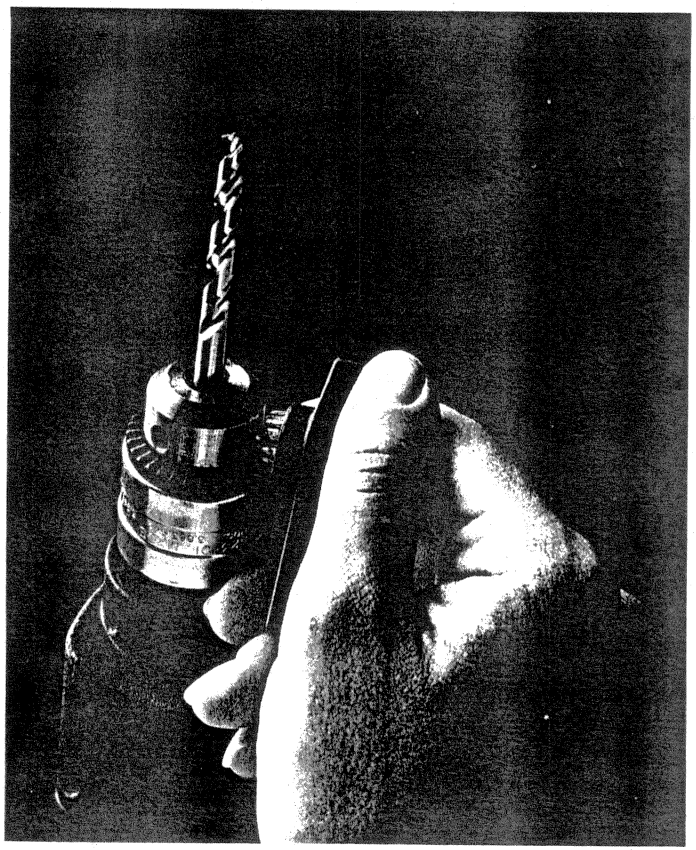
Black & Decker (U.S.) Inc. warrants this product for two years against any defects that are due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to the seller (if a participating retailer) for free replacement (proof of purchase may be required). This unit may also returned to a Black & Decker Service Center or Authorized Service Station, listed under "Tools Electric" in the yellow pages for free replacement or repair at our option. This warranty does not apply to accessories. This warranty gives you specific legal rights and you may have other rights which vary from state to state. Should you have any questions, contact your nearest Black & Decker Service Center Manager.

Like most Black & Decker tools, your Drill is listed by Underwriters' Laboratories to ensure that it meets stringent safety requirements.

This symbol on the nameplate means the product is Listed by Underwriters' Laboratories, Inc.

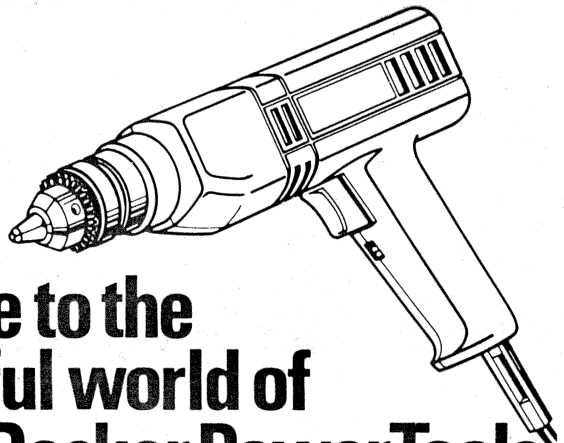
Form No. 741193-01
(NOV86-CD)

BLACK & DECKER (U.S.) INC., U.S. Power Tools Group, 10 North Park Drive, P.O. Box 798, Hunt Valley, MD 21030-0798



Instruction Manual

1/4" & 3/8" Drills: 7043, 7143, 7147



Welcome to the wonderful world of Black & Decker Power Tools.

If you already own a Black & Decker Power Tool you know the pleasures a quality, high performance tool can deliver.

This new M47 Series™ Drill introduces the Shape of Things to Come...a design consumers told us they wanted in a power drill.

The sides are straight, parallel with the drill bit and square to the work surface, making drilling easier, more accurate.

The back of the drill is flat, so greater hand pressure can be applied directly in line with the drill bit.

And inside this streamline, functional, shape is an innovative dimension in small motor technology. A high efficiency, high density, copper wound motor that matches the performance of comparable traditional drill motors, yet is smaller, uses less electricity (less amps), runs cooler and lasts longer.

Plus air cooled bearings and permanently lubricated "grease-less" gears lower maintenance requirements.

Years ahead of the competition, this M47 Series™ Drill will give you years of comfort, performance and versatility.

And for convenience, the chuck key has a clip-on design that attaches to the power cord to help prevent loss and make sure you know where it is at all times.

So take a few minutes to read this informative instruction manual. Pay particular attention to the Safety Rules we've provided for your protection.

We want you to enjoy your Black & Decker drill, and the more you know about it, and its capabilities, the happier you'll be with it.

Thank you for selecting Black & Decker.

And don't forget to send in your owner's registration card.

Cleaning & Lubrication

Use only a damp cloth and any general purpose household cleaning agent to clean your drill. Do not use gasoline, turpentine, lacquer or paint thinner, dry cleaning fluids or similar substances. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid. Permanently lubricated bearings and gears are used in your drill and periodic relubrication is not required. In the unlikely event that your drill should ever require service, take or send it to your local Black & Decker Service Center. Service Center addresses are listed on the owner's registration card.

Accessories

The accessories listed in this manual are available at extra cost from your local dealer or Black & Decker 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: Black & Decker (U.S.) Inc., User Services Department, 10 North Park Drive, P.O. Box 857, Hunt Valley, MD 21030-0857.

Recommended accessories for your drill are shown below. CAUTION: The use of any other accessory or attachment may be hazardous. For safety in use, the following listed accessories should be used only in the sizes specified.

We strongly recommend that your first purchase be safety glasses which should be used with all accessories.

ACCESSORY SIDE HANDLE (available at extra cost) The accessory side handle is a multi-position, 360° auxiliary handle to give you added control of your drill. (It can be positioned for left or right handed users.)

To install the side handle, slip it over the front of your drill, as shown in Figure 6. The side handle fits tightly and may require considerable force to install. With the handle loosely installed, slide the Depth Stop Rod into the side handle assembly, as shown in Figure 6. Tighten the side handle to retain the Depth Stop Rod.

To limit the depth of a drilled hole, simply loosen the side handle and set the distance from the tip of the drill bit to the end of the Depth Stop Rod to equal the desired depth of the hole you plan to drill. Tighten the side handle to retain the Depth Stop Rod and drill the hole. When the end of the Depth Stop Rod contacts the material being drilled it will stop the drill's forward progress and limit the depth of the hole. When you don't wish to use the Depth Stop Rod, just loosen the side handle and slide the rod back out of the way. There's no need to remove it from the drill.

	7043	7143, 7147
BITS, METAL DRILLING	Up to 1/4" diameter	Up to 3/8" diameter
BITS, WOOD DRILLING	Up to 1/2" diameter	Up to 3/4" diameter
BITS, MASONRY DRILLING	Up to 1/2" diameter	Up to 1/2" diameter
HOLE SAWS	Up to 1-1/8" diameter	Up to 1-1/2" diameter
WIRE BRUSHES	Up to 3" diameter	Up to 3" diameter
BUFFING WHEELS	Up to 4" diameter	Up to 4" diameter
BACKING PADS	Up to 4-5/8" diameter	Up to 4-5/8" diameter
SANDING DISCS	Up to 5" diameter	Up to 5" diameter
POLISHING BONNETS	Up to 5" diameter	Up to 5" diameter
GRINDING WHEELS	Type 1 only; Up to 2" dia.; Up to 1/2" thick	Type 1 only; Up to 2" dia.; Up to 1/2" thick
SIDE HANDLE #71-034	(Includes Depth Stop Rod)	(Includes Depth Stop Rod)
SIDE HANDLE #71-033		(Includes Depth Stop Rod, 5 drill bits: 1/16", 3/32", 1/8", 3/16", & 1/4" and 1 combination #2 Phillips/ #10-12 straight screwdriver bit. All stored in side handle.)

NOTE: TWO SIDE HANDLES ARE AVAILABLE. ASK YOUR SERVICE CENTER MANAGER ABOUT THEM.

Drilli · With The M47 Series™ 1/4" & 3/8" Drills

Drilling Hints

1. Always unplug the drill when attaching or removing accessories.
2. Use sharp drill bits only.
3. FOR WOOD use twist drill bits, spade bits, or hole saws.
4. FOR METAL use high speed steel twist drill bits.
5. FOR MASONRY use carbide tipped bits.
6. Be sure the material to be drilled is anchored or clamped securely.
7. Use a centerpunch to make a small indentation at the point to be drilled. The variable speed feature of the 7147 drill allows you to start a hole without using a centerpunch if you desire. Just run the drill very slowly, using light pressure, until the hole is started enough to keep the drill bit from slipping out of it.
8. Do not lock the drill "ON" when drilling by hand. The switch lock is for use only with drill stands and other holding mechanisms.
9. Apply pressure in a straight line with the bit. Use enough pressure to keep the bit biting but not so much as to stall the motor or deflect the bit. The back of the drill is contoured to fit your hand. Pressure applied to the back of the drill, as shown in Figure 5, puts the force directly behind the drill bit.
10. Hold the drill firmly to control its twisting action.
11. If the drill stalls, it is usually because it is being overloaded. If a stall occurs, release the trigger immediately and determine the reason for the stall. Extract the bit from the work piece and start again. DO NOT CLICK THE TRIGGER OF A STALLED DRILL OFF & ON IN AN ATTEMPT TO START IT. DAMAGE TO THE DRILL CAN RESULT.
12. Minimize stalling on breakthrough by reducing pressure and slowly drilling through the last part of the hole.
13. Keep the motor running while pulling the bit out of a drilled hole. This will help reduce jamming.
14. Use a cutting lubricant when drilling metals. The exceptions are cast iron and brass which should be drilled dry. The lubricants that work best are sulphurized cutting oil or lard oil. Bacon grease will also serve.
15. When using twist drill bits to drill holes in wood, it will be necessary to pull the bits out frequently to clear chips from the flutes.
16. The sides of the drill are flat and parallel to the drill bit. To ensure straight drilling of holes, place a square along the side of the drill as a guide as shown in Figure 4.

FIG. 4

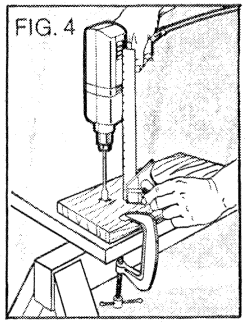


FIG. 5

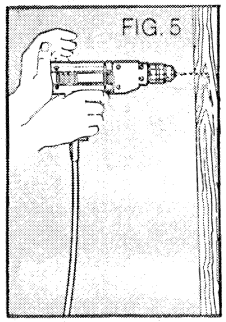
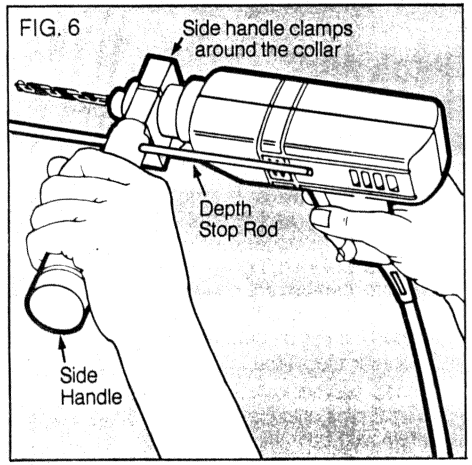


FIG. 6



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:

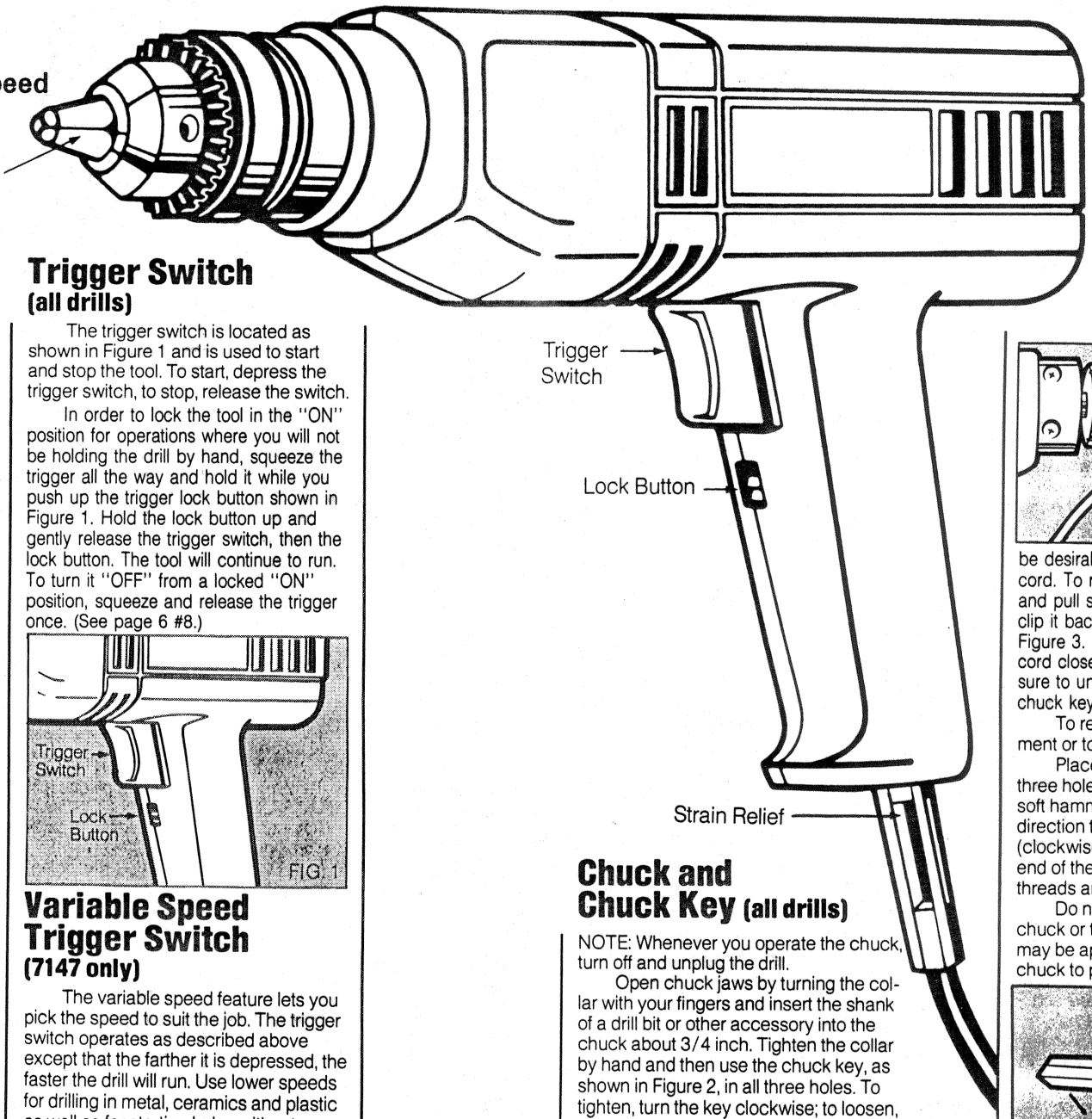
READ ALL INSTRUCTIONS

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **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. Do not use tools in the presence of flammable liquids or gasses.
3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
4. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool or extension cord.
5. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked up place — out of reach of children.
6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
7. **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.
8. **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **USE SAFETY GLASSES.** Also use face or dustmask if cutting operation is dusty.
10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
11. **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.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubrication and changing accessories. Inspect tool cords periodically and, if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean and free from oil and grease.
14. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked. (See page 8 for more information about extension cords.)
18. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
19. **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 otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on or off.
20. **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.

CAUTION: When drilling into walls, floors, or wherever "live" electrical wires may be encountered, DO NOT TOUCH THE CHUCK. Hold the drill only by the plastic handles to prevent electric shock if you drill into a "live" wire.

The "47 Series™ 1/4" & 3/8" Dr"ls

7043: 1/4" Drill
7143: 3/8" Drill
7147: 3/8" Variable Speed Drill



Safety Note
(all drills)

We understand that safety rules make some pretty dry reading, but they really are important. If you just skimmed them, please go back and thoroughly read them. Thank you.

This tool is Double Insulated and, as such has a two-pronged plug and is not intended for grounding. CAUTION: When servicing double insulated tools, use ONLY IDENTICAL REPLACEMENT PARTS. Repair or replace damaged cords. (See page 8 for more information about Double Insulation.)

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (including brush inspection and replacement) should be performed by Black & Decker Service Centers or other qualified organizations, always using Black & Decker replacement parts. When servicing Double Insulated Tools, USE ONLY IDENTICAL REPLACEMENT PARTS.

Motor
(all drills)

Your Black & Decker tool is powered by a B&D built motor. Be sure your power supply agrees with the nameplate marking. A marking of 120 volts, 50/60 Hz or 120 volts, AC Only means that the tool is designed to operate on normal 120 volt house current. Voltage decrease of more than 10% will cause loss of power and overheating.

All Black & Decker tools are factory tested. If this tool does not run, check the power supply.

Trigger Switch
(all drills)

The trigger switch is located as shown in Figure 1 and is used to start and stop the tool. To start, depress the trigger switch, to stop, release the switch.

In order to lock the tool in the "ON" position for operations where you will not be holding the drill by hand, squeeze the trigger all the way and hold it while you push up the trigger lock button shown in Figure 1. Hold the lock button up and gently release the trigger switch, then the lock button. The tool will continue to run. To turn it "OFF" from a locked "ON" position, squeeze and release the trigger once. (See page 6 #8.)

Variable Speed Trigger Switch
(7147 only)

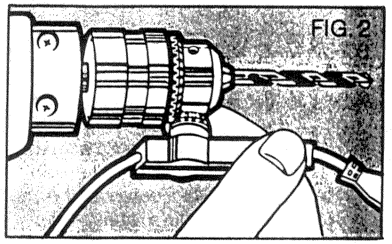
The variable speed feature lets you pick the speed to suit the job. The trigger switch operates as described above except that the farther it is depressed, the faster the drill will run. Use lower speeds for drilling in metal, ceramics and plastic as well as for starting holes without a centerpunch and driving screws. Use higher speed for drilling in wood and composition as well as sanding and polishing operations.

Chuck and Chuck Key (all drills)

NOTE: Whenever you operate the chuck, turn off and unplug the drill.

Open chuck jaws by turning the collar with your fingers and insert the shank of a drill bit or other accessory into the chuck about 3/4 inch. Tighten the collar by hand and then use the chuck key, as shown in Figure 2, in all three holes. To tighten, turn the key clockwise; to loosen, turn it counter-clockwise.

To help prevent loss, the chuck key for your drill clips onto the cord. It need not be removed from the cord for use but situations may arise in which it would



be desirable to remove the key from the cord. To remove the key simply grasp it and pull sharply. When you're finished, clip it back onto the cord, as shown in Figure 3. It's a good idea to clip it to the cord close to the plug. That way you'll be sure to unplug the drill when you use the chuck key.

To remove the chuck for replacement or to use certain accessories:

Place the chuck key in one of the three holes and, using a piece of wood or soft hammer, strike it sharply in the direction that the drill normally runs (clockwise when viewed from the handle end of the drill). This should loosen the threads and permit removal of the chuck.

Do not lubricate the inside of the chuck or the three jaws. A light film of oil may be applied to the outside of the chuck to prevent rust if desired.