

Instruction Manual

Palm Grip Sander 4011

Commercial/Industrial Use Warranty

Black & Decker (U.S.) Inc. warrants this product for one year from the date of purchase. We will repair without charge, any defects due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to any Black & Decker 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.

Like most Black & Decker tools, this tool 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.

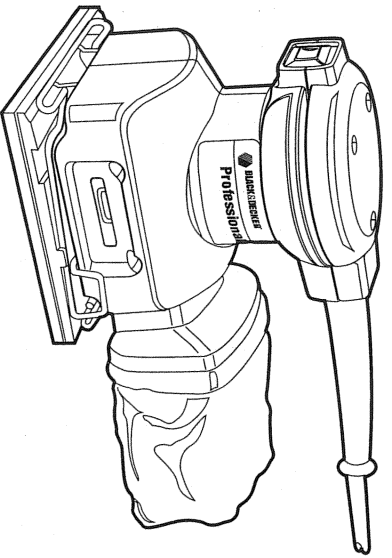


Black & Decker (U.S.) Inc., U.S. Power Tools Group, 10 North Park Drive, P.O. 798, Hunt Valley, MD 21030-0798

Form No. 741549
(JUN89-CD-1)
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4011



Thank You for Buying a Black & Decker Palm Grip Sander

Your 4011 palm grip sander has been carefully designed to meet the rugged standards for quality and dependability that have made Black & Decker the world's choice for over 75 years.

With the right abrasive paper you can produce satin smooth finishes that are ready for painting or varnishing. The 4011 sander features through the pad dust collecting capability and includes an easy to empty dust bag and a paper punch to make your own

special perforated paper for dust collection.

Performance, features and Black & Decker's inherent toughness make this sander every inch the pro that you are.

Please read this informative instruction manual and pay particular attention to the safety instructions we've included for your protection.

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

Thanks, again for buying a Black & Decker!



NOTES

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 the moving parts. Rubber gloves and nonskid 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 away from heat, oil, and sharp edges.
- SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and 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 authorized service facility. 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 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. 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 SAFETY RULES FOR FUTURE USE.

Lubrication

Self lubricating bearings are used in the tool and periodic relubrication is not required. However, it is recommended that, once a year, you take or send the tool to a B & D Service Center for a thorough cleaning and inspection.

Important

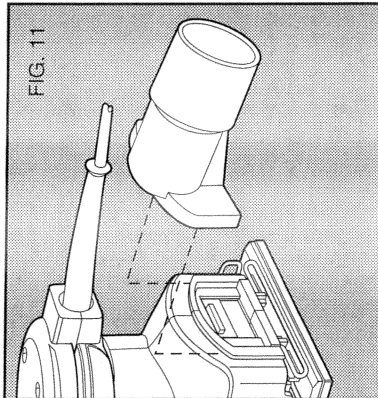
To assure product **SAFETY** and **RELIABILITY**, repairs, maintenance and adjustments should be performed by Black & Decker Service Centers or other qualified service organizations, always using Black & Decker replacement parts.

Every Black & Decker tool is of the highest quality. If you wish to contact us regarding this product, please call toll free between 8:00 a.m. and 5:00 p.m. EST Monday through Friday. 1-800-762-6672

Cat. No.	Grit	Sheets per pack
74-420	Coarse	6
74-421	Medium	6
74-422	Fine	6
74-423	Assortment	2 coarse/ 2 medium/2 fine

Dust Extraction Hose Adaptor
(Cat. No. 40175)

Slides over flange at rear of tool, as shown in Figure 11. Accepts a variety of vacuum hoses for dust extraction.



6" Circular Platen (Cat. No. 40176)
Includes 6" dia. round sanding pad for sanding irregular shapes where extra flexibility may be desired.

To install the circular platen, remove the four screws in the bottom of the sanding pad and remove the pad and the rectangular platen. Replace with the circular platen and the 6" diameter sanding pad using the same four screws. Accepts 6" dia. adhesive backed sanding discs only.

NOTE: Recommended accessories for this tool are listed in this manual. The use of any other may be hazardous.

Special Safety

Instructions For Sanders

Always wear eye protection and a respirator when sanding.
See page 8 for special caution concerning the removal of lead based paint.

Double Insulation

Your Sander is DOUBLE-INSULATED to give you added safety. This means that it is constructed throughout with TWO separate "layers" of electrical insulation or one DOUBLE thickness of insulation between you and the tool's electrical system.

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.) (C.S.A. in Canada). 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	14	12	12	12
10.1 - 13.0	16	16	14	14	14	12	12	12	12	12
13.1 - 15.0	14	14	12	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. (C.S.A. in Canada) listed for outdoor use.

Tools built with this insulation

system are not intended to be grounded. As a result, your Sander 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 Double Insulated Tools, **USE ONLY IDENTICAL REPLACEMENT PARTS.** Repair or replace damaged cords.

Tool Care

Keep your machine as clean as possible by wiping with a clean cloth and occasionally blowing through with air.

Don't use harsh chemicals or solvents to clean the tool. These chemicals could seriously damage the plastic.

Avoid overloading your sander. Overloading will result in a considerable reduction in speed and efficiency and the unit will become hot. In this event, run sander at a "no load" condition for a minute or two.

Brush Replacement

TURN OFF AND UNPLUG THE SANDER

To replace the tool's brushes, remove the three screws located in the top cap, as shown in Figure 9. Lift off the top cap. Observe the brush holders, as shown in Figure 10 and the wires leading from the brushes to the motor field.

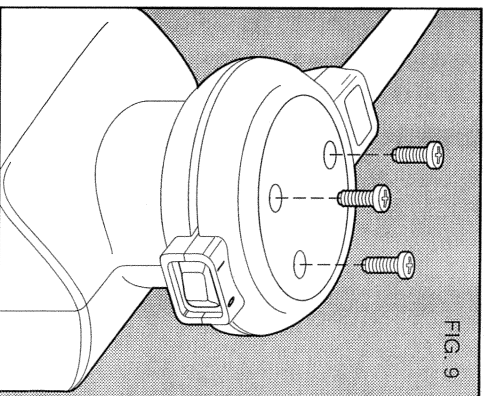


FIG. 9

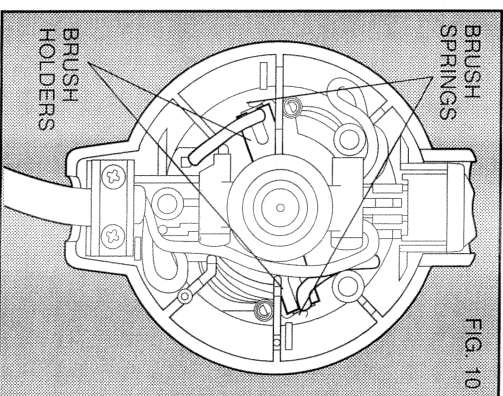


FIG. 10

Pull the wires from the motor field and then lift and hold out of the way one of the brush springs. Remove the old brush from the brush holder and discard the brush/wire assembly. Still holding the brush spring out of the way, insert the new brush, release the spring against the back of the brush and plug the wire into the motor field. Repeat the procedure for the second brush.

Replace the top cap and tighten the three screws that hold it in place. (Always replace both brushes.)

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
626 Hanover Pike
P.O. Box 618
Hampstead, MD 21074-0618

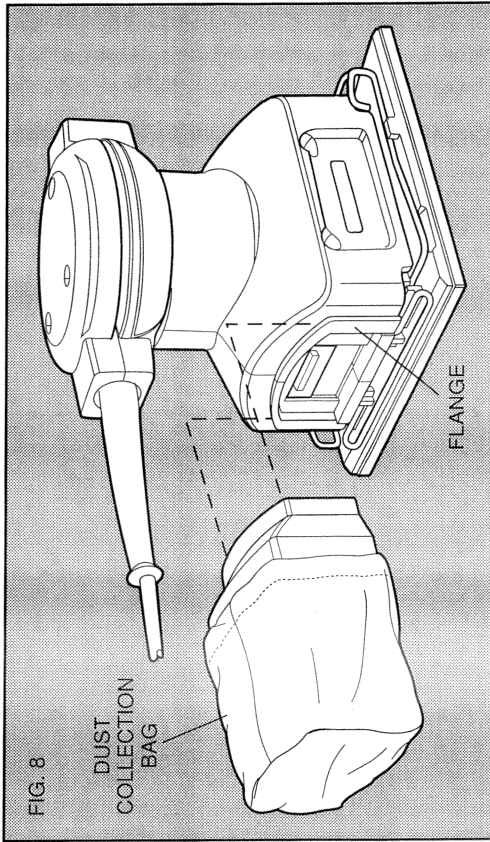


FIG. 8

Operation

To operate your sander, grasp it as shown on the front cover of this manual and turn it on. Move it in long, sweeping strokes along the surface being sanded, letting it do the work. Pushing down on the tool while sanding actually slows the removal rate and produces an inferior quality surface. Be sure to check your work often, this sander is capable of removing material rapidly, especially with coarse paper.

Your sander is designed to sand flush on three sides (four sides without the dust collection bag) for sanding in corners, and its small size and light weight make it ideal for overhead work.

The orbital action of your sander allows you to sand with the grain or at any angle across it for most sanding jobs. On the final sanding steps, as discussed below, a better finish will result if you sand only with the grain.

To produce the best finish possible, start with coarse grit sandpaper and change gradually to finer and finer paper. A final sanding with a piece of well worn fine sandpaper will produce a really professional looking finish that in many

cases will need no hand sanding at all. The rate at which the dust collection bag will fill up will vary with the type of material being sanded and the coarseness of the sandpaper. For best results, empty the bag frequently and check the dust door opening for clogging.

When sanding painted surfaces, you may find that the sandpaper loads up and clogs with paint. A Black & Decker Heat Gun will work much better to remove paint before sanding.

FOLLOW ALL SAFETY INSTRUCTION MANUAL.

CAUTION: EXTREME CARE MUST BE EXERCISED WHEN SANDING OR STRIPPING LEAD BASE PAINTS! SEAL AREAS WHERE THESE OPERATIONS ARE PERFORMED AND WEAR PROTECTIVE BREATHING APPARATUS. DO NOT SMOKE, DRINK OR EAT IN AREAS WHERE PAINT SANDING OR STRIPPING IS DONE AND DO NOT LET VISITORS IN. LEAD FUMES AND SANDING DUST CONTAINING LEAD PARTICLES ARE EXTREMELY POISONOUS, ESPECIALLY TO CHILDREN.

Motor

Your Black & Decker tool is powered by a B & D built motor. Be sure your power supply agrees with the nameplate marking. (Volts, 120 AC only)

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

SAVE THESE INSTRUCTIONS

Attaching Abrasive Paper

Your sander is designed to use 1/4 sized sanding sheets. This size paper can be made by:

- Cutting full sized (9" x 11") sandpaper into 1/4 sheets of 4 1/2" x 5 1/2".
- Cutting 1/2 sheet sandpaper into two 4 1/2" x 5 1/2" sheets.

Pre-cut 4 1/2" x 5 1/2" sandpaper is available at extra cost from Black & Decker.

For normal operations, assemble the abrasive paper to your unit as follows.

- Soften the stiff sandpaper by pulling it over the 90° edge of a table or other straight edge, as shown in Figure 1. Concentrate on softening the edges to be clamped.

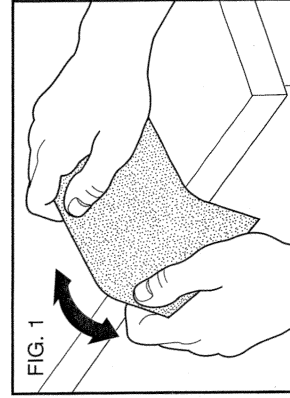


FIG. 1

- Release clamp by pulling up on clamp lever and disengaging it from the tab on the base plate. (See Fig. 2)

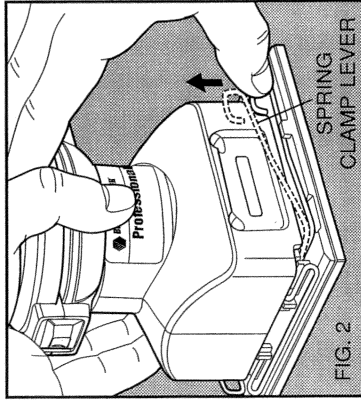


FIG. 2

- Insert the 4 1/2" edge of the abrasive paper under the front paper clamp, as shown in Figure 3 until it hits the paper limiting ribs shown in the figure. Close the front paper clamp and hook it into the lock position behind the tab on the base plate.

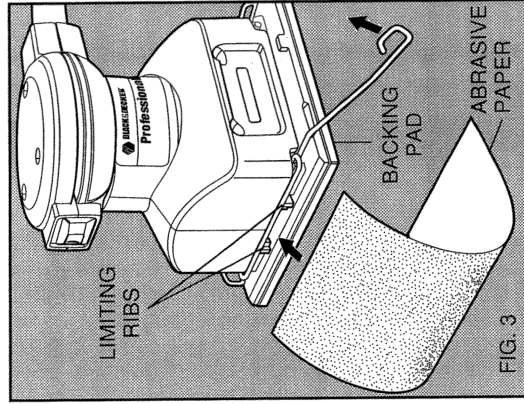


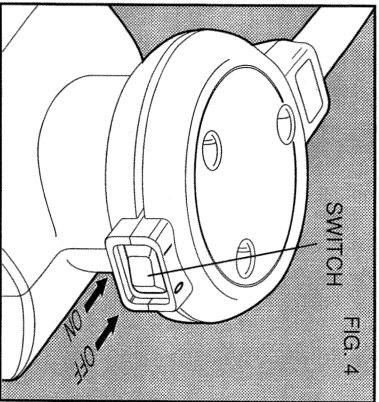
FIG. 3

- Stretch paper over backing pad and insert under the opposite clamp in the same way.
- If you are using the dust extraction feature, perforate the sandpaper with the provided paper punch as instructed on page 6.

Caution: When using perforated paper be sure to raise the dust door (Figure 7), and install the dust collection bag to insure maximum effectiveness. Conversely, when not using the dust extraction feature, be sure to close the dust door, shown in Figure 7.

Switch

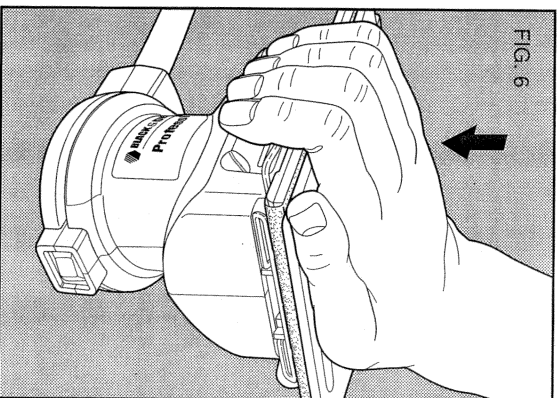
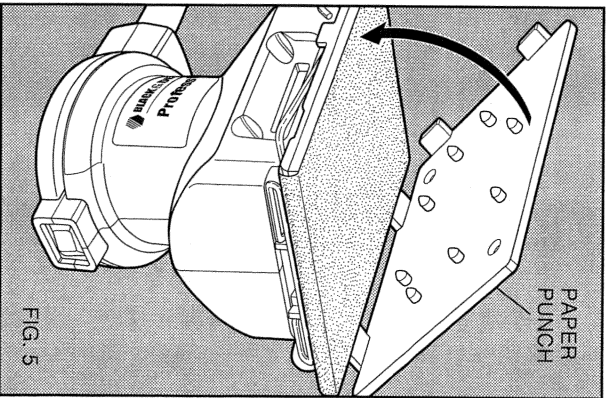
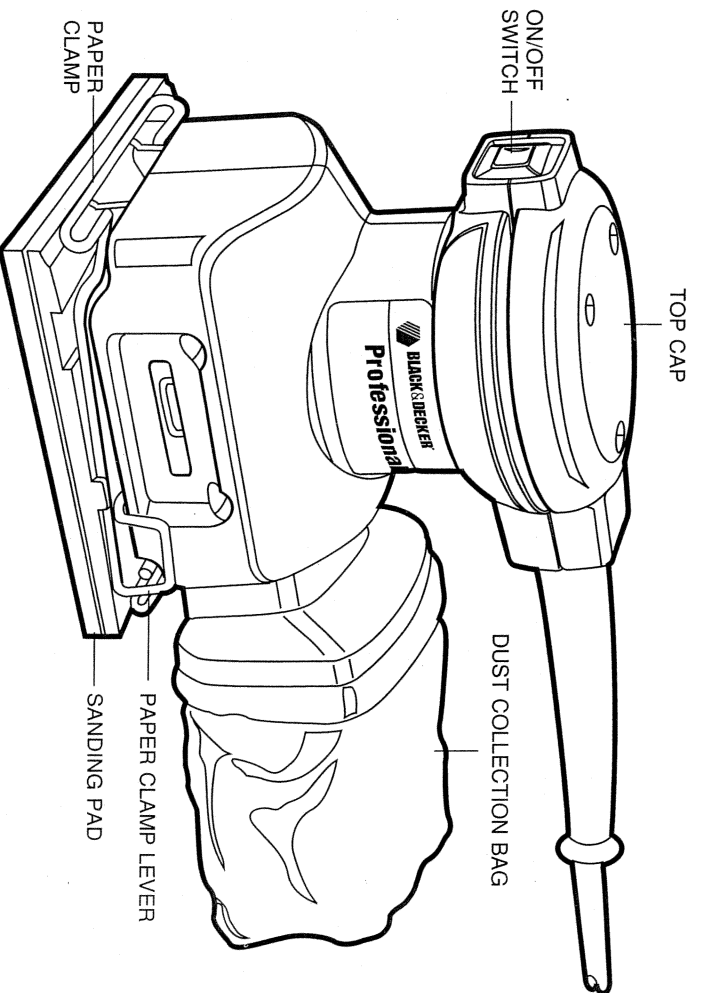
To turn the unit on, depress the side of the dust protected switch that corresponds to the symbol "I". To turn the tool off, depress the side of the switch that corresponds to the symbol "O". See Figure 4.



Paper Punch

A paper punch is provided with your sander to let you perforate regular sandpaper to make dust collection possible.

To perforate your sandpaper, install the sandpaper on the tool as instructed in this manual. With the sander turned off and unplugged, place the paper punch on the paper so that the tabs at the edges of the punch are against any two adjacent sides of the sanding pad, as shown in Figure 5. Press the punch against the pad so that the 8 points penetrate the paper, as shown in Figure 6. (Press the punch into the pad as far as it will go.) Remove the paper punch and the paper is ready.



An alternate method of perforating the paper is to fasten the punch down to a suitable work surface and press the sander (with the paper attached) down on the punch. Two holes are provided in the punch for this purpose. Use #8 flat head screws.

Dust Collection Bag

DUST COLLECTION BAG: NEVER OPERATE THIS TOOL WITH PERFORATED PAPER UNLESS THE DUST COLLECTION BAG IS IN PLACE, OR THE DUST DOOR IS CLOSED.

To use the dust collecting system, raise the dust door by sliding it up into the housing, as shown in Figure 7. Lower the plastic end of the collection bag over the flange around the dust door and push it down as far as it will go, as shown in Figure 8.

To empty the dust collection bag, simply lift it up, off of the sander and empty over a trash receptacle.

