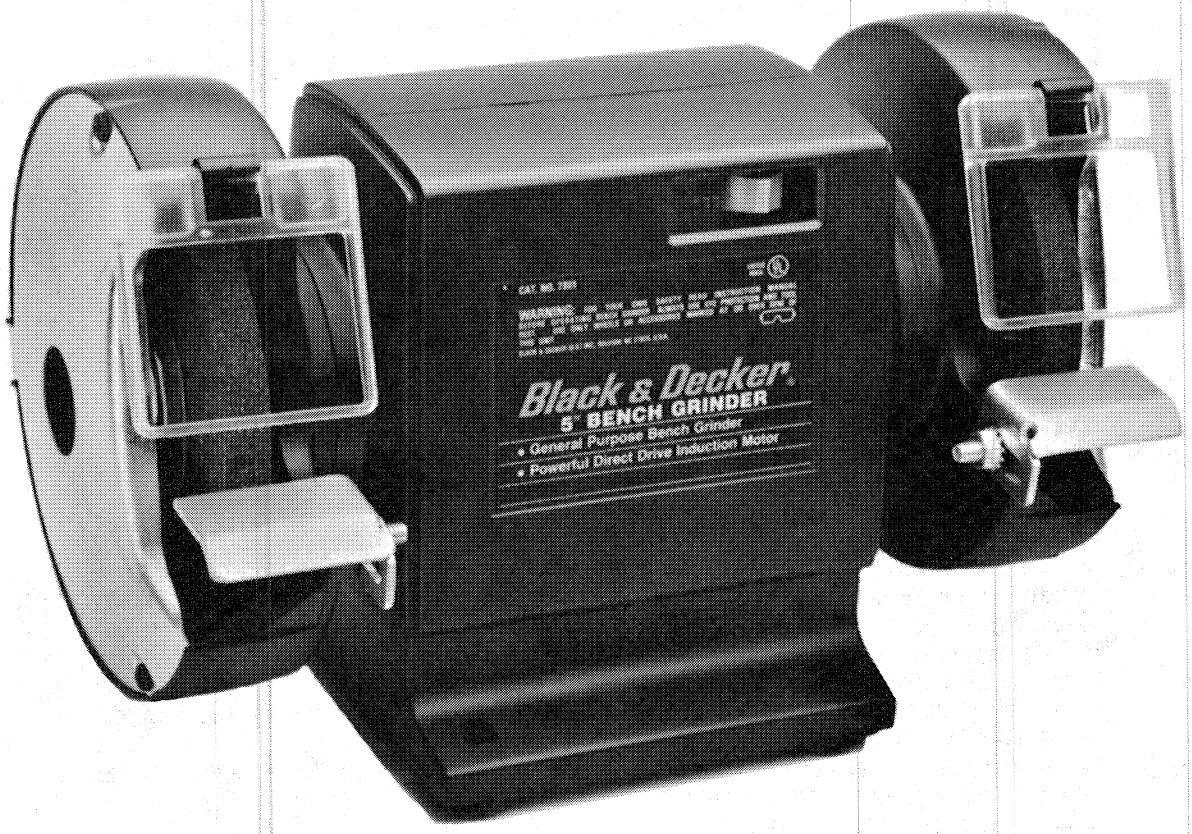
BLACK & DECKER™

INSTRUCTION MANUAL



5″ Bench Grinder

7901 Arbor—1/2″ RPM—3600

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electrical shock and personal injury, including the following:

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed before turning on the tool.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from work area.
6. **MAKE WORKSHOP KID PROOF** with padlocks, master switches, or by removing starter keys.
7. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** Don't force tool or attachment to do a job it was not designed for.
9. **WEAR PROPER APPAREL.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

Rules for safer operation of stationary power tools.

10. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are **NOT** safety glasses.
11. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if cutting tool is accidentally contacted.
12. **DON'T OVERREACH.** Keep your proper footing and balance at all times.
13. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions when changing accessories.
14. **DISCONNECT TOOLS** before servicing and when changing accessories.
15. **USE RECOMMENDED ACCESSORIES.** Consult owner's manual. Use of improper accessories may cause risk of personal injury.
16. **AVOID ACCIDENTAL STARTING.** Make sure switch is off before plugging in cord.
17. **NEVER LEAVE TOOL RUNNING UNATTENDED.** Turn power OFF.

ADDITIONAL GRINDER SAFETY RULES

1. Always use guards and eye shields. Always wear safety glasses or other eye protection when operating this tool and keep the eye shields mounted in their proper position on the wheel guard.
2. Replace a cracked wheel immediately. Handle grinding wheels carefully to avoid bumping or dropping. DO NOT use a grinding wheel that has been dropped. Before using, inspect each grinding wheel for cracks or flaws and if these are evident, discard the wheel.
3. Before mounting a new wheel, be sure that it is marked with an R.P.M. that is the same as, or higher than, the no-load speed of the grinder as marked on the nameplate. Do not overtighten wheel nut. Use only flanges furnished with this grinder. Keep Tool Rests and Spark Shields adjusted.
4. Never start a grinder with anyone, including the operator, standing in line with the wheel. After installing a replacement wheel, stand to one side and allow it to revolve freely for about one minute.
5. Do not grind on the sides of grinding wheels unless they are the special wheels designed specifically for this purpose.
6. Do not over-tighten wheel nut.
7. Use only clamp washer furnished with this grinder.
8. Bolt Bench Grinder to a bench or pedestal to prevent movement.
9. Use accessories only in the proper and intended manner.
10. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to assure 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 other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

CAUTION: GRINDING CAUSES SPARKS. DO NOT GRIND IN EXPLOSIVE ATMOSPHERES OR AROUND FLAMMABLE LIQUIDS.

GROUNDING INSTRUCTIONS

1. **All grounded, cord-connected tools** — In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided — if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

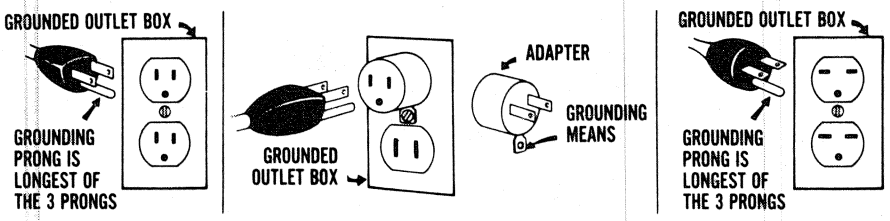
Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

1A. **Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts:** This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in Sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, etc. extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

1B. **Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating between 150-250 volts, inclusive** — This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch D. The tool has a grounding plug that looks like the plug illustrated in Sketch D. Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

GROUNDING METHODS



2. **Permanently connected tools** — This tool should be connected to a grounded, metal, permanent wiring system, or to a system having an equipment-grounding conductor.

We recommend that you NEVER disassemble the tool or try to do any rewiring in the electrical system. Any such repairs should be performed only by B&D Service Centers or other qualified service organizations. Should you be determined to make a repair yourself, remember that the green colored wire is the "grounding" wire. Never connect this green wire to a "live" terminal.

LUBRICATION

Bench grinder spindles are mounted on lubricant impregnated bearings. No periodic lubrication is required.

ACCESSORIES

The accessories listed in this manual are available at extra cost from your local dealer, Black & Decker Service Center, or by writing to:

Customer Services, Black & Decker (U.S.) Inc., 500 Hanover Pike, Hampstead, Md. 21074

GRINDING WHEELS (5" Diam. x ½" Face x ½" Arbor Hole). Manufactured by the nation's leading abrasive manufacturers to stringent quality specifications.
Cat. No. 79-555 Coarse — 36 Grit
Cat. No. 79-556 Medium — 60 Grit

SANDING/POLISHING WHEEL (4" Diam. x ⅜" face x ½" hole)
Cat. No. 79-255 For sanding, polishing, honing, etc.

WIRE WHEEL BRUSHES (½" Arbor Hole).

Each wire tuft is locked independently, giving a dense, even brushing surface, and less danger of loose wires.
Cat. No. 70-142 4", Coarse Wire
Cat. No. 70-143 4", Fine Wire

COTTON BUFF:
For general purpose buffing and polishing.
Cat. No. U-1322 4" Diam. x ⅝" Face x ½" Arbor Hole.

NOTE: The above accessories are recommended for use with your Bench Grinder. **CAUTION:** The use of any other accessory or attachment might be hazardous.

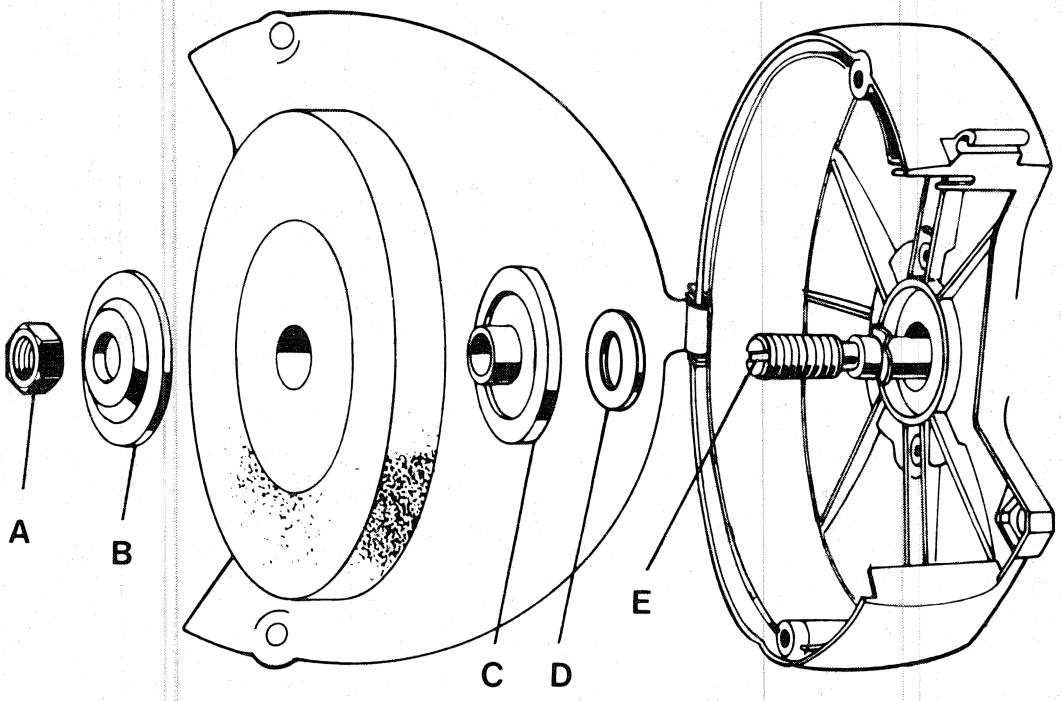


FIG. 4

3. Remove Outer Clamp Washer "B" (silver colored with small hole), Wheel, Inner Clamp Washer "C" and flat washer "D". If they are burred or not perfectly flat, repair or replace them.

4. Each Grinding Wheel purchased should be equipped with a blotter fastened to each side of the wheel. Blotters must always be used between the wheel and the inner and outer clamp washers. Contact surfaces of wheels, blotters and washers must be clean and flat.

5. **Always use the exact type of clamp washers that are supplied with your tool. Never substitute flat or odd sized washers. Replace them in the exact order and position shown in Figure 4. Always place hollow sides of washers against wheel.**

6. **Only tighten arbor nut sufficiently to drive the wheel without slippage.** Hold spindle with screwdriver in end slot "E". **Do not overtighten.**

7. Be sure to replace end covers by reversing step 1.

8. After installing replacement wheel, put on safety goggles and stand to the side of the grinder, turn switch "ON" and allow wheel to revolve freely for one minute before beginning to grind.

9. If a new wheel has excess vibration, loosen nut and rotate wheel about ½ turn on shaft. Retighten nut.

BENCH MOUNTING

Your bench grinder is intended to be permanently mounted to a workbench or other surface. For mounting instructions, see page 6.

OPERATING INSTRUCTIONS

When you face the Bench Grinder, the wheel on your left is a 5" coarse (36 grit) grinding wheel. This wheel is for rough grinding and maximum material removal. The wheel on your right is a 5" medium (60 grit) grinding wheel. It should be used for finer finish and sharpening operations. Note: These wheels may be reversed.

To operate the Bench Grinder, put on safety glasses or other eye protection and hold the work firmly. Rest the work on the tool rest and feed it slowly into the wheel at the desired grinding angle. Treat the wheel with respect . . . do not jam the work into the wheel or use unnecessary pressure.

Grind only on the face of the grinding wheel, unless you have a special wheel specifically made to permit grinding on the side of the wheel.

CAUTION: Extended Grinding of items will cause them to become hot. Allow item to cool before touching. Do not allow hot items to come in contact with housing.

WIRE BRUSHING INSTRUCTIONS

Wire brushes available from your dealer at extra cost.

Wire Brushing quickly removes rust, scale or old paint. ALWAYS wear safety glasses or other eye protection when using wire wheels as pieces of wire may break off and be thrown from the rotating brush. Handle Wire Wheel Brushes carefully with gloves or rags to avoid puncturing the skin.

BUFFING INSTRUCTIONS

Buffing wheels available from your dealer at extra cost.

Use Cotton Buffing Wheels, normally with stick buffing compound applied to the face of the wheel (usually about ⅝" wide). Wear safety goggles for protection against particles of compound thrown off by the wheel. Remove the tool rest if it interferes with the buffing operation. Do not jam work into wheel. Hold work firmly.

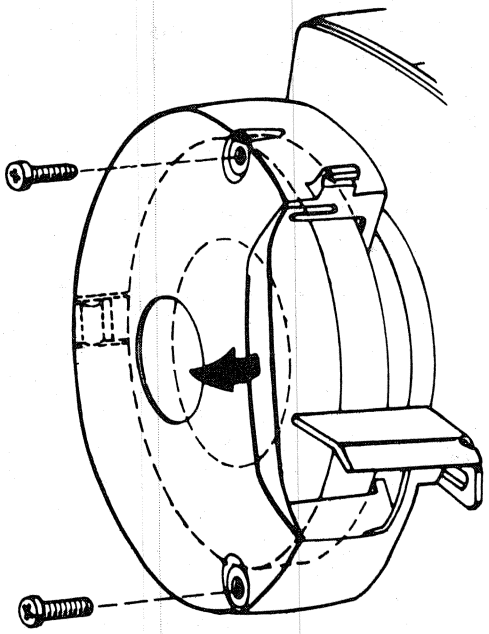


FIG. 3

CHANGING WHEELS

UNPLUG POWER CORD AND BE SURE THAT SWITCH STAYS IN THE "OFF" POSITION.

1. Remove the two screws from the End Cover as shown in figure 3. Swing out the Cover as indicated by the arrow.
2. See figure 4, page 8. Remove clamp nut "A" by turning it in the direction the wheel normally rotates. (The nut "A" shown in black and has a left-hand thread. The silver-colored nut at the other end of the grinder has a right-hand thread.) Use a screwdriver in the end slot "E" to hold spindle when removing nuts.

(continued on page 8)

EXTENSION CORDS

Tools that have 3 wire cords requiring grounding must only be used with extension cords that have 3-prong grounding type plugs and 3-pole receptacles. 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.

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 to 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	TOTAL EXTENSION CORD LENGTH - FEET							
RATING - AMPS	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. Black & Decker has extension cords available that are U.L. listed for outdoor use.

MOTOR

Be sure your power supply agrees with nameplate marking. 120 Volts 50/60 Hz means Alternating Current (normal 120 volt, 60 cycle house current). Voltage variation of more than 10% will cause loss of power and over-heating. All tools are factory-tested; if this tool does not operate, check the supply line for blown fuses; plug and receptacle for contact.

SAVE THESE INSTRUCTIONS FOR FURTHER USE.

SWITCH

The switch is located on the front of the grinder above the nameplate. Pushing the switch button to the right turns the tool on. Pushing the button to the left turns the tool off.

ATTACHING EYE SHIELDS

The two eye shields are made of clear shatterproof plastic and attached to the top of each wheel guard by snapping them into the hinge boss as shown in figure 1. The swivel action of the hinge allows the eye shields to be moved out of the way for grinding large objects and allowing maximum access to the grinding surface. For normal grinding and maximum protection, the eye shields should always be positioned between the grinding wheel and the operator. ALWAYS WEAR EYE PROTECTION.

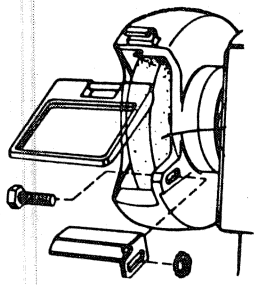


FIG. 1

ATTACHING TOOL RESTS

The two Tool Rests are not interchangeable—one fits the left side of the grinder and one the right side. Be careful to assemble parts exactly as shown in figure 1. Tighten the lock nut firmly with a clearance of 1/16″ between the grinding wheel and the Tool Rest—see figure 2.

Tool Rests are adjustable for wheel wear. Keep them adjusted so that a clearance of 1/16″ is continually maintained between the wheel and the Tool Rest as the wheel wears. This clearance is very important as it will prevent any loose piece of significant size from jamming between the wheel and the Tool Rest. Such jamming could fracture the wheel, break the Tool Rest, or both.

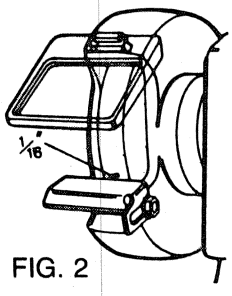
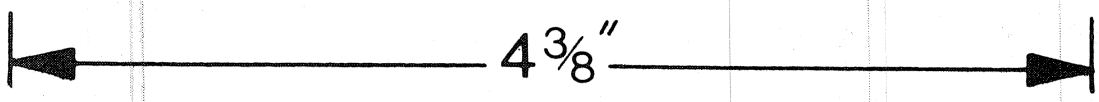


FIG. 2

BENCH MOUNTING

Mounting the grinder securely to a bench is strongly recommended in order to prevent movement of the grinder when pressure is applied against a grinding wheel. To mount your bench grinder, follow the steps below:



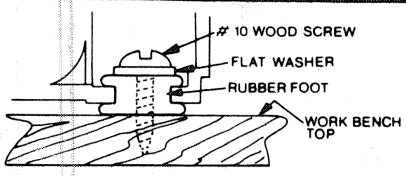


FIG. 5

(mounting hardware not included.)

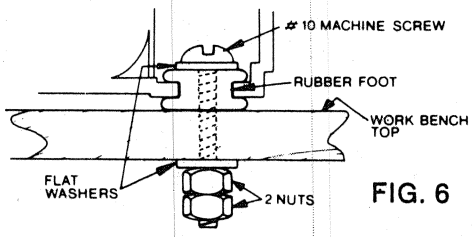


FIG. 6

1. Cut out this template on the dotted line and tape it down on the workbench or other surface where you want to mount the grinder. Locate at least ½" from any edge.
2. Using a centerpunch, mark the positions of the screw holes as indicated by the template.
3. Remove the template and drill the screw holes using the appropriate drill bit for the wood screws or machine screws you are going to use to secure the bench grinder. SAVE THE TEMPLATE.

   NOTE: For best results, use wood or machine screws no smaller than #10 nor larger than ¼".
4. Insert the screws through the rubber feet as shown in figure 7 on the back of the template. Be sure to place a flat washer between the rubber foot and the screw head.
5. Slide the rubber feet into the slots provided and place the grinder down over the holes you drilled so that the screws align with the holes. (Mounting hardware not included)
6. Tighten the screws through the holes in the grinder base only enough to partially compress the rubber feet. (The feet will not be effective in absorbing vibration if they are fully compressed.) (Mounting hardware not included)

NOTE: When using machine screws, a second nut is required to lock against the first nut as shown in figure 6.

FRONT

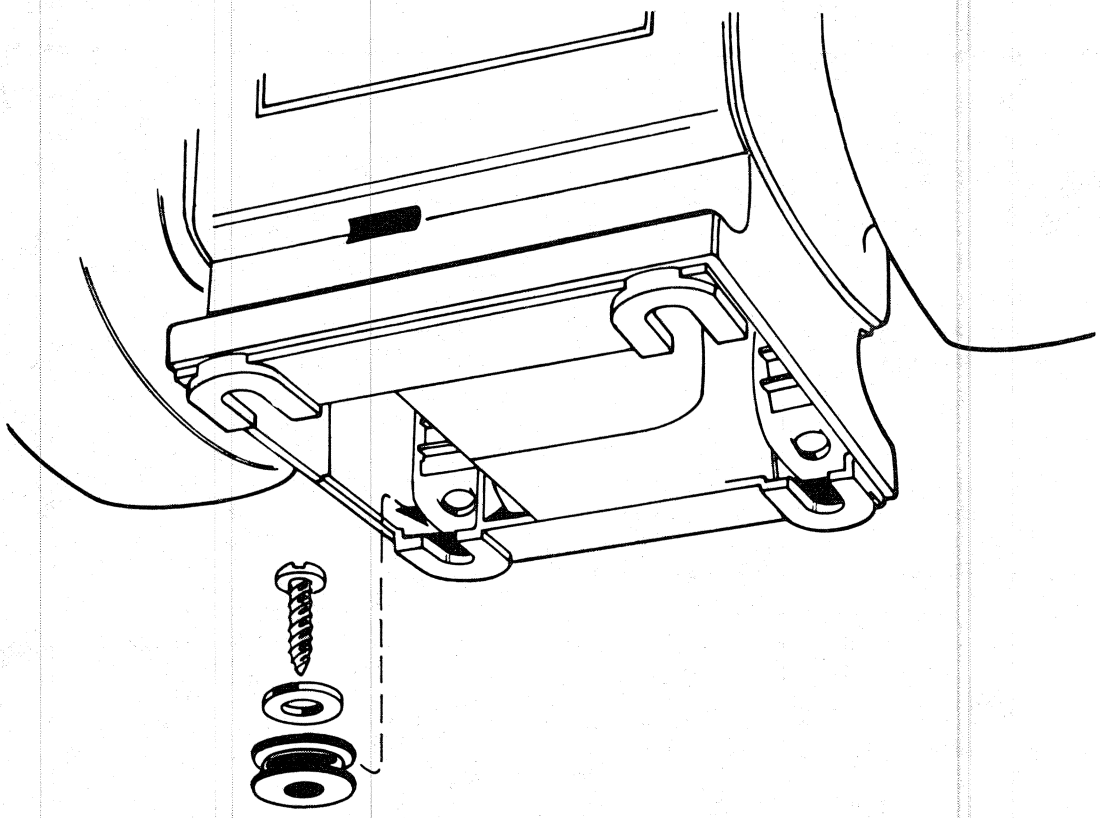


FIG. 7

IMPORTANT

To assure product SAFETY and RELIABILITY repairs, maintenance and adjustment should be performed by BLACK & DECKER Service Centers or other qualified service organizations, always using BLACK & DECKER replacement parts.

HOME USE WARRANTY (A Full Two Year Warranty)

Black & Decker 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). The unit may also be 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.

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