

Radley®

120V • 60Hz • 2 Amp

5" Random Orbit Sander

Owner's Manual



LISTED

Intertek
3042597
JD2522U

**READ ALL INSTRUCTIONS BEFORE FIRST USE.
KEEP THIS MANUAL FOR FUTURE REFERENCE.
KEEP AWAY FROM CHILDREN.**



**WEAR CSA APPROVED
EYE PROTECTION**



**WEAR EAR
PROTECTION**



**WEAR A
FACE MASK**

PRODUCT SPECIFICATIONS

Rating:	120V, 60Hz, AC
Amperes:	2.0 AMP
No load speed:	12,000 OPM
Disc diameter:	5"
Weight:	3 lb. 6 oz (1.53 kg)

Need Assistance?

Call us on our toll free customer support line:

1-866-349-8665 (Monday through Friday 9am – 5pm eastern time)

- Technical questions
- Replacement parts
- Parts missing from package



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GENERAL SAFETY WARNINGS

WARNING: Before using this tool or any of its accessories, read this manual and follow all Safety Rules and Operating Instructions. The important precautions, safeguards and instructions appearing in this manual are not meant to cover all possible situations. It must be understood that common sense and caution are factors which cannot be built into the product.

This instruction manual includes the following:

- General Safety Warnings
- Specific Safety Rules and Symbols
- Assembly
- Operation
- Maintenance
- Accessories

EYE, EAR & LUNG PROTECTION



**WEAR CSA APPROVED
EYE PROTECTION**



**WEAR EAR
PROTECTION**



**WEAR A
FACE MASK**

ALWAYS WEAR EYE PROTECTION THAT CONFORMS WITH CSA REQUIREMENTS or ANSI SAFETY STANDARD Z87.1

FLYING DEBRIS can cause permanent eye damage. Prescription eyeglasses ARE NOT a replacement for proper eye protection. **WARNING:** Non-compliant eyewear can cause serious injury if broken during the operation of a power tool.

ALWAYS WEAR EAR PROTECTION

WARNING: Use hearing protection, particularly during extended periods of operation of the tool, or if the operation is noisy.

WEAR A DUST MASK THAT IS DESIGNED TO BE USED WHEN OPERATING A POWER TOOL IN A DUSTY ENVIRONMENT.

WARNING: Dust that is created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals that are known to cause cancer, birth defects, or other genetic abnormalities. These chemicals include: Lead from lead-based paints; Crystalline silica from bricks, cement, and other masonry products; Arsenic and chromium from chemically treated lumber. The level of risk from exposure to these chemicals varies, according to how often this type of work is performed. In order to reduce exposure to these chemicals, work in a well-ventilated area, and use approved safety equipment, such as a dust mask that is specifically designed to filter out microscopic particles.

ELECTRICAL SAFETY



WARNING: To avoid electrical hazards, fire hazards or damage to the tool, use proper circuit protection.

This tool is wired at the factory for 120 V AC operation. It must be connected a 120 V AC, 15 A circuit that is protected by a time-delayed fuse or circuit breaker. To avoid shock or fire, replace power cord immediately if it is worn, cut or damaged in any way.

POWER TOOL SAFETY

WARNING: Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.**

WORK AREA SAFETY

Keep work area clean and well lit. Cluttered or dark areas invite accidents.

Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.

Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of a ground fault circuit interrupter (GFCI) reduces the risk of electric shock.

PERSONAL SAFETY

Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.

Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

POWER TOOL USE AND CARE

Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.

Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES

WARNING: Know your orbit sander. Do not plug the tool into the power source until you have read and understand this Instruction Manual. Learn the tool's applications and limitations, as well as the specific potential hazards related to this tool. Following this rule will reduce the risk of electric shock, fire, or serious injury.



WEAR CSA APPROVED EYE PROTECTION

Always wear eye protection. Any power tool can throw foreign objects into your eyes and cause permanent eye damage. ALWAYS wear safety goggles (not glasses) that comply with ANSI safety standard Z87.1. Everyday glasses have only impact resistant lenses. They ARE NOT safety glasses.

WARNING: Glasses or goggles not in compliance with ANSI Z87.1 could cause serious injury when they break.

WARNING: Always use a dust mask when sanding.

WARNING: Always use hearing protection when sanding, particularly during extended periods of operation.

WARNING: Always unplug the tool from the power source before changing the sanding disc or buffing pad and when cleaning the tool.

Do not wear gloves, neckties or loose clothing.

Secure the workpiece. Use clamps or a vice to hold the work when practical. It is safer than using your hand and it frees both hands to operate the tool.

Do not sand material too small to be securely held.

Make sure there are no nails or foreign objects in the part of the workpiece to be sanded.

Always keep hands out of the path of the sanding pad. Avoid awkward hand positions where a sudden slip could cause your hand to move into the path of the sanding pad.

To avoid injury from accidental starting, always remove the plug from the power source before installing or removing sandpaper or the dust duct bag.

GUIDELINES FOR EXTENSION CORDS

⚠ WARNING: Keep the extension cord clear of the working area. Position the cord so it will not get caught on the workpiece, tools or any other obstructions while you are working with the power tool.

Make sure any extension cord used with this tool is in good condition. When using an extension cord, be sure to use one of heavy enough gauge to carry the current the tool will draw. An undersized cord will cause a drop-in line voltage resulting in loss of power and overheating.

The table below shows the correct size to use according to cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number the heavier the cord.

Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it. Protect your extension cord from sharp objects, excessive heat and damp or wet areas.

Use a separate electrical circuit for your power tools. This circuit must not be less than 14-gauge wire and should be protected with either a 15A time delay fuse or circuit breaker. Before connecting the power tool to the power source, make sure the switch is in the OFF position and the power source is the same as indicated on the nameplate. Running at lower voltage will damage the motor.

⚠ WARNING: Repair or replace damaged or worn extension cords immediately.

Select the appropriate extension cord gauge and length using the chart below.

When operating a power tool outdoors, use an outdoor extension cord marked “W-A” or “W”. These cords are rated for outdoor use and reduce the risk of electric shock.

⚠ WARNING: Keep the extension cord clear of the working area. Position the cord so it will not get caught on the workpiece, tools or any other obstructions while you are working with the power tool.

MINIMUM GAUGE (AWG) EXTENSION CORDS (120 V use only)					
Ampere rating		Total length in feet			
More than	Not more than	7.5 m (25')	15 m (50')	30 m (100')	45 m (150')
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Applicable	

SYMBOLS

WARNING: Some of the following symbols may appear on the sander. Study these symbols and learn their meaning. Proper interpretation of these symbols will allow for more efficient and safer operation of this tool.

V	Volts		Direct current
A	Amperes	n_0	No load speed
Hz	Hertz		Alternating or direct current
W	Watts		Class II construction
kW	Kilowatts		Splash-proof construction
μ F	Microfarads		Watertight construction
L	Liters		Protective grounding at grounding terminal, Class I tools
kg	Kilograms	.../min	Revolutions or reciprocations per minute
H	Hours	\emptyset	Diameter
N/cm^2	Newtons per square centimeter	0	Off position
Pa	Pascals		Arrow
OPM	Oscillations per minute		Warning symbol
Min	Minutes		Wear your safety glasses
S	Seconds		
	Alternating current		
	Three-phase alternating current		
	Three-phase alternating current with neutral		

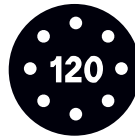
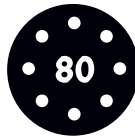
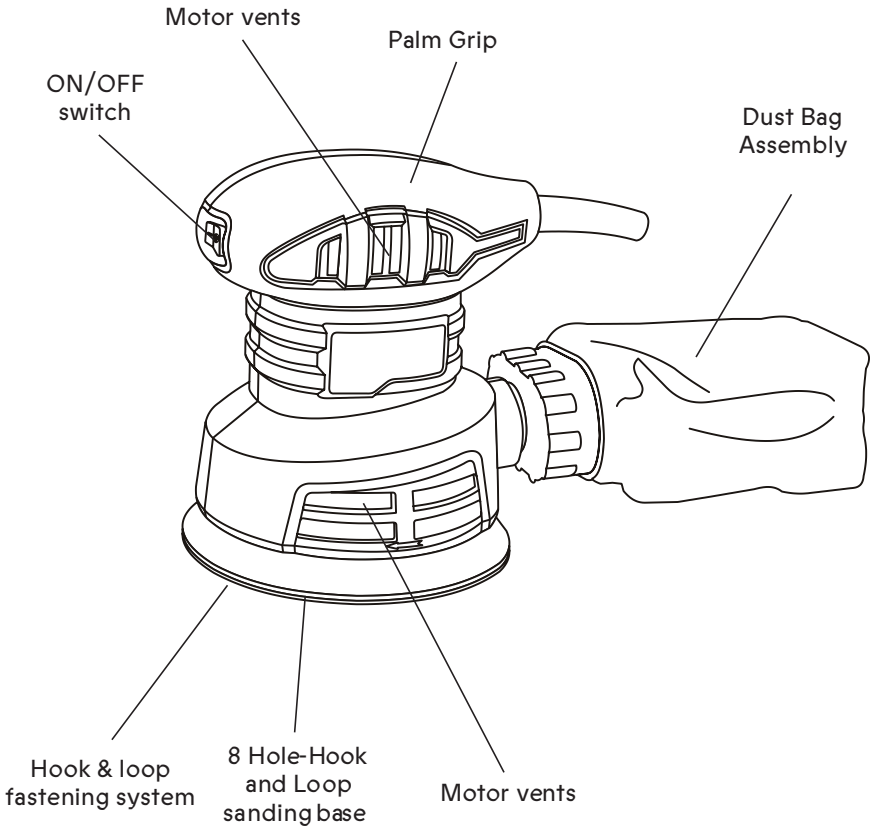
LISTED



Intertek
3042597
JD2522U

This symbol designates that this tool is listed with U.S. requirements by ETL Testing Laboratories, Inc. Conforms to UL Std. 60745-1 and 60745-2-4.

KNOW YOUR RANDOM ORBIT SANDER



3 x Hook & loop sandpapers

ASSEMBLY AND OPERATING

NOTE: The drawings in the assembly and operating section of this manual may differ slightly from the tool you purchased.

INSTALLING A SANDING DISC

To install a sanding disc, firmly press the sanding disc (1) onto the hook & loop pad (2) (Fig. 1).

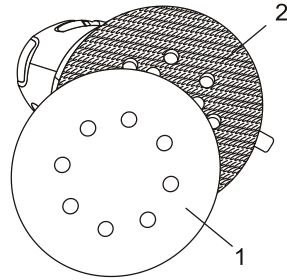


Fig. 1

NOTES:

- a) Place the sanding disc so the holes in the disc line up with the matching holes in the hook & loop pad.
- b) Press the sanding disc firmly onto the hook & loop pad.

To remove the sanding disc (1), simply peel the disc away from the hook & loop pad (2) (Fig. 2).

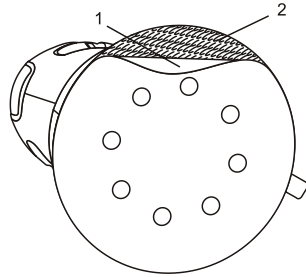


Fig. 2

ON/OFF SWITCH

To turn the switch ON, press the left hand side of the switch (1) (Fig. 3). To turn the switch OFF, press the right hand side of the switch (2).

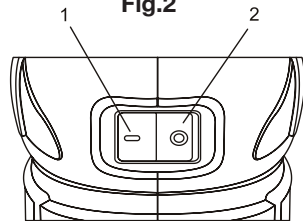


Fig. 3

CONNECTING THE DUST BAG ASSEMBLY TO THE SANDER

1. Slide the dust bag connector (1) into the dust port (2) in the rear of the sander (Fig. 4).

NOTE: Make sure the dust bag connector key (3) mates with the dust port key way (4).

2. When the dust bag connector is pressed fully into the dust port, turn the dust bag approximately 15° clockwise to lock the dust bag onto the sander.

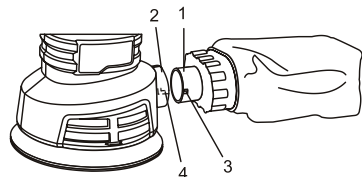


Fig. 4

ASSEMBLY AND OPERATING

CLEANING THE DUST BAG

Remove the dust bag assembly (1) from the dust port by rotating it COUNTERCLOCKWISE approximately 15° and pulling it out of the dust port (Fig. 5). Carefully shake the dust bag assembly with the end cap opening (2) pointing downward to remove the sanding dust. Reinstall the dust bag assembly as noted in Fig 4.

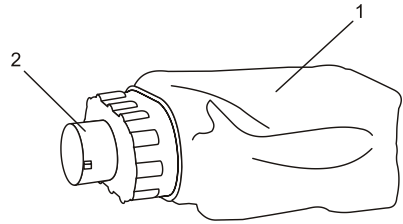


Fig.5

SANDING DISC SELECTION

Make sure you select the correct size and style of sanding disc for your sander. The correct disc will:

- Have a diameter of 5"
- Have a row of eight 3/8" holes that match the hole pattern in the sander base
- Have a backing for use with the hook & loop disc attachment system.

Selecting the correct grit and type of sandpaper is extremely important 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 most material. Fine 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 best job.

NOTE: Where the sanding disc grits are shown numerically, higher numbers indicate finer grit and lower numbers indicate coarser grit.

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. Fine grit should be used for finishing the surface. Always continue sanding with each grit until the surface is uniform.

⚠ WARNING

For safety reasons, the operator must read the sections of this Owner's Manual entitled "GENERAL SAFETY WARNINGS", "POWER TOOL SAFETY", "SPECIFIC SAFETY RULES", "EXTENSION CORD SAFETY" and "SYMBOLS" before using this sander.

Verify the following every time the sander is used:

1. Sander cord is not damaged.
2. Sanding disc is in good condition and properly installed on the sander.
3. The workpiece is properly secured and free from any foreign objects.
4. Safety glasses, safety goggles, or face shield is being worn.
5. Hearing protection and dust mask are being worn.

Failure to adhere to these safety rules can greatly increase the chances of serious injury.

ASSEMBLY AND OPERATING

SANDING

Clamp or otherwise secure your workpiece to prevent it from moving under the sander while being sanded. Secure the workpiece in a vice if possible.

WARNING: Any unsecured workpiece could be thrown toward the operator causing injury.

Place the sander on the workpiece so the complete sanding disc surface is in contact with the workpiece. Turn the sander ON by pressing on the left-hand side of the ON/OFF switch. Move the sander slowly over the workpiece making successive passes in parallel lines, circles or crosswise movements. Because the random orbital motion of the sanding disc moves in tiny circles, it is not necessary to move the sander with the grain or in the same direction for successive passes (Fig. 6).

Upon completion of the sanding operation, turn sander OFF by pressing on the right-hand side of the ON/OFF switch. Wait until the sanding disc comes to a complete stop before removing it from the workpiece.

WARNING: Your sander should only be turned ON when the entire surface of the sanding disc is in contact with the workpiece. Failure to follow this sanding procedure could result in a loose sanding disc, which could result in possible injury.

CLEAN THE DUST BAG OFTEN

Clean the dust bag often. It will be more efficient when it is not clogged with sanding dust. To clean the dust bag, see Fig. 5 on Page 12.

DO NOT FORCE THE SANDER.

The weight of the sander usually provides adequate pressure. Let the sander and the sanding disc do the work. Applying added pressure will slow the motor, increase the wear on the sandpaper and greatly reduce the sander speed. Excessive pressure will overload the motor causing possible damage from the motor overheating. It will also create an inferior finish on sanded work. Any finish or resin on wood will soften from the frictional heat, causing sandpaper to become clogged quickly. Do not sand in one spot too long as the sander's rapid action may remove too much material, making the surface uneven.

Extended periods of sanding may tend to overheat the motor. If this occurs, turn the sander OFF, wait until the sanding disc comes to a complete stop and remove it from the workpiece. Check to make sure your hands have not been covering the cooling vents. Let the motor cool before continuing the sanding operation.

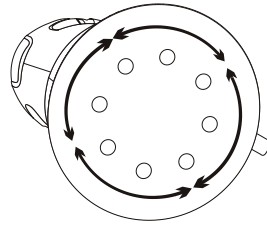


Fig. 6

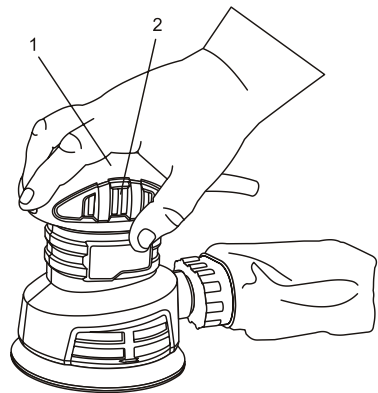


Fig. 7

NOTE: Hold the sander with one hand on the hand grip (1) on top of the sander (Fig. 7). Be careful NOT to cover the cooling vents (2) with your hand. Covering the cooling vents could cause the motor to be damaged by overheating.

MAINTENANCE

GENERAL

WARNING: When servicing, use only identical replacement parts. The use of any other part may create a hazard or cause product damage.

DO NOT use solvents when cleaning plastic parts. Plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use a clean cloth to remove dirt, dust, oil, grease etc.

WARNING: DO NOT allow brake fluids, gasoline, petroleum-based products, penetrating oils, etc. to come into contact with plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

DO NOT abuse power tools. Abusive practices can damage the tool and the workpiece.

WARNING: DO NOT attempt to modify tools or create accessories. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury. It will also void the warranty.

It has been found that electric tools are subjected to accelerated wear and possible premature failure when they are used on fiberglass boats and sports cars, wallboard, spackling compounds or plaster. The chips and grindings from these materials are highly abrasive to electric tool parts such as bearings, brushes, commutators, 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 it out with an air jet.

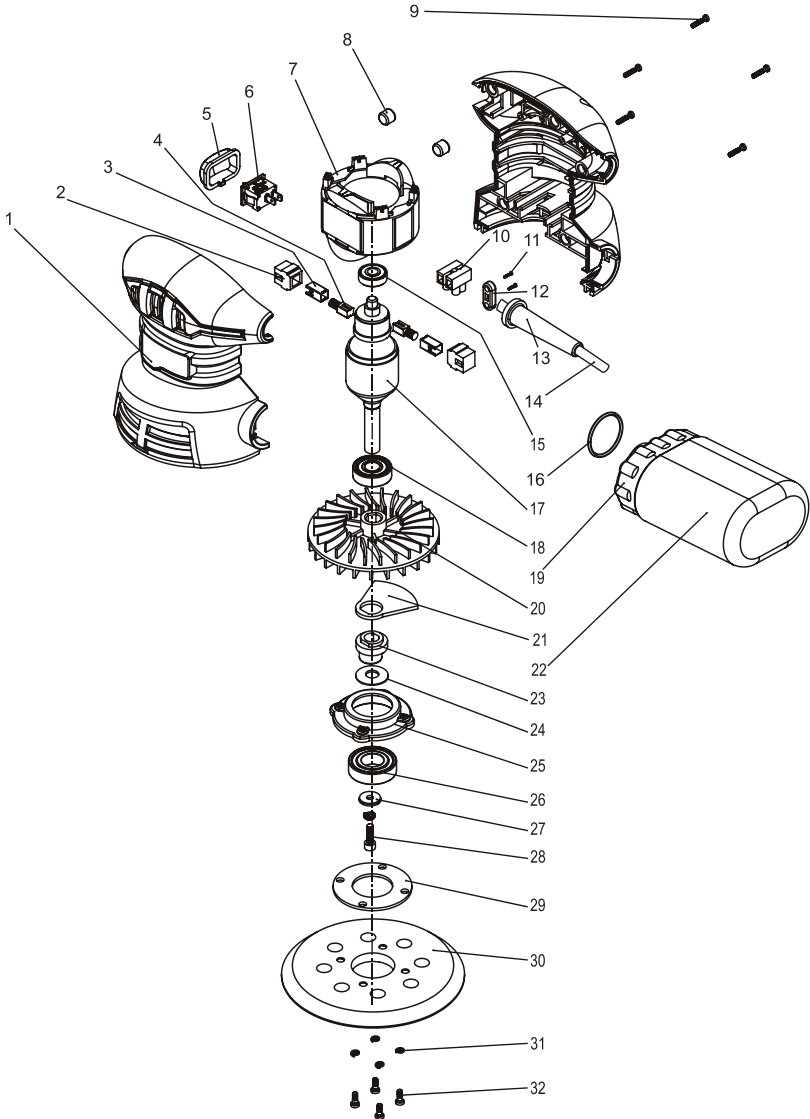
WARNING: Always wear safety goggles or safety glasses with side shields during all sanding operations. It is critical that you also wear safety goggles or safety glasses with side shields and a dust mask while blowing dust out of the sander with an air jet. Failure to take these safety precautions could result in permanent eye or lung damage.

LUBRICATION

All the bearings in this tool are lubricated with a sufficient amount of high-grade lubricant for the life of the unit under normal conditions. Therefore, no further lubrication is required.

EXPLODED VIEW

NOTE: The drawings in the exploded view section of this manual may differ slightly from the tool you purchased



PARTS LIST

WARNING: When servicing, use only original equipment replacement parts. The use of any other parts may create a safety hazard or cause damage to the sander.

Any attempt to repair or replace electrical parts on this sander may create a safety hazard unless repairs are performed by a qualified technician. For more information, call the Toll-free Helpline, at 1-866-349-8665.

Always order by PART NUMBER, not by key number.

Key #	Part #	Part Name	Quantity
1	3011060024	Housing assembly	1
2	3150060005	Brush holder support	2
3	2030070001	Brush holder	2
4	1230010120	Carbon brush	2
5	3140080036	Switch cover	1
6	1061250001	Switch	1
7	1020060021	Stator	1
8	3140060001	Rubber buffer	2
9	4030010106	Tapping screw ST3.9*19	5
10	1250010002	Tapping screw	1
11	4030010099	Tapping screw ST3.9*14	2
12	3150020001	Cord clamp	1
13	3140010054	Cord guard	1
14	1190030006	Cord	1
15	4010010053	Bearing 607 2RS	1
16	3140020023	"O" ring	1
17	1010060020	Rotor	1
18	4010010054	Bearing 6000 2RS	1
19	3180040048	Vacuum adaptor	1
20	3150010087	Fan	1
21	2030030196	Counterbalance	1
22	6150030048	Dust Bag	1
23	2010130030	Eccentric seat	1
24	2030170007	Dustproof washer	1
25	2020130001	Bearing block	1
26	4010010084	Bearing 6000RS	1
27	2030020033	Washer	1
28	4020080004	Hexagon screw M5*16	1
29	2030160007	Large washer	1
30	1150020007	Rubber backing pad	1
31	4040030011	Spring washer 5	5
32	4020010081	Special screw M5*14	4

WARRANTY

RADLEY RANDOM ORBIT SANDER WARRANTY

If this Radley Tool fails due to a defect in material or workmanship within one year from the date of purchase, return it to any Home Hardware store with the original bill of sale for exchange. This warranty does not include expendable parts including but not limited to blades, brushes, belts, light bulbs and / or batteries. This warranty covers defects in material or workmanship only. It does not cover normal wear and tear, failure due to abuse / misuse, or defects caused by careless or accidental mishandling. If this Radley product is used for commercial or rental purposes, this warranty does not apply.

120V • 60Hz • 2 AMP

5" Random Orbit Sander



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EXCLUSIVE TO HOME HARDWARE

For information on the entire line-up of Radley power tools visit homehardware.ca or your local Home Hardware retail store.

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