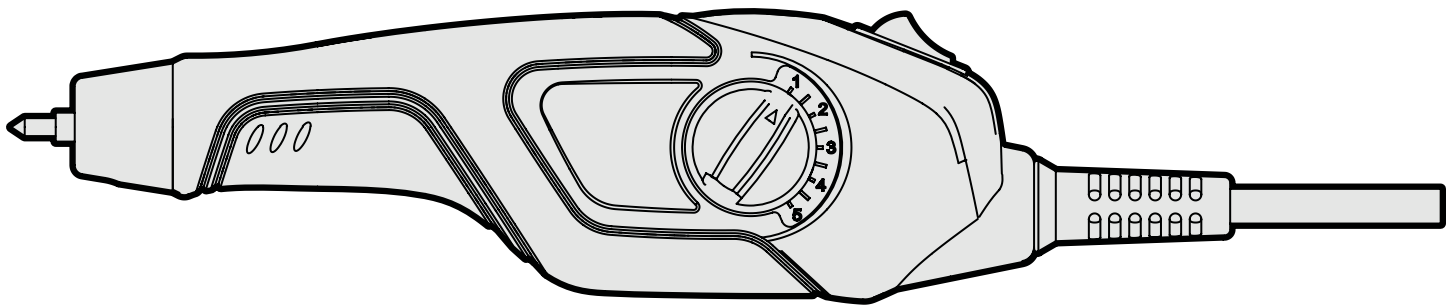




MODEL 21D, 21E

ELECTRIC ENGRAVER

Instruction Manual



NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:



1-847-429-9263 (M-F 8AM-5PM CST)



TECHSUPPORT@WENPRODUCTS.COM

IMPORTANT: Your new tool has been engineered and manufactured to WEN's highest standards for dependability, ease of operation, and operator safety. When properly cared for, this product will supply you years of rugged, trouble-free performance. Pay close attention to the rules for safe operation, warnings, and cautions. If you use your tool properly and for its intended purpose, you will enjoy years of safe, reliable service.

For replacement parts and the most up-to-date instruction manuals, visit ***WENPRODUCTS.COM***

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To purchase accessories for your tool, visit ***WENPRODUCTS.COM***

Replacement Carbide Tips (Part No. 21C-001)

INTRODUCTION

Thanks for purchasing the WEN Electric Engraver. We know you are excited to put your tool to work, but first, please take a moment to read through the manual. Safe operation of this tool requires that you read and understand this operator's manual and all the labels affixed to the tool. This manual provides information regarding potential safety concerns, as well as helpful assembly and operating instructions for your tool.

 Indicates danger, warning, or caution. The safety symbols and the explanations with them deserve your careful attention and understanding. Always follow the safety precautions to reduce the risk of fire, electric shock or personal injury. However, please note that these instructions and warnings are not substitutes for proper accident prevention measures.

NOTE: The following safety information is not meant to cover all possible conditions and situations that may occur. WEN reserves the right to change this product and specifications at any time without prior notice.

At WEN, we are continuously improving our products. If you find that your tool does not exactly match this manual, please visit **wenproducts.com** for the most up-to-date manual or contact our customer service at **1-847-429-9263**.

Keep this manual available to all users during the entire life of the tool and review it frequently to maximize safety for both yourself and others.

SPECIFICATIONS

Model Number	21D, 21E
Power	120V, 60 Hz, 0.2A, 13W
No-Load Speed	7,200 SPM
Engraving Tip	Tungsten Carbide
Product Weight	9 Ounces

GENERAL SAFETY RULES

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

Safety is a combination of common sense, staying alert and knowing how your item works. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE SAFETY INSTRUCTIONS.

WORK AREA SAFETY

- 1. Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- 2. 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.
- 3. Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

- 1. 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.
- 2. 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.
- 3. Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- 4. 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.
- 5. 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.

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

PERSONAL SAFETY

- 1. 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.
- 2. Use personal protective equipment. Always wear eye protection.** Protective equipment such as a respiratory mask, non-skid safety shoes and hearing protection used for appropriate conditions will reduce the risk of personal injury.
- 3. 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.
- 4. 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.
- 5. Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- 6. Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.

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SAVE THESE SAFETY INSTRUCTIONS.

7. 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

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

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

7. 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.

8. Use clamps to secure your workpiece to a stable surface. Holding a workpiece by hand or using your body to support it may lead to loss of control.

9. KEEP GUARDS IN PLACE and in working order.

SERVICE

1. 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.


CALIFORNIA PROPOSITION 65 WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- 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 with approved safety equipment such as dust masks specially designed to filter out microscopic particles.

SPECIFIC RULES FOR YOUR ENGRAVER

 **WARNING!** Do not operate the power tool until you have read and understood the following instructions and the warning labels.

VIBRATION SAFETY

1. TOOL PURPOSE. This engraver is designed to engrave or decorate metal, glass, leather, wood, plastic, and ceramic. Engraving other materials could result in fire, injury, or damage to the workpiece. Using the machine for any other purpose for which it is not designed may result in serious injuries, machine damage and voiding of the warranty.

2. PERSONAL SAFETY.

- Always wear ANSI Z87.1-approved glasses with side shields and a dust mask.
- Do not wear loose clothing or jewelry, as they might get drawn in by the tool. Tie back long hair.
- DO NOT wear gloves while operating this tool.

3. TOOL & ACCESSORIES INSPECTION. Before operation, check the tool and accessories for any damage or missing parts. Do not use the tool if any part is missing or damaged. Make sure all adjustments are correct and all connections are tight. Keep all guards in place.

4. Engraver ACCESSORIES.

- Do not use bits or any accessories that are damaged or worn.
- Make sure the bit is securely locked in the tool.
- Always turn off the unit before doing any cleaning or maintenance.

5. WORKPIECE REQUIREMENTS. Check the workpiece carefully for splits, knots, nails, or other obstructions. These types of blemishes may cause a safety risk during operation.

6. Hold the engraver only by the insulated gripping surfaces during operation. Fasteners that contact hidden wiring may make the exposed metal parts of the power tool “live” and could electrically shock the operator.

7. DO NOT use power tools in the presence of flammable liquids or gases.

8. Be sure you always have a firm footing and hold the tool firmly. Keep hands, hair and other beloved body parts away from the moving components of the tool.

9. Always secure the workpiece, especially if the workpiece is small.

10. AVOID DANGEROUS CONDITIONS. Do not use power tools in wet or damp areas or expose them to rain. ALWAYS keep your work area clean, uncluttered, and well-lit.

11. Do not touch the bit or the workpiece immediately after operation. They may be hot and could burn your skin.

12. KEEP BYSTANDERS AT A SAFE DISTANCE from the work area, especially when the tool is operating. NEVER allow children or pets near the tool.

13. ALWAYS remove the power cord plug from the electric outlet when making adjustments, changing parts, cleaning or working on the tool.

14. NEVER LEAVE A RUNNING TOOL UNATTENDED. Turn the power switch to OFF. Do not leave the tool until it has come to a complete stop.

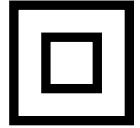
15. CLEANING. Never use solvents to clean plastic parts. Solvents could dissolve or otherwise damage the material. Use only a soft damp cloth to clean plastic parts.

16. REPLACEMENTS. Should any component of your engraver be missing / damaged or fail in any way, shut off the switch and remove the plug from power supply outlet. Replace the missing, damaged, or failed parts using only identical replacement parts before resuming operation.

ELECTRICAL INFORMATION

DOUBLE-INSULATED TOOL

The tool's electrical system is double-insulated where two systems of insulation are provided. This eliminates the need for the usual three-wire grounded power cord. Double-insulated tools do not need to be grounded, nor should a means for grounding be added to the product. All exposed metal parts are isolated from the internal metal components with protecting insulation.



IMPORTANT: Servicing a double-insulated product requires extreme care and knowledge of the system, and should be done only by qualified service personnel using identical replacement parts. Always use original factory replacement parts when servicing.

1. 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 a proper outlet. Do not modify the machine plug or the extension cord in any way.

2. Ground fault circuit interrupter protection (GFCI) should be provided on the circuit or outlet used for this power tool to reduce the risk of electric shock.

3. Service and repair. To avoid danger, electrical appliances must only be repaired by a qualified service technician using original replacement parts.

GUIDELINES AND RECOMMENDATIONS FOR EXTENSION CORDS

When using an extension cord, be sure to use one heavy enough to carry the current your product 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 be used according to cord length and ampere rating. When in doubt, use a heavier cord. The smaller the gauge number, the heavier the cord.

AMPERAGE	REQUIRED GAUGE FOR EXTENSION CORDS			
	25 ft.	50 ft.	100 ft.	150 ft.
0.2A	18 gauge	16 gauge	16 gauge	14 gauge

1. Examine extension cord before use. Make sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.

2. Do not abuse extension cord. Do not pull on cord to disconnect from receptacle; always disconnect by pulling on plug. Disconnect the extension cord from the receptacle before disconnecting the product from the extension cord. Protect your extension cords from sharp objects, excessive heat and damp/wet areas.

3. Use a separate electrical circuit for your tool. This circuit must not be less than a 12-gauge wire and should be protected with a 15A time-delayed fuse. Before connecting the motor to the power line, make sure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.

KNOW YOUR ELECTRIC ENGRAVER

UNPACKING

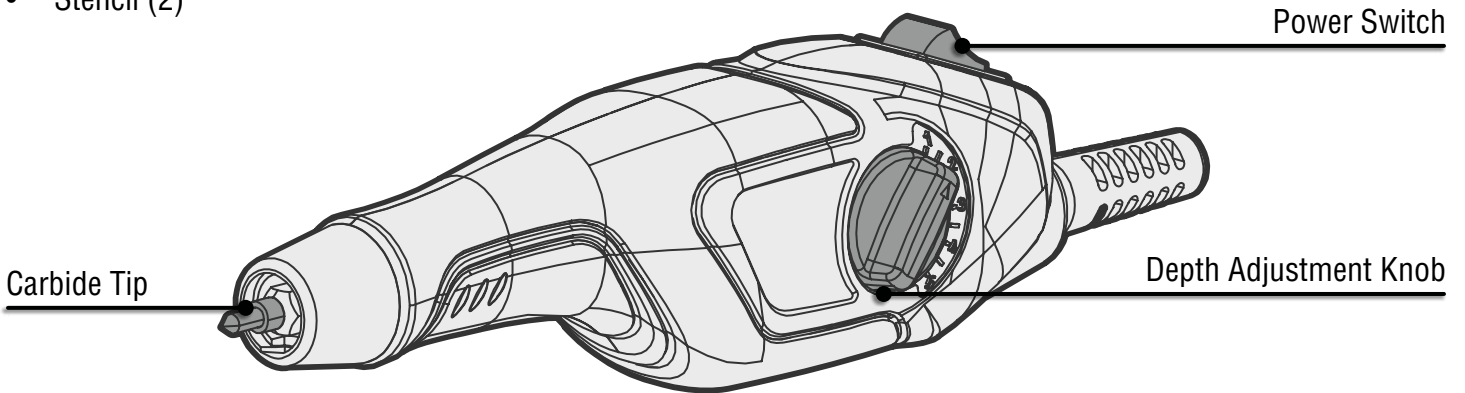
Carefully remove the electric engraver from the packaging and place it on a sturdy, flat surface. Make sure to take out all contents and accessories. Do not discard the packaging until everything is removed. Check to make sure you have all of the parts and accessories. If any part is missing or broken, please contact customer service at **1-847-429-9263** (M-F 8-5 CST), or email techsupport@wenproducts.com. Refer to the following diagrams to become familiarized with all the parts and controls of your engraver. The components will be referred to later in the manual for assembly and operation instructions.

TOOL PURPOSE

The engraver can be used to permanently mark metal, glass, plastic, wood, leather, ceramics and much more. Refer to the diagram below to become familiarized with the parts and controls of your engraver.

INCLUDED ACCESSORIES

- Carbide Tip (1)
- 1.5mm Hex Wrench (1)
- Stencil (2)

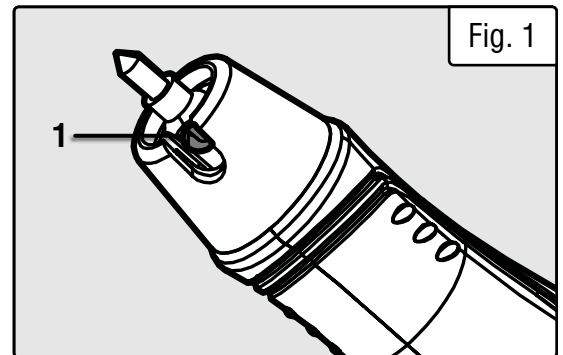


ASSEMBLY & ADJUSTMENTS

⚠ WARNING! To avoid injury from accidental startups, make sure that the tool is switched OFF and the power cord is unplugged from the power source when assembling the tool or making adjustments.

INSTALLING AN ENGRAVER TIP

1. Loosen the tip locking screw (Fig. 1 - 1) by turning it counterclockwise with the included hex wrench.
2. To fit the new engraving tip, insert the tip into the chuck ensuring the tip fully enters the chuck. A new tip should protrude from the end of the housing by approximately 8.5mm (~3/8 inch).
3. Tighten the tip locking screw fully by rotating in a clockwise direction.



OPERATION

⚠ WARNING! Do not let comfort or familiarity with the product replace strict adherence to product safety rules. Do not plug in or turn on the tool until it is fully assembled according to the instructions. Failure to follow the safety instructions may result in serious personal injury.

⚠ WARNING! Thoroughly read and understand all instructions before using this product. Save this manual.

TURNING ON / OFF

It is recommended that you practice on scrap material before you start your project.

1. Before using the engraver you must install the carbide tip (see instructions on p. 8).
2. Connect the engraver plug to the power supply. While firmly holding the engraver, toggle the power switch (Fig. 2 - 1) to the ON position.
3. Hold the engraver at an angle, like you would hold a pen. Do not press down hard while engraving; use light pressure while guiding the point over the work to be completed.

NOTE: Use one of the included stencils for more precise engraving.

4. Toggle the power switch to the OFF position to turn the engraver off. Disconnect the engraver plug from the power supply.

NOTE: Always allow the engraver to completely cool down after operation and before storage.

ADJUSTING THE DEPTH

The depth adjustment knob (Fig. 3 - 1) controls the stroke length and therefore the depth of engraving.

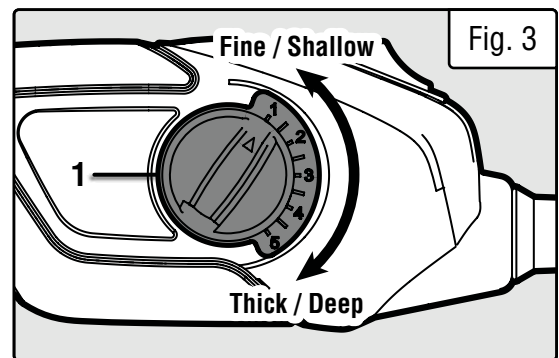
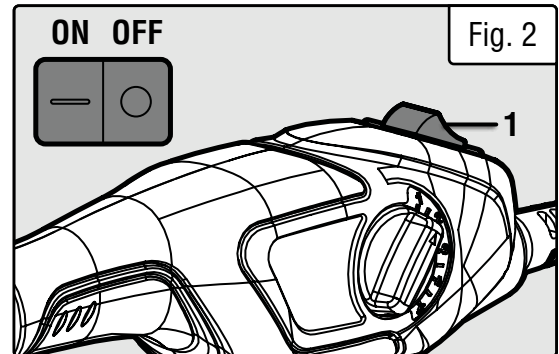
For a fine / shallow mark:

1. Turn the depth adjustment knob counterclockwise to position '1'.

For a thick / deep mark:

1. Turn the stroke adjustment dial clockwise to position '5'.

NOTE: The positions 1-5 get deeper as you turn the depth adjustment knob clockwise, 1 being the most shallow, and 5 being the most deep.



MAINTENANCE

⚠ WARNING! To avoid accidents, turn OFF and unplug the tool from the electrical outlet before cleaning, adjusting, or performing any maintenance work.

⚠ WARNING! Any attempt to repair or replace electrical parts on this tool may be hazardous. Servicing of the tool must be performed by a qualified technician. When servicing, use only identical WEN replacement parts. Use of other parts may be hazardous or induce product failure.

ROUTINE INSPECTION

Before each use, inspect the general condition of the tool. If any of these following conditions exist, do not use until parts are replaced or the saw is properly repaired.

Check for:

- Loose hardware
- Misalignment or binding of moving parts
- Damaged cord / electrical wiring
- Cracked or broken parts
- Any other condition that may affect its safe operation

NOTE: Electric tools used on fiberglass material, wall-board, spackling compounds, or plaster are subject to accelerated wear and possible premature failure because the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutators, etc. Consequently, we do not recommend using this tool for extended work on these types of materials. However, if you do work with any of these materials, it is extremely important to clean the tool using compressed air after operation.

CLEANING & STORAGE

1. Keep the ventilation openings free from dust and debris to prevent the motor from overheating.
2. Wipe the tool surfaces clean with a clean cloth. Make sure water does not get into the tool.

CAUTION! Most plastics are susceptible to damage from various types of commercial solvents. Do not use any solvents or cleaning products that could damage the plastic parts. Some of these include, but are not limited to, gasoline, carbon tetrachloride, chlorinated cleaning solvents, and detergents that contain ammonia.

3. Store the tool in a clean and dry place away from the reach of children. Store in temperatures between 41° to 86°F.

PRODUCT DISPOSAL

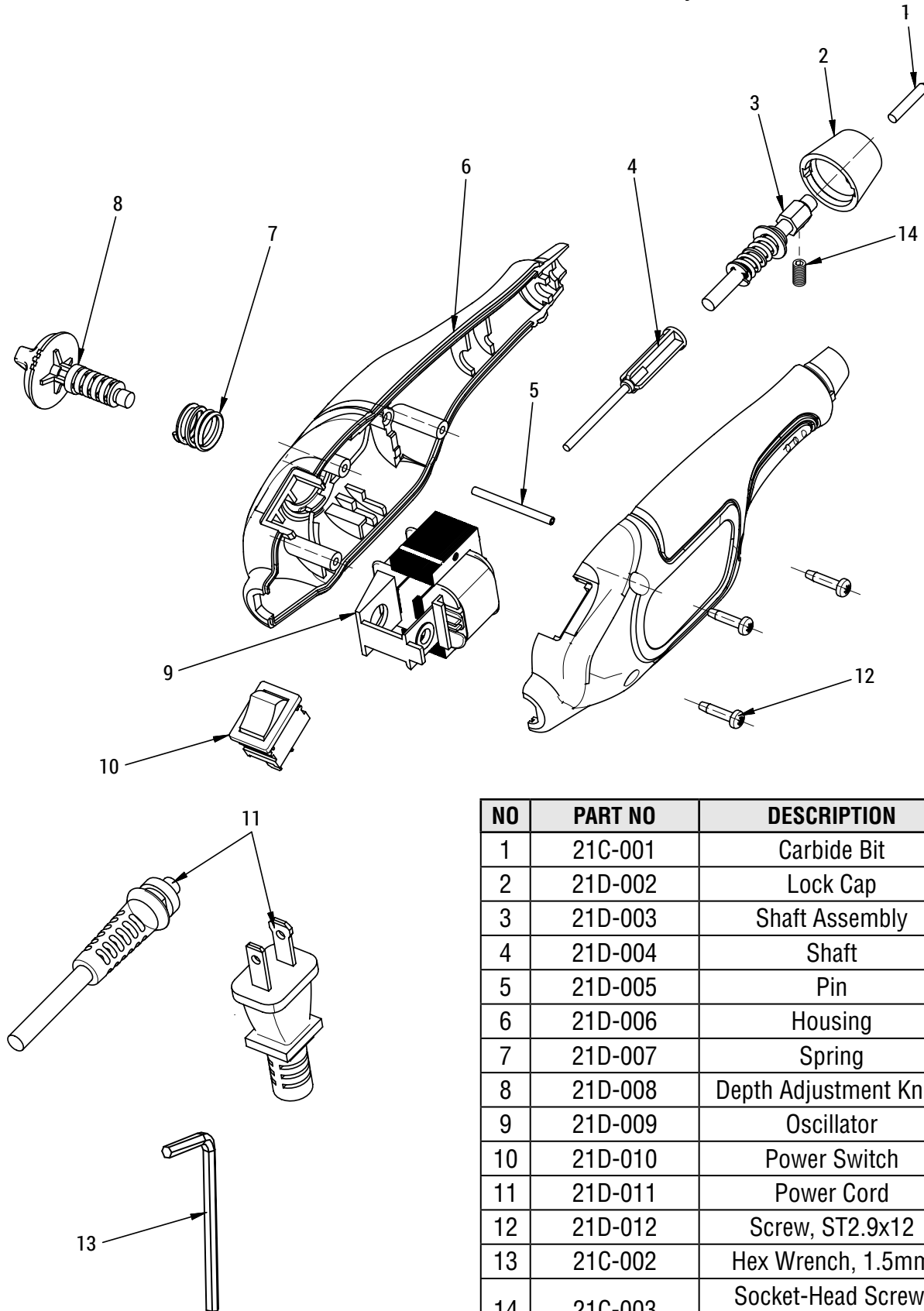
Used power tools should not be disposed of together with household waste. This product contains electronic components that should be recycled. Please take this product to your local recycling facility for responsible disposal and to minimize its environmental impact.



Please recycle the packaging and electronic components where facilities exist.

EXPLODED VIEW & PARTS LIST

NOTE: Not all parts may be available for purchase. Parts and accessories that wear down over the course of normal use are not covered under the warranty.



NO	PART NO	DESCRIPTION	QTY
1	21C-001	Carbide Bit	1
2	21D-002	Lock Cap	1
3	21D-003	Shaft Assembly	1
4	21D-004	Shaft	1
5	21D-005	Pin	1
6	21D-006	Housing	1
7	21D-007	Spring	1
8	21D-008	Depth Adjustment Knob	1
9	21D-009	Oscillator	1
10	21D-010	Power Switch	1
11	21D-011	Power Cord	1
12	21D-012	Screw, ST2.9x12	3
13	21C-002	Hex Wrench, 1.5mm	1
14	21C-003	Socket-Head Screw, M3-0.5x4	1

WARRANTY STATEMENT

WEN Products is committed to building tools that are dependable for years. Our warranties are consistent with this commitment and our dedication to quality.

LIMITED WARRANTY OF WEN PRODUCTS FOR HOME USE

GREAT LAKES TECHNOLOGIES, LLC (“Seller”) warrants to the original purchaser only, that all WEN consumer power tools will be free from defects in material or workmanship during personal use for a period of two (2) years from date of purchase or 500 hours of use; whichever comes first. Ninety days for all WEN products if the tool is used for professional or commercial use. Purchaser has 30 days from the date of purchase to report missing or damaged parts.

SELLER’S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the replacement of parts, without charge, which are defective in material or workmanship and which have not been subjected to misuse, alteration, careless handling, misrepair, abuse, neglect, normal wear and tear, improper maintenance, or other conditions adversely affecting the Product or the component of the Product, whether by accident or intentionally, by persons other than Seller. To make a claim under this Limited Warranty, you must make sure to keep a copy of your proof of purchase that clearly defines the Date of Purchase (month and year) and the Place of Purchase. Place of Purchase must be a direct vendor of Great Lakes Technologies, LLC. Purchasing through third party vendors, including but not limited to garage sales, pawn shops, resale shops, or any other secondhand merchant, voids the warranty included with this product. Contact techsupport@wenproducts.com or 1-847-429-9263 with the following information to make arrangements: your shipping address, phone number, serial number, required part numbers, and proof of purchase. Damaged or defective parts and products may need to be sent to WEN before the replacements can be shipped out.

Upon the confirmation of a WEN representative, your product may qualify for repairs and service work. When returning a product for warranty service, the shipping charges must be prepaid by the purchaser. The product must be shipped in its original container (or an equivalent), properly packed to withstand the hazards of shipment. The product must be fully insured with a copy of the proof of purchase enclosed. There must also be a description of the problem in order to help our repairs department diagnose and fix the issue. Repairs will be made and the product will be returned and shipped back to the purchaser at no charge for addresses within the contiguous United States.

THIS LIMITED WARRANTY DOES NOT APPLY TO ITEMS THAT WEAR OUT FROM REGULAR USAGE OVER TIME, INCLUDING BELTS, BRUSHES, BLADES, BATTERIES, ETC. ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO TWO (2) YEARS FROM DATE OF PURCHASE. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE IN THE U.S., PROVINCE TO PROVINCE IN CANADA AND FROM COUNTRY TO COUNTRY.

THIS LIMITED WARRANTY APPLIES ONLY TO ITEMS SOLD WITHIN THE UNITED STATES OF AMERICA, CANADA AND THE COMMONWEALTH OF PUERTO RICO. FOR WARRANTY COVERAGE WITHIN OTHER COUNTRIES, CONTACT THE WEN CUSTOMER SUPPORT LINE. FOR WARRANTY PARTS OR PRODUCTS REPAIRED UNDER WARRANTY SHIPPING TO ADDRESSES OUTSIDE OF THE CONTIGUOUS UNITED STATES, ADDITIONAL SHIPPING CHARGES MAY APPLY.