

RYOBI POWER EQUIPMENT WARRANTY

Subject to the warranty conditions below, this RYOBI tool (hereinafter called "the Product"), is warranted by Ryobi (herein called "the Company") to be free from defects in material or workmanship for a period of 12 months from the date of original purchase covering both parts and labour. Under the terms of this warranty, the repair or replacement of any part shall be the opinion of the Company or its authorised agent. Should service become necessary during the warranty period, the owner should contact the authorised Ryobi retailer from whom the product was purchased, or the nearest Company branch office. In order to obtain warranty service, the owner must include the Sales Docket and Warranty Certificate to confirm date of purchase. This Product is sold by the dealer or agent as principal and the dealer has no authority from the Company to give any additional warranty or guarantee on the Company's behalf except as herein contained or herein referred to.

Warranty Conditions

This warranty only applies provided that the Product has been used in accordance with the manufacturer's recommendations under normal use and reasonable care (in the opinion of the Company) and such warranty does not cover consumable components, damage, malfunction or failure resulting from

misuse, neglect, abuse, or used for a purpose for which it was not designed, or is not suited and no repairs, alterations or modifications have been attempted by other than an Authorised Service Agent. This guarantee will not apply if the tool is damaged by accident or if repairs arise from normal wear and tear.

Accessories such as bits, blades, sanding discs, cutting lines, etc., are excluded from this guarantee. Normal consumable parts, such as carbon brushes, bearings, chucks, cord assembly's, spark plugs, recoil pulleys and bump head assembly's are specifically excluded from this guarantee.

The Company accepts no additional liability pursuant to this warranty for the costs of traveling or transportation of the Product or parts to and from the service dealer or agent - which costs are not included in the warranty.

Nothing herein shall have the effect of excluding, restricting or modifying any conditions, warranty, right or liability imposed, to the extent only that such exclusion, restriction or modification would render any term herein void.



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THIS WARRANTY FORM SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES.

For your record and to assist in establishing date of purchase (necessary for in-warranty service), please keep your purchase docket and this form, completed with the following particulars.

PURCHASED FROM:.....

ADDRESS OF DEALER:.....

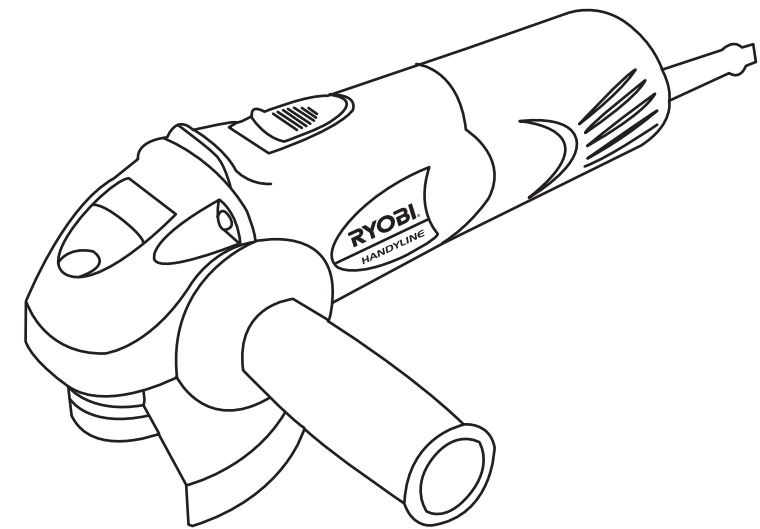
DATE:..... MODEL NO..... SERIAL NO.....

Present this form with your Purchase Docket when Warranty Service is required.

RYOBI®

HG-650

OWNER'S OPERATING MANUAL



RYOBI®

OWNER'S OPERATING MANUAL 650W ANGLE GRINDER MODEL HG-650

SPECIFICATIONS

Voltage.....	230V~50Hz
Power input.....	650 Watt
No load speed.....	11,000 min ⁻¹
Grinding wheel.....	115 mm
Spindle thread.....	M14 x 2.0
Disk bore size.....	22 mm
Nett weight.....	2.0 kg

THANK YOUR FOR BUYING A RYOBI ANGLE GRINDER

Your new angle grinder has been engineered and manufactured to Ryobi's high standard of dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble free performance. If you use your angle grinder properly and only for what it is intended, you will enjoy years of safe, reliable service.



CAUTION: Carefully read through this entire owner's manual, paying close attention to the general safety rules and rules for safe operation, before using.

KEEP THIS MANUAL FOR FUTURE REFERENCE

RELEVANT SAFETY CERTIFICATE

DOUBLE INSULATION

Double insulation is a concept in safety in electric power tools, which eliminates the need for earth grounding. Whenever there is electric current in the tool there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.



DOUBLE INSULATED



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.

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 Authorised Service Centre for repair. When servicing, use only identical Ryobi replacement parts.



WARNING: This machine is manufactured in accordance with the relevant safety requirements. To assure safety and reliability, all repairs should be performed by an Authorised Service Centre or other Qualified Service Organisations

GENERAL SAFETY RULES

The purpose of safety rules is to attract your attention to possible dangers. The safety symbols and the explanations with them, require your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.



SAFETY ALERT SYMBOL. Indicates caution or warning. May be used in conjunction with other symbols or pictures.

Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

Do not attempt to operate this tool until you have read thoroughly and completely understood the safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock or serious personal injury. Save this Owners Operating Manual and review it frequently for continual safe operation and for instructing others who may use this tool.



The operation of any tool 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 eye glasses or standard safety glasses with side shields.

Due to continued product refinement policy, product features and specifications can and will change without notice. Check current features and specifications with your retailer.

RULES FOR SAFE OPERATION

WORK AREA

- 1. KEEP WORK AREA CLEAN AND WELL LIT.** Cluttered, dark work areas and benches invite accidents and injury.
- 2. AVOID DANGEROUS WORK ENVIRONMENTS.** Do not use power tools in damp or wet locations or expose power tools to rain. Do not use power tools in the presence of flammable liquids or gases as normal sparking of the motor could ignite fumes.
- 3. KEEP CHILDREN, BYSTANDERS AND PETS AWAY.** Bystanders and children should wear safety glasses and be kept a safe distance from the work area. Do not let others make contact with the tool or extension cord. Distractions can cause you to lose control.

ELECTRICAL SAFETY

- 1. CHECK THE POWER SOURCE VOLTAGE.** Before connecting a tool to a power source (power point receptacle, outlet, etc.) be sure that the voltage supply is the same as that specified on the nameplate of the tool. A power source with a voltage greater than that specified for the tool can result in serious injury to the user, as well as damage to the tool. If in doubt, do not plug in the tool. Using a power source with a voltage less than the nameplate rating is harmful to the motor.
- 2. POWER TOOL PLUGS MUST MATCH THE OUTLET.** Never modify the plug in any way. Do not use any adaptor plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce the risk of electric shock.
- 3. GUARD AGAINST ELECTRICAL SHOCK.** Prevent body contact with grounded surfaces and objects such as water pipes, radiators, cookers and refrigerator enclosures.
- 4. DO NOT ABUSE THE CORD.** Never carry the tool by its cord or yank it to disconnect it from the socket. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock. Disconnect the tool from the power supply immediately if the supply cable is damaged or cut.
- 5. EXTENSION CORD.** When an extension cord is used make sure:
 - That the pins on the plug of the extension cord are the same in number, size and shape as those of the plug on the unit.

- That the extension cord is properly wired and in good electrical condition.
 - That the wire size is large enough for the AC ampere rating of the unit.
 - Ensure that the male and female plug connection is elevated and out of the way of any water contact.
- 6. OUTDOOR USE EXTENSION CORDS.** When the tool is used outdoors, use only extension cords intended for use outdoor and so marked.
 - 7. DO NOT EXPOSE POWER TOOLS TO RAIN OR WET CONDITIONS.** Water entering a power tool will increase the risk of electric shock.

PERSONAL SAFETY

- 1. USE SAFETY EQUIPMENT.** Always wear eye and hearing protection. Safety equipment such as safety glasses, a dust mask, non-skid safety shoes, hard hat, safety gloves or earmuffs, used for appropriate conditions will reduce personal injury. Everyday eyeglasses have impact resistant lenses only, they are not safety glasses. A face or dust mask is also required if dust is going to be created.
- 2. DRESS CORRECTLY.** Do not wear loose clothing or jewelry, they can be caught in moving parts. Rubber gloves and non-slip Footwear are recommended when working outdoors. If you have long hair, wear protective hair covering.
- 3. STAY ALERT AND EXERCISE CONTROL.** Watch what you are doing and use common sense. Do not operate a tool when you are tired. Do not rush.
- 4. DO NOT OPERATE THIS TOOL WHILE UNDER THE INFLUENCE OF DRUGS.** Alcohol or any medication.
- 5. AVOID UNINTENTIONAL STARTING.** Always check that the switch is in the OFF position before plugging in the tool to the power supply. Do not carry a plugged in tool with your finger on the switch.
- 6. DO NOT USE TOOL IF SWITCH DOES NOT TURN THE TOOL ON OR OFF.** Have defective switches replaced by an authorised service centre.
- 7. TOOLS ARE NOT INTENDED FOR USE BY YOUNG OR INFIRM PERSONS WITHOUT SUPERVISION.** Young children should be supervised to ensure that they do not play with the tool.

RULES FOR SAFE OPERATION

8. **REMOVE ADJUSTING KEYS AND WRENCHES BEFORE TURNING THE POWER TOOL ON.** A wrench or a key left attached to a rotating part of the power tool may result in serious personal injury.
9. **DO NOT OVERREACH.** Keep proper footing and balance at all times. Do not use tool on a ladder or unstable support. Secure tools when working at elevated levels.
10. **CONNECT DUST EXTRACTION EQUIPMENT.** If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.
11. **DO NOT ALLOW PERSONS UNFAMILIAR WITH THE POWER TOOL OR THESE INSTRUCTIONS OPERATE THE POWER TOOL.** Power tools are dangerous in the hands of untrained users.

POWERTOOL USE AND CARE

1. **KNOW YOUR POWER TOOL.** Read this Operating Manual carefully learn its applications and limitations as well as the specific potential hazards related to this tool.
2. **DO NOT FORCE THE TOOL.** The tool will do the job better and safer working at the rate for which it was designed.
3. **USE THE CORRECT TOOL FOR THE JOB.** Do not force small tools or attachments to do the job of a heavier duty tool. Never use a tool for a purpose for which it was not intended.
4. **THE TOOL MUST BE USED FOR ITS PRESCRIBED PURPOSE.** Any use other than those mentioned in this manual will be considered a case of misuse. The user and not the manufacturer shall be liable for any damage or injury resulting from such cases of misuse.
5. **SECURE YOUR WORK.** Use clamps or a vice to hold your work. It is safer than using your hands and it frees both hands to operate the tool.
6. **DISCONNECT IDLE TOOLS.** Switch off the power and disconnect the plug from the power supply before servicing, when changing accessories and when the tool is not in use.
7. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged have them repaired

by an authorised service facility. Inspect extension cords periodically and replace them if damaged. Keep tool handles dry, clean and free from oil and grease. Never use brake fluids, petrol, petroleum based products, or any strong solvents to clean your tools.

8. **CHECK DAMAGED PARTS.** Before using a tool, check that there are no damaged parts. If a part is damaged, carefully determine if it will operate properly and perform its intended function. Check for misalignment of moving parts, binding of moving parts, breakage of parts, proper mounting and any other conditions that may affect the operation of the tool. A part that is damaged should be properly repaired or replaced by an authorised service centre, unless otherwise indicated in this Operating Manual. Defective switches must be replaced by an authorised service centre. Do not use a tool if the switch does not turn the tool on and off correctly.
9. **DISCONNECT THE PLUG FROM THE POWER SUPPLY BEFORE MAKING ANY ADJUSTMENTS,** changing accessories, or storing the power tool. Such preventative safety measures reduce the risk of starting the power tool accidentally.
10. **USE ONLY APPROVED PARTS.** When servicing, use only identical replacement parts. Use an authorised service centre to fit replacement parts.
11. **DO NOT MAKE ANY CHANGES TO THE TOOL.** The manufacturer shall not be liable for any changes made to the tool nor for any damage resulting from such changes.
12. **STORE TOOLS SAFELY.** When not in use, tools should be stored in a dry, high and locked-up place, out of reach of children.



WARNING: This electric tool is manufactured in accordance with the relevant safety requirements. To assure safety and reliability, all repairs should be performed by an Authorised Service Centre or other Qualified Service Organisation.

SPECIFIC SAFETY RULES FOR GRINDER

1. **ALWAYS USE PROPER GUARD WITH GRINDING WHEEL.** A guard protects operator from broken wheel fragments. When using grinding wheel attachments, the guard must always be attached to the tool and positioned for maximum safety, so the least amount of wheel is exposed from the side the tool is being operated.
2. **ACCESSORIES MUST BE RATED FOR AT LEAST THE SPEED RECOMMENDED ON THE TOOL WARNING LABEL.** Wheels and other accessories running over rated speed can fly apart and cause injury. Grinding wheels or any other accessory must have a maximum safe operating speed greater than the "no load speed" marked on the tool's nameplate.
3. **HOLD TOOL BY INSULATED GRIPPING SURFACES WHEN PERFORMING AN OPERATION WHERE THE CUTTING TOOLS MAY CONTACT HIDDEN WIRING OR ITS OWN CORD.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
4. **BEFORE USING A GRINDER OR INSTALLING A NEW WHEEL, INSPECT THE GRINDING WHEEL FOR CHIPS AND CRACKS.** Remove bad wheels immediately. Run the tool at no load for one minute, holding the tool in the direction away from people. Wheels with flaws will normally break apart during this time.
5. **CAREFULLY HANDLE BOTH THE TOOL AND INDIVIDUAL GRINDING WHEELS TO AVOID CHIPPING OR CRACKING.** Install a new wheel if tool is dropped while grinding. Do not use a wheel that may be damaged. Fragments from a wheel that bursts during operation will fly away at great velocity possibly striking you or bystanders.
6. **DO NOT USE GRINDING WHEEL THAT IS LARGER THAN THE MAXIMUM RECOMMENDED SIZE FOR YOUR TOOL, OR WORN DOWN DAMAGED WHEELS FROM LARGER GRINDERS.** Wheels intended for large angle sander/grinders are not suitable for the high speed of a small angle sander/grinder, these wheels may easily BM 1619P01046 5-05 5/10/05 10:39 PM Page 3 burst and the fragments strike you or bystanders.
7. **DO NOT USE DEPRESSED HUB GRINDING WHEELS FOR CUT-OFF OPERATIONS.**
8. **DO NOT USE THIS TOOL WITH "WOODCARVING" BLADE.** Such blades create frequent kick-back and loss of control.
9. **WEAR PROPER APPAREL WHILE USING A SANDER/GRINDER.** Face shield or at least safety goggles, dust mask, leather gloves and shop apron capable of stopping small wheel or workpiece fragments.
10. **POSITION THE CORD CLEAR OF THE SPINNING GRINDING WHEEL OR ANY OTHER SANDING ACCESSORY.** Do not wrap the cord around your arm or wrist. If you lose control and have the cord wrapped around your arm or wrist it may entrap you and cause injury.
11. **AVOID BOUNCING AND SNAGGING THE WHEEL, ESPECIALLY WHEN WORKING CORNERS, SHARP EDGES ETC.** This can cause loss of control and kick-back.
12. **REGULARLY CLEAN THE TOOL'S AIR VENTS BY COMPRESSED AIR.** Excessive accumulation of powdered metal inside the motor housing may cause electrical failures.
13. **DO NOT GRIND OR SAND NEAR FLAMMABLE MATERIALS.** Sparks from the wheel could ignite these materials.
14. **THIS TOOL CAN BE CONVERTED TO A SANDER.** When grinding is resumed the proper guard and wheel flanges MUST be reinstalled before proceeding with grinding. The guard must always be attached to the tool and positioned for maximum safety, so the least amount of wheel is exposed from the side the tool is being operated. The grinding wheel guard cannot be used for most sanding operations or for wire brushing.
15. **WHEN SANDING, DO NOT USE OVERSIZED SANDING DISC.** Larger sanding disc will extend beyond the sanding pad causing snagging, tearing of the disc or kick-back. Extra paper extending beyond the sanding pad can also cause serious lacerations.
16. **WHEN SANDING CHEMICALLY PRESSURE TREATED LUMBER, PAINT THAT MAY BE LEAD BASED, OR ANY OTHER MATERIALS THAT MAY CONTAIN CARCINOGENS, USE SPECIAL PRECAUTIONS.** A suitable breathing respirator must be worn by all personal entering the work area. Work area should be sealed by plastic sheeting and persons not protected should be kept out until work area is thoroughly cleaned.

SPECIFIC SAFETY RULES FOR GRINDER

17. DIRECT THE DISCHARGE OF THE SPINNING WIRE BRUSH AWAY FROM YOU.

Small particles and tiny wire fragments may be discharged at high velocity during the “cleaning” action with these brushes and may become imbedded in your skin.

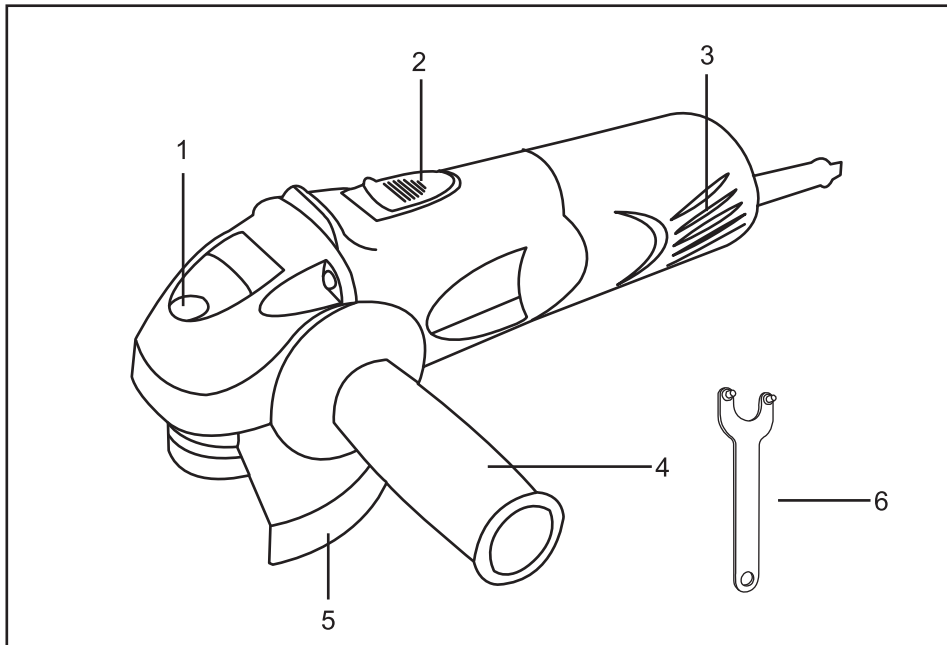


WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- 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.

DESCRIPTION



1. Spindle lock
2. Switch button
3. Rear motor housing

4. Side handle
5. Wheel guard
6. Lock nut spanner

ASSEMBLY

WHEEL GUARD INSTALLATION



WARNING:

Wheel guard must be attached when using disc grinding wheels. Always keep wheel guard between you and your work while grinding.

To attach the wheel guard DISCONNECT tool from power source. Position the guard on spindle neck, then secure guard with the collar screw.

LOCK NUT AND BACKING FLANGE

Your tool is equipped with a threaded spindle for mounting accessories. Always use the supplied lock nut (and backing flange) that has same thread size as spindle.

SIDE HANDLE

The side handle used to guide and balance the tool can be threaded into the front housing on either side of the tool, depending on personal preference and comfort. Use the side handle for safe control and ease of operation.

DISC GRINDING WHEEL ASSEMBLY (Fig.1)

Disconnect tool from power source. Be sure that wheel guard is in place for grinding. Thread BACKING FLANGE onto spindle, then place GRINDING WHEEL on the spindle. Thread on the lock nut and tighten nut using the supplied lock nut spanner, while holding the spindle lock in. TO REMOVE: Reverse procedure.

MASONRY CUTTING WHEEL ASSEMBLY

For cutting masonry materials like brick, tile, stone, etc., it is best to use a dry diamond cutting wheel. Use only lock nut and flange with equal diameters.



WARNING:

Do not use water or other cooling fluid with this tool for cutting.



WARNING:

When using an abrasive cutoff wheel, be sure to use only the special wheel guard designed for use with cut-off wheels. Never use cut-off wheel for side grinding.

Disconnect tool from power source before attaching cutting wheel. With cut off wheel guard in place, assemble flange, cutting wheel and lock nut. When cutting, make only small passes through workpiece at a time. Be aware that “Kickback” can occur at any time. Keep both hands on tool for maximum control. (Fig.2)

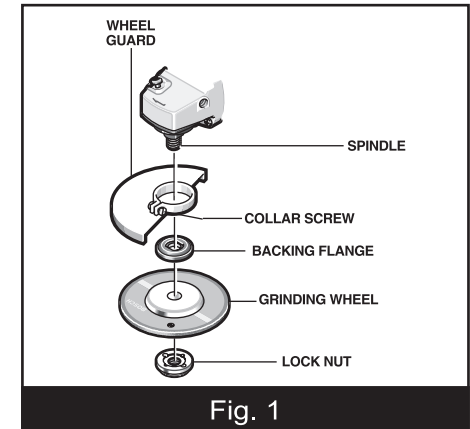


Fig. 1

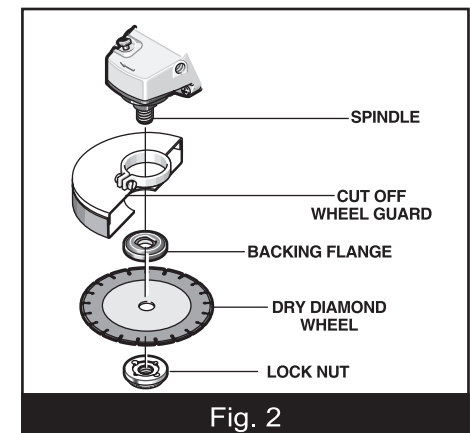


Fig. 2

ASSEMBLY

SANDING ACCESSORIES ASSEMBLY



WARNING:

Before attaching a backing pad be sure its maximum safe operating speed is not exceeded by the nameplate speed of the tool.



WARNING:

Wheel guard may not be used for most sanding operations. Always reinstall wheel guard when converting back to grinding operations.

TO INSTALL BACKING PAD AND SANDING DISC

Disconnect tool from power source. Set the tool on its top side (spindle up). Place the rubber backing pad onto the spindle shaft. Center the sanding disc on top of the backing pad and thread onto the spindle as far as you can with your fingers. Press in the spindle lock, then tighten the backing pad securely with the lock nut spanner. (Fig.3)

TO REMOVE BACKING PAD AND SANDING DISC

Disconnect tool from power source. Using the lock nut spanner unscrew the nut from the spindle, while holding spindle lock in.

WIRE BRUSH ASSEMBLY

Before assembling wire brush to this tool, disconnect from the power source. Wire brushes are equipped with their own threaded hub, simply thread on to spindle. Be sure to seat against shoulder before turning tool "ON".

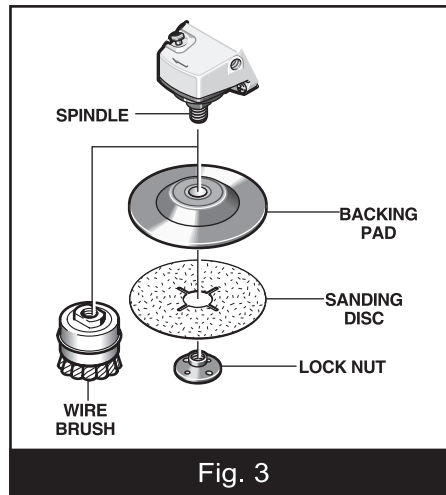


Fig. 3

OPERATION

SLIDE ON-OFF SWITCH WITH LOCK

The tool is switched "ON" by the switch button located at the top of the motor housing. The switch can be locked in the "ON" position, a convenience for long grinding operations.

To turn the tool "ON" without locking it, slide the switch button forward by applying pressure ONLY at the REAR portion of the button. When pressure is released the switch button will snap to "OFF" position.

To lock the switch "ON", slide the switch button forward and press "IN" the FRONT portion.

To unlock the switch, simply press and release the REAR portion of the button. Switch is spring loaded and will snap back automatically. (Fig.4)

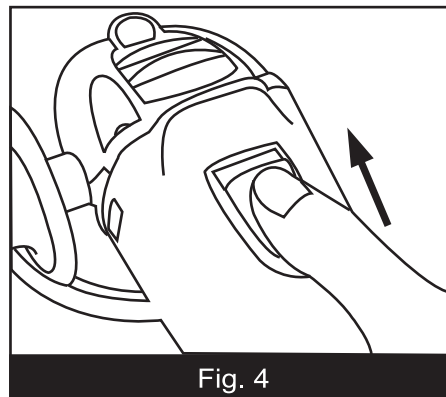


Fig. 4

OPERATION



WARNING:

Hold the tool with both hands while starting the tool, since torque from the motor can cause the tool to twist.

Start the tool before applying to work and let the tool come to full speed before contacting the workpiece. Lift the tool from the work before releasing the switch. DO NOT turn the switch "ON" and "OFF" while the tool is under load; this will greatly decrease the switch life.

GRINDING OPERATIONS SELECTING GRINDING WHEELS



WARNING:

Before using a grinding wheel, be certain that its maximum safe operating speed is not exceeded by the nameplate speed of the grinder. Do not exceed the recommended wheel diameter.

DISC GRINDING WHEELS

Grinding wheels should be carefully selected in order to use the grinder most efficiently. Wheels vary in type of abrasive, bond, hardness, grit size and structure. The correct type of wheel to use is determined by the job. Use disc grinding wheels for fast grinding of structural steel, heavy weld beads, steel casting, stainless steel and other ferrous metals.

GRINDING TIPS

Efficient grinding is achieved by controlling the pressure and keeping the angle between wheel and workpiece at 10° to 15°. If the wheel is flat, the tool is difficult to control. If the angle is too steep, the pressure is concentrated on a small area causing burning to the work surface.



WARNING:

Excessive or sudden pressure on the wheel will slow grinding action and put dangerous stresses on the wheel.

When grinding with a new wheel be certain to grind while pulling tool backwards until wheel becomes rounded on its edge. New wheels have sharp corners which tend to "bite" or cut into workpiece when pushing forward.

SANDING OPERATIONS SELECTING SANDING DISC

Sanding discs are made of extremely hard and sharp aluminum oxide grits, phenol-resin bonded to a sturdy fiber backing for fast heavy-duty service and long life. The discs vary as to size and spacing of the abrasive grits. OPEN COAT (type H) — used for soft materials and on paint or varnish. CLOSED COAT (type K) — used for metal, hardwood, stone, marble and other materials.

Sanding discs range in grit from 16 (very coarse) to 180 (very fine). To obtain best results, select sanding discs carefully. Many jobs require the use of several grit sizes and at times both "open coat and closed coat" discs are required to get the job done faster. See chart for application examples.

Operation: Refinishing painted wood or metal surfaces.	
REMARKS	GRIT
To remove paint and to smooth surface irregularities.	Coarse 16-24-30
To smooth the rough sanding.	Medium 36-50-80
To remove scratches left by previous discs.	Fine 100-120
To smooth surfaces for painting, polishing or waxing.	Very Fine 150-180

SANDING TIPS

For best results, tilt the Disc Sander at a 10° to 15° angle while sanding so that only about 1" of the surface around the edge of the disc contacts the work.



WARNING:

If the disc (accessory) is held flat or the back edge of the disc comes in contact with the work, a violent thrust to the side may result.

If sander is tilted too much, sanding action will be too great and a rough cut surface or gouging and snagging will result.

Guide the Disc Sander with crosswise strokes. Be careful not to hold the sander in one spot too long. Do not use a circular motion, as this makes swirl marks. Test before use on scrap stock.

Do not force or apply pressure when sanding. Use only the weight of the tool for pressure. Excess pressure actually slows the tool down. If faster stock removal is desired, change to a coarser grit disc.

OPERATION

Remove gummy paint from metal with an "open coat" disc. Sand until sparks start to appear, then stop and change to a "closed coat" disc to remove any remaining paint.

SANDING WOOD

When sanding wood the direction of the disc motion at the contact point should parallel the grain as much as possible. The rapid cut of discs and the swirl type scratch pattern they occasionally create generally prohibit their use for producing the final finish.

Scratches and circular marks are usually the result of using too coarse a grit. When changing to a finer grit, move across the sanding lines that were made by a previous coarser disc.

SANDING METAL

When sanding automobiles or appliances, wipe the metal clean with a non-flammable solvent or



WARNING:

Avoid bouncing and snagging the wire brush, especially when working corners, sharp edges etc. This can cause loss of control and kick-back.

commercial cleaner to remove all wax and grease. By doing this first, the sanding discs will sand better and last longer.

For heavy duty work, use a coarse grit disc first. Follow-up with a medium grit to remove scratches. To produce smooth finish, use fine grit disc.

WIRE BRUSH OPERATIONS

Wire brushes are intended to "clean" structural steel, castings, sheet metal, stone and concrete. They are used to remove rust, scale and paint.

MAINTENANCE

TOOL LUBRICATION

Your tool has been properly lubricated and is ready to use. It is recommended that tools with gears be regreased with a special gear lubricant at every brush change.

CARBON BRUSHES

The brushes and commutator in your tool have been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend every two to six months the brushes be examined. Only genuine RYOBI replacement brushes specially designed for your tool should be used.

BEARINGS

After about 300-400 hours of operation, or at every second brush change, the bearings should be replaced at RYOBI Service Center. Bearings which become noisy (due to heavy load or very abrasive material cutting) should be replaced at once to avoid overheating or motor failure.

CLEANING



WARNING:

To avoid accidents always disconnect the tool from the power supply before cleaning or performing any maintenance. The tool may be cleaned most effectively with compressed dry air. Always wear safety goggles when cleaning tools with compressed air.

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.



CAUTION:

Certain cleaning agents and solvents damage plastic parts. Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

SERVICE

Now that you have purchased your tool, should a need ever exist for repair parts or service, simply contact your nearest RYOBI Authorised Service Centre or other qualified service organisation. Be sure to provide all pertinent facts when you call or visit.

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