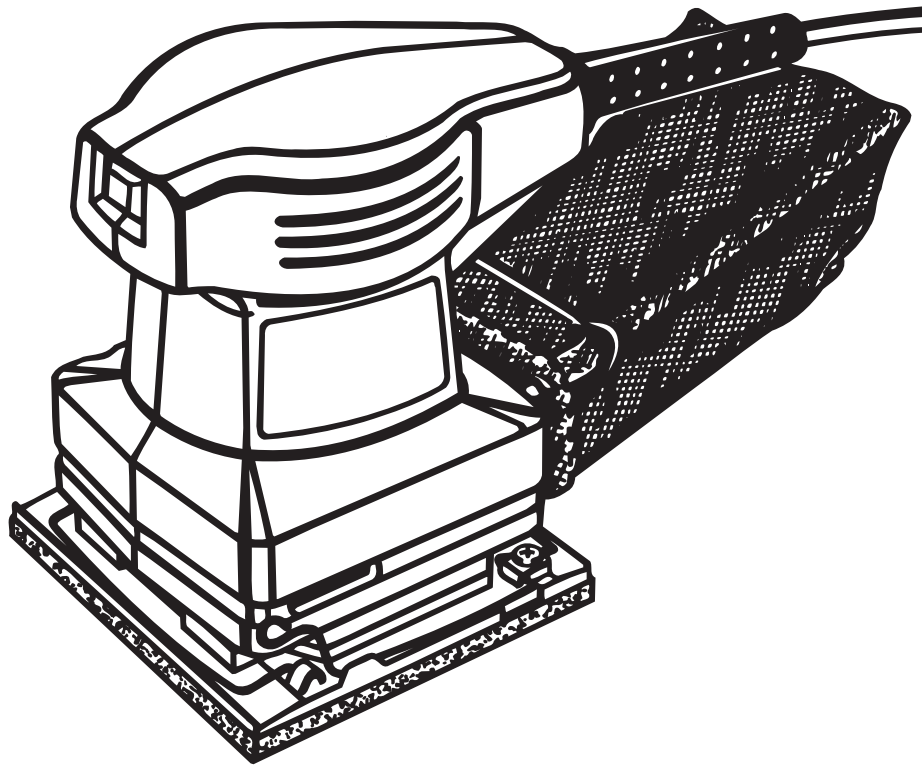




# OPERATOR'S MANUAL

## 1/4 SHEET SANDER – S605D8

### DOUBLE INSULATED



SPECIFICATIONS:	
Size of Paper	1/4 Sheet
Motion	Orbital Action
Rating	120 volts, 60 Hz, AC
Input	2.0 Amperes
No Load Speed	14,000 OPM
Orbit Diameter	1/16 in. (1.6 mm)

#### THANK YOU FOR BUYING A RYOBI SANDER.

Your new sander has been engineered and manufactured to Ryobi's high standard for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.

**CAUTION:** Carefully read through this entire operator's manual before using your new sander. Pay close attention to the Rules for Safe Operation, Warnings, and Cautions. If you use your sander properly and only for what it is intended, you will enjoy years of safe, reliable service.

Thank you again for buying Ryobi tools.

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

# RULES FOR SAFE OPERATION

## DOUBLE INSULATION

Your Ryobi power tool is double insulated. This means you are separated from the tool's electrical system by two complete sets of electrical insulation. This extra layer of insulation is intended to protect the user from electrical shock due to a break in the wiring insulation. All exposed metal parts are isolated from the 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 **RYOBI AUTHORIZED SERVICE CENTER** for repair. When servicing use only identical Ryobi replacement parts.

**WARNING: THE DOUBLE INSULATED SYSTEM IS INTENDED TO PROTECT THE USER FROM SHOCK RESULTING FROM A BREAK IN THE TOOL'S INTERNAL WIRING. OBSERVE ALL NORMAL SAFETY PRECAUTIONS RELATED TO AVOIDING ELECTRICAL SHOCK.**

**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 OPERATOR'S 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 operator'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 the sanding 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. It's safer than using your hand and it frees both hands 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.
18. **DISCONNECT TOOLS.** When not in use, before servicing, or when changing attachments and accessories such as sandpaper, etc., all tools should be disconnected from power supply.

## RULES FOR SAFE OPERATION (Continued)

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 under-sized 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 **16** 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. **NEVER USE THIS OR ANY POWER SANDER FOR WET SANDING OR LIQUID POLISHING.** Failure to comply can result in electrical shock causing serious injury or worse.
24. **KEEP HANDS AWAY FROM SANDING AREA.**
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 by an authorized service 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 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.
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 sanding.
33. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol, or any medication.
34. **When servicing use only identical Ryobi replacement parts.**
35. **POLARIZED PLUGS.** To reduce the risk of electric shock, this equipment 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.
36. **SAVE THESE INSTRUCTIONS.** Refer to 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:

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

# FEATURES

Your sander is suitable for sanding with coarse, medium, and fine grit sandpaper. It will produce a fine scratch free finish when used to sand with the grain on wood surfaces. It has been designed so that flush corner sanding on three sides of the sander is possible.

Your sander has a comfortable palm grip handle that provides maximum one-hand control and comfort, plus it reduces operator fatigue during continuous sanding operations.

Your sander has quick action paper clamps. This makes changing or replacing sandpaper fast and easy.

Your sander also has a built in dust collection that collects dust through punched holes in the sandpaper and cushion. See *Figure 1*.

**Before attempting to use your sander, familiarize yourself with all operating features and safety requirements.**

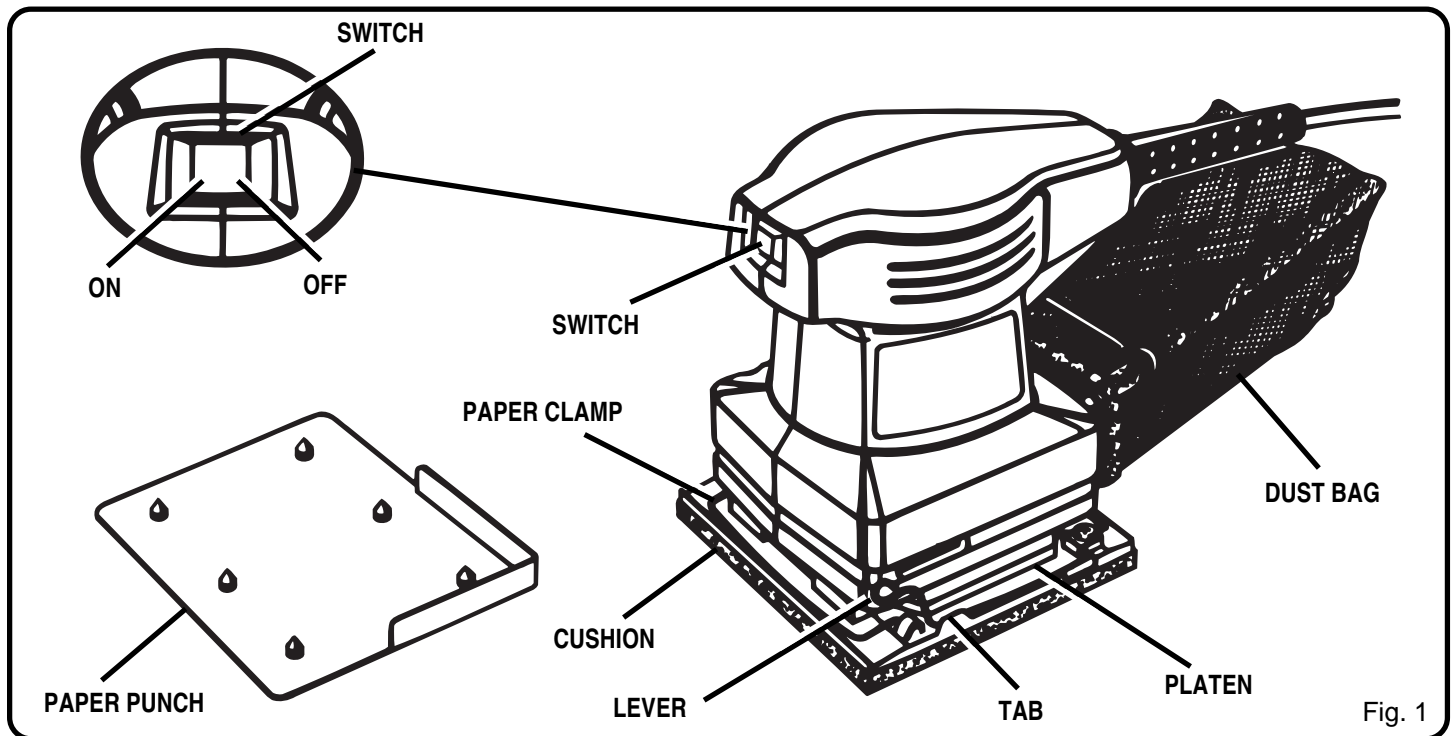
## SWITCH

This tool is equipped with a simple switch control. To turn your sander "ON", depress the switch button as shown in Figure 1. Depress the switch button in the opposite direction to turn your sander "OFF".

## ELECTRICAL CONNECTION

Your sander 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.

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



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

## WARNING:



The operation of any sander 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. Always wear eye protection which is marked to comply with ANSI Z87.1.

# OPERATION

**WARNING: YOUR SANDER SHOULD NEVER BE CONNECTED TO POWER SUPPLY WHEN YOU ARE ASSEMBLING PARTS, MAKING ADJUSTMENTS, ASSEMBLING OR REPLACING SANDPAPER, CLEANING, OR WHEN NOT IN USE. DISCONNECTING SANDER WILL PREVENT ACCIDENTAL STARTING THAT COULD CAUSE SERIOUS PERSONAL INJURY.**

## INSTALLING NON-ADHESIVE SANDPAPER

See Figure 2.

Inspect sandpaper before installing. **DO NOT** use if broken or defective.

1. Unplug your sander.

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

2. If replacing sandpaper, remove old sandpaper. To remove paper, release paper clamp by lifting up on lever and disengaging it from the tab on the platen.
3. Insert end of new 1/4 sheet sandpaper approximately 1/2 in. (13 mm) under the paper clamp. **Note:** 1/2 in. (13 mm) clamping of sandpaper is necessary for multi-sheet stacking of paper.
4. Lift up on lever and lock into place. Apply downward pressure to conform sandpaper to platen.
5. Wrap sandpaper around cushion. Lift lever on opposite end of sander and insert loose end of sandpaper under paper clamp. Fit sandpaper tight against cushion.
6. Lift up on lever and lock into place.
7. Multiple sheets of sandpaper can be installed at one time for convenience.

## INSTALLING ADHESIVE SANDPAPER

See Figure 2.

Inspect sandpaper before installing. **DO NOT** use broken or defective sandpaper.

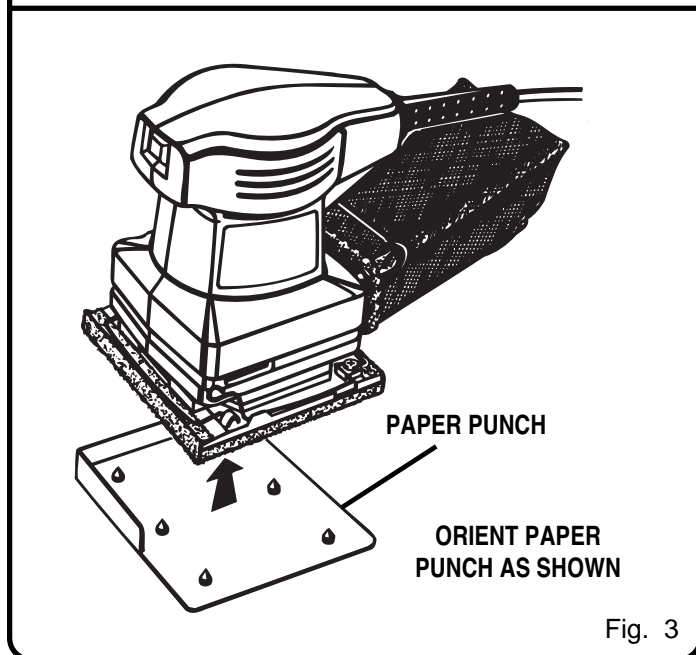
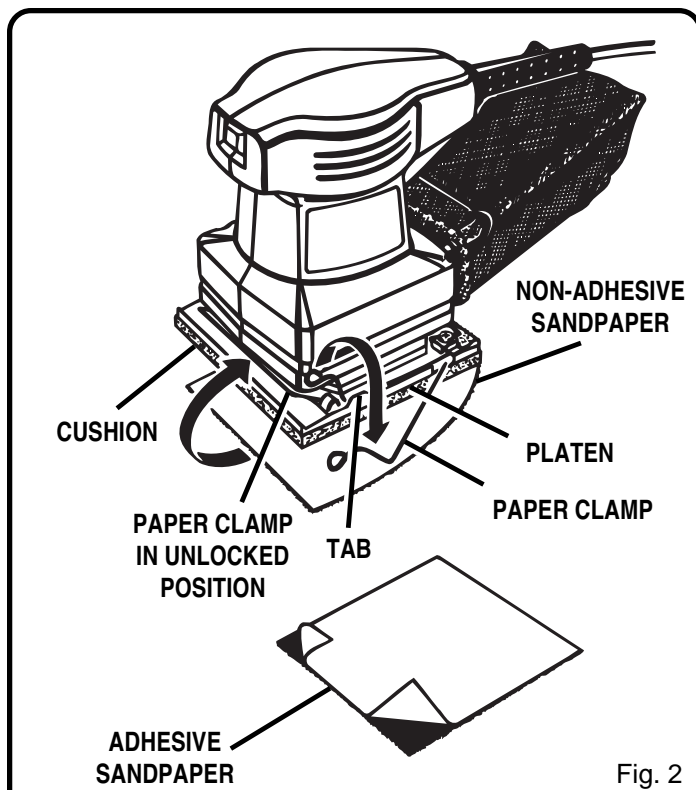
1. Unplug your sander.

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

2. If replacing sandpaper, remove old sandpaper by peeling it off cushion. If removing regular sandpaper, release paper clamp by lifting up on lever and disengaging it from the tab on the platen.
3. Remove non-adhesive sandpaper, then lift up on paper clamp lever and lock it into place.
4. Carefully peel adhesive backing from new 1/4 sheet sandpaper.
5. Position sandpaper, making sure front edge of sandpaper is aligned with front edge of the cushion, then carefully press sticky side of sandpaper on cushion. **Note:** Sandpaper must be aligned with the front edge of the cushion for proper functioning of the flush sanding feature.

See Figure 2.

**Note:** The cushion on your sander is approximately 1/4 in. (6.4 mm) smaller than precut adhesive backed sanding sheets. If desired you may want to trim off the overhang of sandpaper on the back side of cushion. The cushion has been made smaller so that multiple sheets of non-adhesive sandpaper can be installed.



## PAPER PUNCH

See Figure 3.

A paper punch template has been supplied with your sander. This punch should be used for aligning and punching holes in the sandpaper. Punched holes must align with the holes in the cushion.

Punching the holes properly is a necessary step in order for the dustless feature of your sander to function properly.

# OPERATION

**WARNING: ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS WHEN OPERATING YOUR SANDER. FAILURE TO DO SO COULD RESULT IN FOREIGN OBJECTS BEING THROWN INTO YOUR EYES, RESULTING IN POSSIBLE SERIOUS INJURY. IF THE SANDING OPERATION IS DUSTY, ALSO WEAR A FACE OR DUST MASK.**

## APPLICATIONS

(Use only for the purposes listed below)

1. Sanding on wood surfaces.
2. Removing rust from and sanding steel surfaces.
3. Sanding plastics.

## SANDPAPER SELECTION

Selecting the correct size grit and type sandpaper is an extremely important step in achieving a high quality sanded finish. Aluminum oxide, silicon carbide, and other synthetic abrasives are best for power sanding. Natural abrasives, such as flint and garnet are too soft for economical use in power sanding.

In general, coarse grit will remove the most material and finer grit will produce the best finish in all sanding operations. The condition of the surface to be sanded will determine which grit will do the job. If the surface is rough, start with a coarse grit and sand until the surface is uniform. Medium grit may then be used to remove scratches left by the coarser grit and finer grit used for finishing of the surface. Always continue sanding with each grit until surface is uniform.

**Note: DO NOT** use sander without sandpaper. Doing so will damage the cushion.

## PREPARING FOR OPERATION

**CAUTION:** Be careful not to let your hand completely cover air vents.

## SANDING

Clamp or otherwise secure the work to prevent it from moving under your sander.

**WARNING: UNSECURED WORK COULD BE THROWN TOWARDS THE OPERATOR CAUSING INJURY.**

Hold your sander in front and away from you, keeping it clear of the workpiece. Start your sander by pressing the switch button to "ON" position and letting the motor build to its maximum speed. Gradually lower your sander on the work with a slight forward movement. See Figure 4. Move it slowly using forward and backward strokes.

**DO NOT FORCE.** The weight of the unit supplies adequate pressure, so let the sandpaper and sander do the work. Applying additional pressure only slows the motor, rapidly wears sandpaper and greatly reduces sander speed. Excessive pressure will overload the motor causing possible damage from motor overheating and can result in inferior work. Any finish or resin on wood may soften from the frictional heat. Do not allow sanding on one spot too long as the sander's rapid action may remove too much material, making the surface uneven.

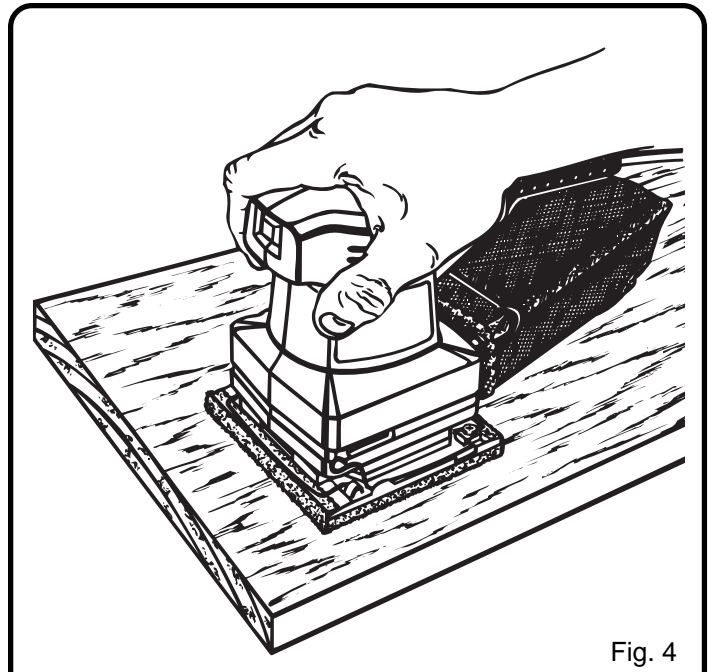


Fig. 4

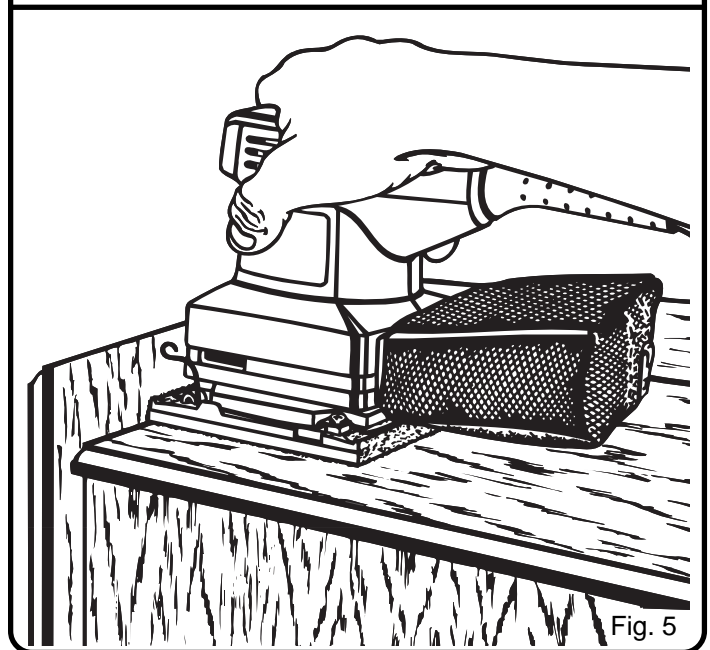


Fig. 5

Flush sanding can be performed with your sander. See Figure 5. The front edge of your sander allows flush sanding in corners. Always remove sander from workpiece before turning your sander off.

**WARNING: DO NOT WEAR LOOSE CLOTHING OR JEWELRY WHEN OPERATING SANDER. THEY COULD GET CAUGHT IN MOVING PARTS CAUSING SERIOUS INJURY. KEEP HEAD AWAY FROM SANDER AND SANDING AREA. HAIR COULD BE DRAWN INTO SANDER CAUSING SERIOUS INJURY.**

# OPERATION

## ORBITAL MOTION

Orbital motion is ideal for fast cutting action when removing old finishes, smoothing rough wood, cutting stock down to required dimensions, or for finishing surfaces to be painted. As shown in figure 6, the sandpaper moves in tiny circles at a very high speed, allowing the sander to move easily.

## DUSTLESS SANDING

The dust bag located on the rear of your sander provides a dust collection system for your sander. Sanding dust is drawn up through the holes of the cushion and collects in the dust bag during sanding operation. For more efficient operation, empty dust bag when half full.

## TO EMPTY DUST BAG

- Unplug your sander.

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

- Unzip Dust Bag.
- Shake dust bag to empty.
- Zip dust bag up after emptying.

## TO REMOVE DUST BAG FOR EMPTYING OR CLEANING

See Figure 7.

- Unplug your sander.

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

- Slide dust bag retainer from sander as shown by the arrow in figure 7.

**Note:** Grooves on dust bag retainer align with grooves on your sander.

- Empty dust bag.

## TO INSTALL DUST BAG

See Figure 8.

- Unplug your sander.

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

- Realign grooves on dust bag retainer with grooves on your sander.
- Slide dust bag assembly into place as shown by the arrow in figure 8.

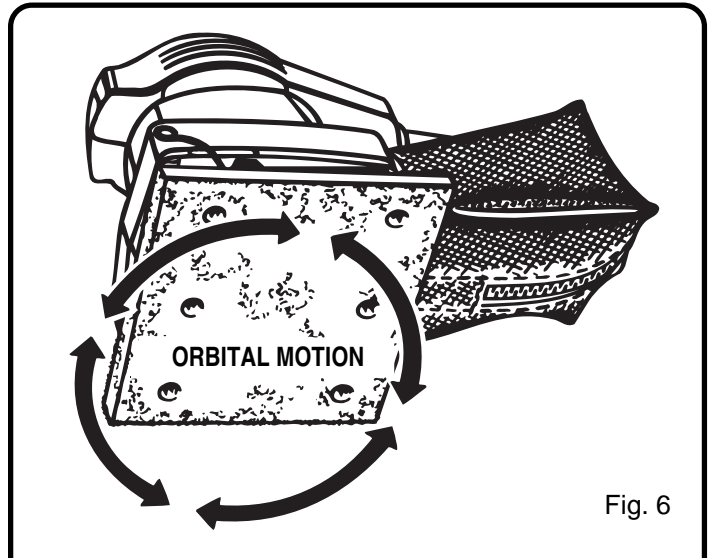


Fig. 6

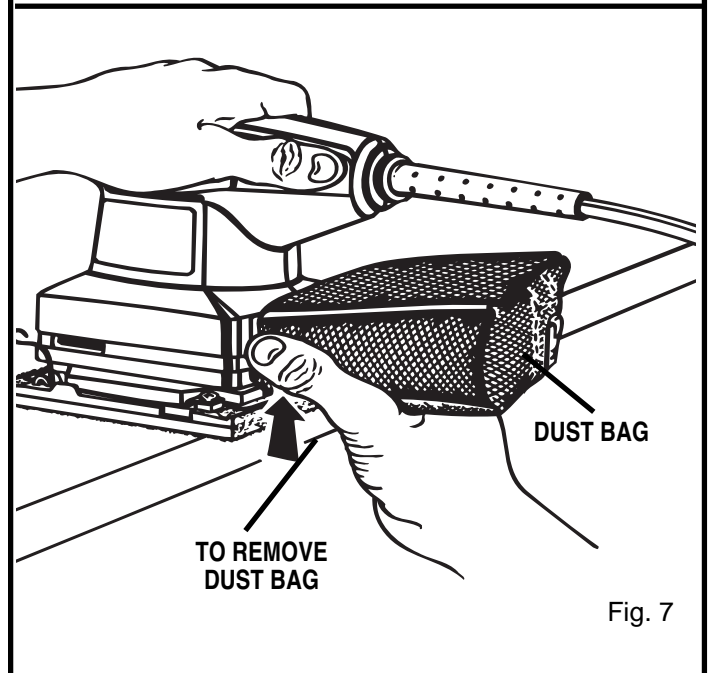


Fig. 7

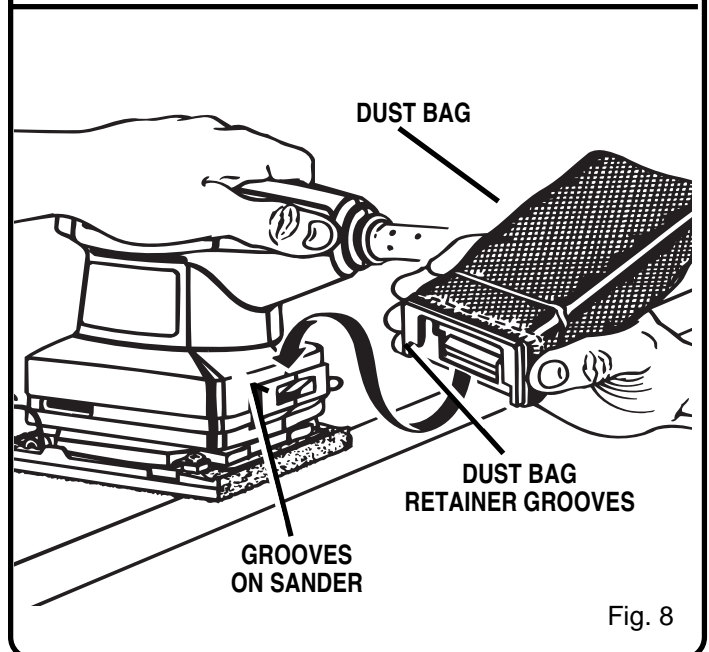


Fig. 8

# MAINTENANCE

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

## GENERAL

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.**

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 these materials, 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.**

## 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, use an extension cord that is heavy enough to carry the current the tool will draw. Follow the recommended cord sizes on the chart provided to determine the minimum wire size required in an extension cord.

**Extension Cord Length**  
**0-100 Feet**

**Wire Gauge Size (A.W.G.)**  
**16**

When working with your tool outdoors, use an extension cord suitable for outdoor use and so marked. Outdoor use extension cords are marked with the letters "WA" on the cord's jacket.

**CAUTION:** Keep extension cords away from the sanding area and position the cord so that it will not get caught on lumber, tools, etc., when sanding.

**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.**

## 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.







# OPERATOR'S MANUAL

## 1/4 SHEET SANDER – S605D8

### DOUBLE INSULATED

- **SERVICE**

Now that you have purchased your tool, should a need ever exist for repair parts or service, simply contact your nearest Ryobi Authorized Service Center. Be sure to provide all pertinent facts when you call or visit. Please call 1-800-525-2579 for your nearest Ryobi Authorized Service Center. You can also check our web site at [www.ryobitools.com](http://www.ryobitools.com) for a complete list of Authorized Service Centers.

- **MODEL NO. AND SERIAL NO.**

The model number of this tool will be found on a plate attached to the motor housing. Please record the model number and serial number in the space provided below.

- MODEL NUMBER S605D8
- SERIAL NUMBER \_\_\_\_\_

#### RYOBI TECHNOLOGIES, INC.

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