



# RANDOM ORBITAL SANDER

80153

## Owner's Manual



PRODUCT SPECIFICATIONS	
Rating:	120 V, 60 Hz AC
Amperes:	2.4 A
Speed:	5,000 – 12,000 OPM (no load)
Disc diameter:	5" (127 mm)
Weight:	3 lb 6 oz (1.53 kg)

GreatNeck Tools, LLC Mineola, NY 11501

REV 7/10

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## GENERAL SAFETY WARNINGS



**CAUTION:** Before using this tool or any of its accessories, read this manual and follow all Safety Rules and Operating Instructions.

This instruction manual includes the following:

- General Safety Rules
- Specific Safety Rules and Symbols
- Functional Description
- Assembly
- Operation
- Maintenance
- Accessories

## EYE, EAR & LUNG PROTECTION



**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.



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

**SAVE THESE INSTRUCTIONS FOR REFERENCE**

## GENERAL SAFETY WARNINGS



**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 operation. It must be connected to a 120 V, 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

## GENERAL SAFETY RULES

 **WARNING: Read and understand all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

## WORK AREA

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

Do not operate power tools in potentially explosive environments, such as in the presence of flammable liquids, gas or dust. Power tools create sparks that may ignite dust or fumes.

Keep bystanders, children and visitors away while operating the tool. Distractions can cause the operator to lose control.

## ELECTRICAL SAFETY

Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will only fit into a polarized plug one way.

If the plug does not fit into the outlet properly, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not alter the plug in any way. Double insulation eliminates the need for the three-pronged grounded power cord and grounded power supply system.

Avoid contact between the operator's body and grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if the operator's body is grounded.

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

Do not abuse the cord. Do not use the power cord to carry the tool or to pull the plug out of the outlet. Keep the power cord away from heat, oil, sharp edges, and moving parts. Replace a damaged power cord immediately. A damaged power cord increases the risk of electric shock.

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

## PERSONAL SAFETY

Stay alert, be aware of the surroundings, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating a power tool may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewellery.

Contain long hair. Keep hair, clothing, and gloves away from moving parts. Loose clothing, jewellery, or long hair can get caught in moving parts.

# POWER TOOL SAFETY

## *PERSONAL SAFETY – cont'd*

Avoid accidental start-ups. Verify that the switch is in the OFF position before plugging in the tool. Carrying a power tool with a finger on the switch or plugging in a tool that has the switch in the ON position invites accidents.

Remove adjusting keys and wrenches before turning the tool ON. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance allows the operator to maintain better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection.

Use a dust mask, non-skid safety shoes, a hardhat, or hearing protection when appropriate.

## **USE AND CARE OF POWER TOOLS**

Use clamps or another practical means to secure and support the workpiece to a stable platform. Holding the work in a hand or against the body is not stable, and may lead to loss of control.

Do not force the tool. Use the correct tool for the application. The correct tool will do the job better and safer when used at the rate that it was designed to work at.

Do not use a power tool if it cannot be turned ON or OFF using the power switch. A tool that cannot be controlled using the switch is dangerous, and must be repaired.

Disconnect the plug from the outlet before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of accidental start-ups.

When power tools are not in use, store them out of the reach of children or untrained persons. Tools are dangerous in the hands of untrained users.

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

Inspect the tool for misalignment or binding of moving parts, broken parts, and any other condition that may affect the operation of the tool. If it is damaged, have the tool serviced before using it. Many accidents are caused by poorly maintained tools.

Use only accessories that are recommended by the manufacturer for this model. Accessories that are suitable for one tool may become hazardous when used with another tool.

## **SERVICE**

Tool servicing must be performed by qualified personnel. Service or maintenance performed by non-qualified personnel could result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow the instructions in the Maintenance section of this Manual. The use of unauthorized parts or failure to follow the instructions in the Maintenance section of this Manual may create a risk of electric shock or injury.

## SPECIFIC SAFETY RULES

**⚠ WARNING: Know your random orbit sander. Read the Owner's Manual carefully. 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.



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: Wearing glasses or goggles that do not comply with ANSI Z87.1 could cause serious injury if they break.**

Always wear hearing protection and a dust mask when sanding. Use only in a well-ventilated area. Using personal safety devices and working in a safe environment reduces the risk of injury.

**⚠ 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 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 a sandpaper or dust duct bag.

**SAVE THESE INSTRUCTIONS FOR REFERENCE**

## EXTENSION CORD SAFETY

**⚠ 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 at right 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 15 A time delayed 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.









MINIMUM GAUGE (AWG) EXTENSION CORDS (120 V use only)					
Amperage rating		Total length			
More than	Not more than	25' (7.5 m)	50' (15 m)	100' (30 m)	150' (45 m)
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 palm belt sander. Study these symbols and learn their meanings. Proper interpretation of these symbols will allow for more efficient and safer operation of this tool.

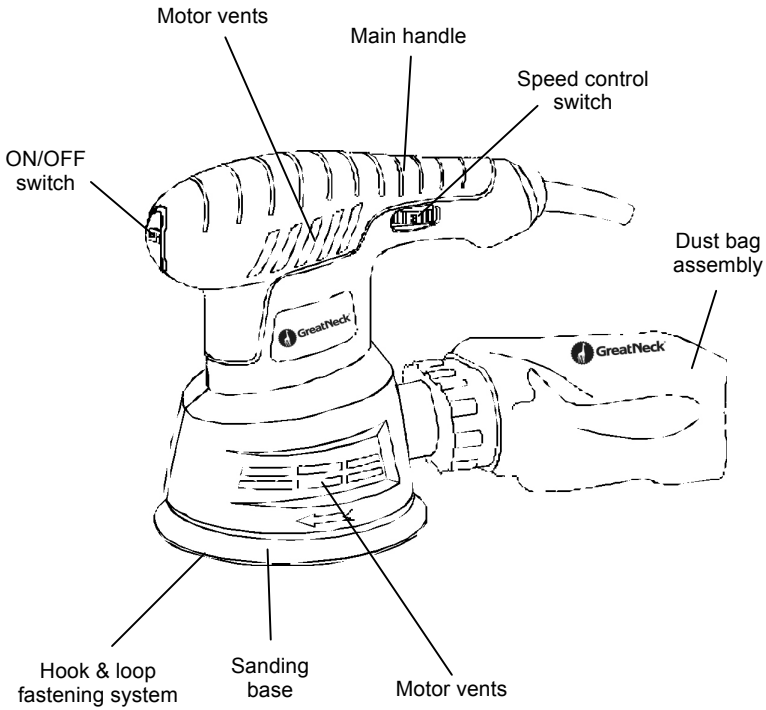
<b>V</b>	Volts
<b>A</b>	Amperes
<b>Hz</b>	Hertz
<b>W</b>	Watts
<b>kW</b>	Kilowatts
<b>μF</b>	Microfarads
<b>L</b>	Litres
<b>kg</b>	Kilograms
<b>H</b>	Hours
<b>N/cm<sup>2</sup></b>	Newtons per square centimetre
<b>Pa</b>	Pascals
<b>Min</b>	Minutes
<b>S</b>	Seconds
	Alternating current
	Three-phase alternating current
	Three-phase alternating current with neutral

	Direct current
<b>n<sub>o</sub></b>	No load speed
	Alternating or direct current
	Class II construction
	Splash-proof construction
	Watertight construction
	Protective grounding at grounding terminal, Class I tools
<b>.../min</b>	Revolutions or reciprocations per minute
<b>∅</b>	Diameter
<b>0</b>	Off position
	Arrow
	Warning symbol



This symbol designates that this tool is listed with Canadian requirements by ETL Testing Laboratories, Inc. Conforms to UL Std. 745-1, 745-2-4. Certified to CAN/CSA Std. C22.2 No. 745-1, 745-2-4.

## KNOW YOUR SANDER



# ACCESSORIES AND CONTENTS

## AVAILABLE ACCESSORIES

**⚠ WARNING:** Use only sanding discs and buffing pads that are recommended for this sander. Follow the instructions that accompany the accessories. The use of improper accessories may result in injury to the operator or damage to the sander.

Before using any accessory, carefully read the instructions or the owner's manual for the accessory.

- Replacement sanding discs

**⚠ WARNING:** If any part is missing or damaged, do not plug the tool into the power source until the missing or damaged part is replaced.

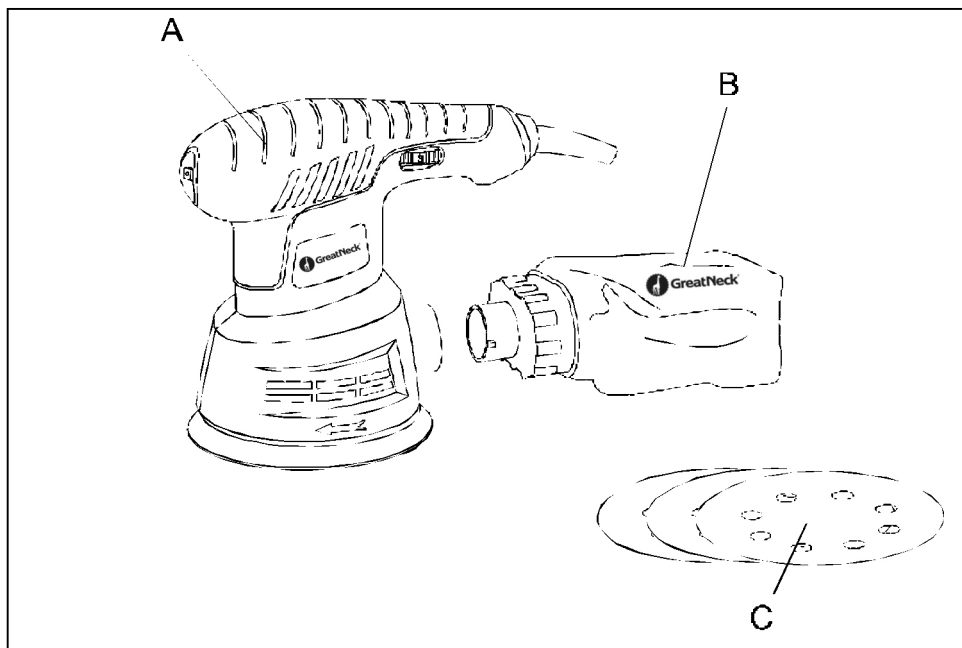
## CONTENTS

Carefully unpack the sander. Compare the contents against the "SANDER COMPONENTS" chart below.

See illustration of contents below.

**⚠ WARNING:** To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner or similar highly volatile solvents to clean the tool.

SANDER COMPONENTS		
KEY	DESCRIPTION	QTY
A	Sander	1
B	Dust bag assembly	1
C	Sanding discs	3
	Owner's manual	1



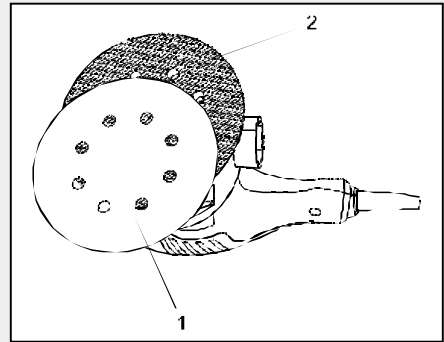
# ASSEMBLY AND OPERATING

## INSTALLING A SANDING DISC

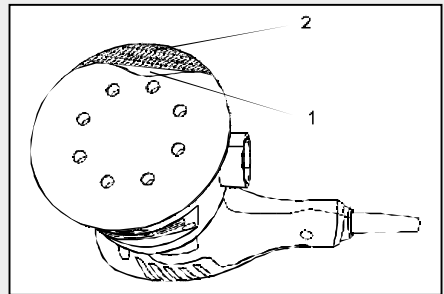
1. Firmly press the sanding disc (1) onto the hook & loop pad (2) (Fig. 1).

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



**Fig. 1**



**Fig. 2**

# ASSEMBLY AND OPERATING

## SPEED CONTROL SWITCH

To run the sander at its slowest speed, turn the speed control switch wheel (1) to #1 (Fig. 4). To run the sander at higher speeds, turn the speed control switch wheel to a higher number on the wheel. The sander will be running at full speed when the wheel is set at "MAX".

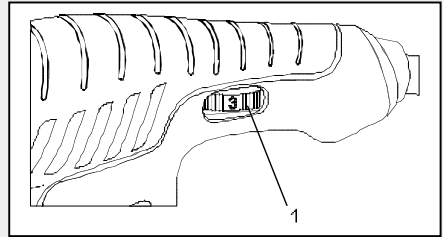


Fig. 4

## ON/OFF SWITCH

To turn the sander ON, push the right hand side of the switch (1) until the sander starts. To turn the sander OFF, press the left hand side of the switch (2) (Fig. 5).

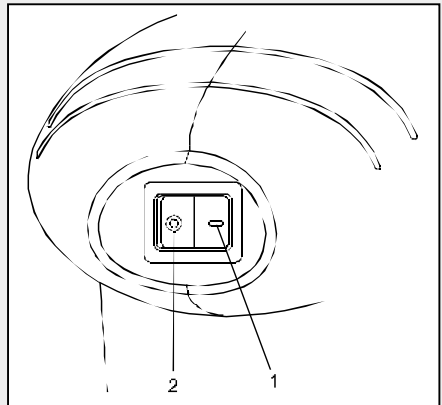


Fig. 5

## CONNECT THE DUST BAG TO THE SANDER

1. Slide the dust bag connector (1) into the dust port (2) in the rear of the sander (Fig. 6).

**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.
3. Remove the dust bag container (5) from the dust bag frame (6) periodically to remove the dust from the bag.

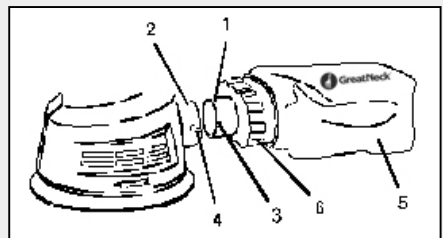


Fig. 6

**NOTE:** The opening of the dust bag is elasticized to permit easy removal and installation.

# ASSEMBLY AND OPERATING

## **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. Sander is the correct for the type for the job.
3. Safety glasses, hearing protection and dust mask are being worn.
4. Sanding disc is in good condition and properly installed.

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

## **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 3/8" holes that match the hole pattern in the sander base
- Have a backing for use with the hook & loop disc attachment system.

# ASSEMBLY AND OPERATING

## *SANDING DISC SELECTION – cont'd*

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.

## **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.

## ASSEMBLY AND OPERATING

### SANDING – cont'd

Set the speed control to the desired speed. Higher speeds tend to cut faster and produce a smoother finish. 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 right hand side of the ON/OFF switch. Move the sander slowly over 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. 7).

Upon completion of the sanding operation, turn sander OFF by pressing on the left 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.

**NOTE:** Hold the sander using the handle (1) on top of the sander (Fig. 8). 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.

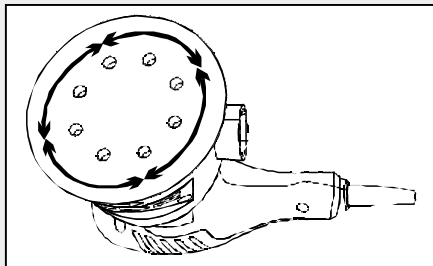


Fig. 7

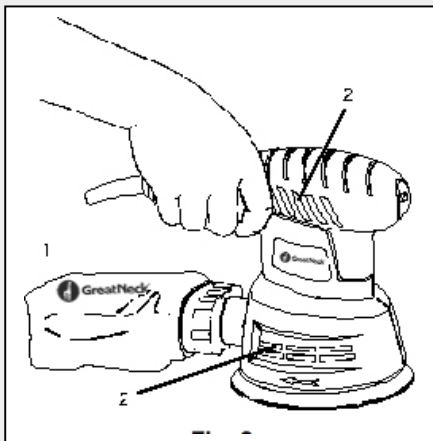


Fig. 8



## ASSEMBLY AND OPERATING

### *SANDING – cont'd*

**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 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.

### **CLEANING THE DUST BAG**

Clean the dust bag often. It will be more efficient when it is not clogged with sanding dust. To clean the dust bag, simply remove the dust bag from the sander and shake the sanding dust out of the bag and into a container.

# MAINTENANCE

## GENERAL

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

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. These substances contain chemicals that can damage, weaken or destroy plastic.**

Remove accumulated dust and debris regularly using a soft DRY brush.

**⚠ WARNING: Use safety goggles when using an air jet to blow dust out of the sander.**

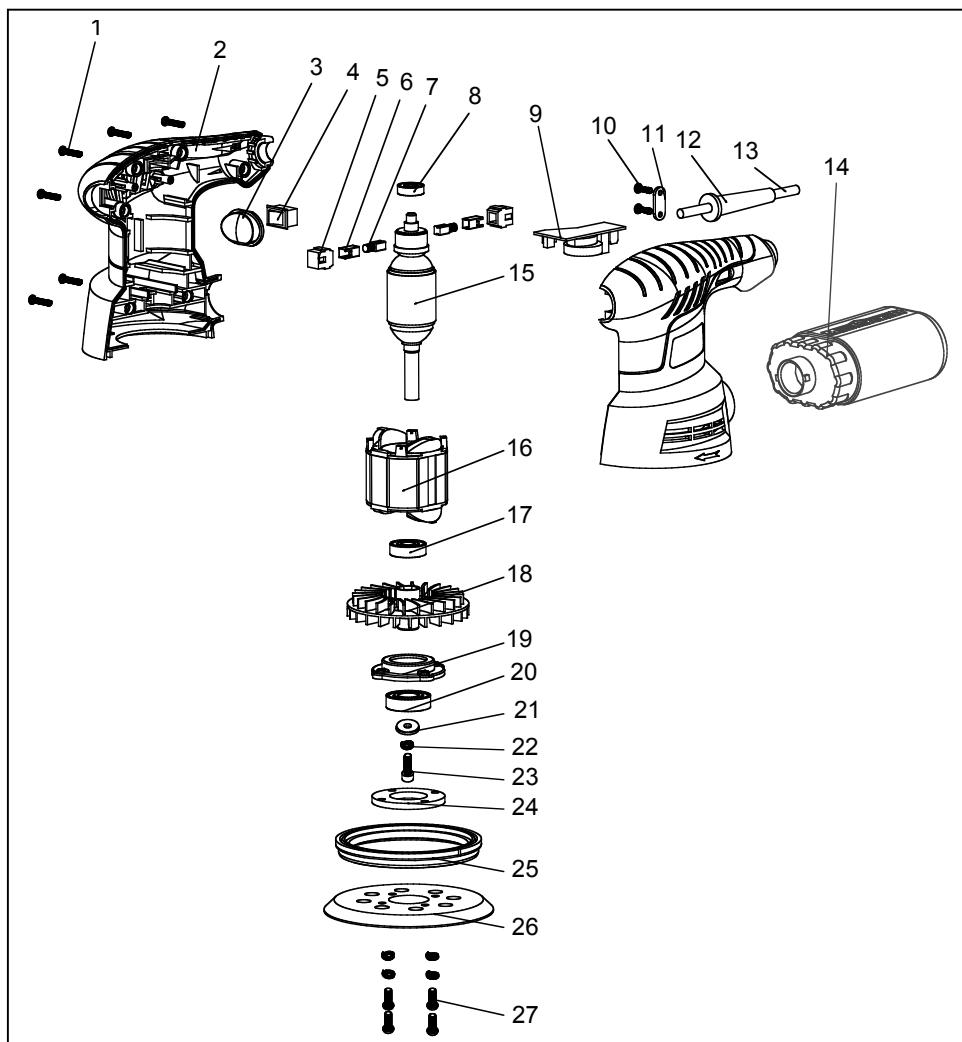
DO NOT abuse power tools. Abusive practices can damage the tool and the workpiece.

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

## 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 conditions. Therefore, no further lubrication is required.

# EXPLODED VIEW



## PARTS LIST

**⚠ WARNING:** When servicing, use only GreatNeck® 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 1-866-458-2472.

**Always order by PART NUMBER, not by key number.**

Key #	Part #	Part Name	Quantity
1	81053-1	Tapping screw ST3.9×19	6
2	81053-2	Housing	1
3	81053-3	Switch cover	1
4	81053-4	Switch	1
5	81053-5	Brush holder support	2
6	81053-6	Brush holder	2
7	81053-7	Carbon brush	2
8	81053-8	Bearing 607	1
9	81053-9	Variable speed PCB	1
10	81053-10	Tapping screw ST3.9×14	2
11	81053-11	Cord clamp	1
12	81053-12	Cord guard	1
13	81053-13	Cord set	1
14	81053-14	Dust bag assembly	1
15	81053-15	Rotor	1
16	81053-16	Stator	1
17	81053-17	Bearing 6000	1
18	81053-18	Aluminum fan	1
19	81053-19	Bearing seat	1
20	81053-20	Bearing 6002	1
21	81053-21	Washer	1
22	81053-22	Spring washer 5	1
23	81053-23	Hex screw M5×16	1
24	81053-24	Big washer (6mm)	1
25	81053-25	Brake ring	1
26	81053-26	Base plate	1
27	81053-27	Special screw M5×18	4

## **GREATNECK® ONE YEAR LIMITED WARRANTY**

If within one year from date of purchase, this product fails due to a defect in materials or workmanship, return the product with proof of purchase, postage prepaid to Great Neck Saw Mfrs. Inc., Mineola, NY 11501, for replacement with an item of equal or greater value. This warranty excludes incidental/consequential damages and failures due to misuse, abuse or abnormal wear and tear.

This warranty gives you specific rights, and you may also have other rights, which vary from state to state.

**Customer Service 1-866-458-2472**  
**[www.greatnecktools.com](http://www.greatnecktools.com)**

**ALWAYS WEAR SAFETY GOGGLES**  
**GREATNECK TOOLS LLC**  
**MINEOLA, NY 11501**  
**MADE IN CHINA**