

### **User Manual**

Read this manual before using machine to avoid serious injury and damage

# 60200PC-WHD

# 13" 2-Speed Portable Planer

With Spiral Style Cutterhead and 4-Sided Carbide Inserts



For technical support, email techservices@wahudatools.com or call at **877-568-8879** VER. 05.28.21

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### **INTRODUCTION**

This user manual is intended for use by anyone working with this machine. It should be kept available for immediate reference so that all operations can be performed with maximum efficiency and safety. Do not attempt to perform maintenance or operate this machine until you have read and understand the information contained in this manual. The drawings, illustrations, photographs, and specifications in this user manual represent your machine at time of print. However, changes may be made to your machine or this manual at any time with no obligation to WAHUDA.

### **WARRANTY**

#### 2 - YEAR LIMITED WARRANTY

WAHUDA warrants its machinery to be free of defects in workmanship and materials for a period of two (2) years from the date of the original purchase by the original owner. This warranty applies to products sold in United States only. The warranty does not apply to any product used for professional or commercial production purposes nor for industrial or educational applications. Such cases are covered by our 1 year Limited Warranty with the Conditions and Exceptions.

Warranty does not include failures, breakage or defects deemed after inspection by an Authorized Service Center or our agent to have been directly or indirectly caused by or resulting from improper use, lack of or improper maintenance, misuse or abuse, negligence, accidents, damage in handling or transport, or normal wear and tear of any part or component. Examples are consumables such as inserts and knives or wear items like drive belts, bearings or brushes. Additionally, warranty is void if repairs or alterations are made to the machine by an unauthorized service center without the direct consent of WAHUDA.

To file a claim of warranty, call toll free 877-568-8879 or email techservices@wahudatools.com . Warranty applies to the original buyer only and cannot be transferred. Your machines date of purchase and serial number have already been registered with WAHUDA when shipped. If you purchased your machine from one of our authorized dealers, please go online at www.wahudatools.com and register your machine online. Thus, you will only need to provide your full name when contacting WAHUDA.

The defective units should be returned Freight prepaid to WAHUDA's Authorized Service Center for inspection. If the warranty claim is considered to be invalid due to exclusions listed above, WAHUDA will at your direction dispose of or return the product. In the event you choose to have the product returned you will be responsible for the handling and shipping cost of the return.

WAHUDA furnishes the above warranties in lieu of all other warranties, express or implied. WAHUDA shall not be liable for any special, indirect, incidental, punitive or consequential damages, including without limitation to loss of profits arising from or related to the warranty, the breach of any agreement or warranty, or the operation or use of its machinery, including without limitation damages arising from damage to fixtures, tools, equipment, parts or materials, direct or indirect loss caused by any other part, loss of revenue or profits, financing or interest charges, and claims by and third person, whether or not notice of such possible damages has been given to WAHUDA. Not Responsible for damages of any kind for any delay by or failure of WAHUDA to perform its obligations under this agreement or claims made a subject of a legal proceeding against WAHUDA more than one (1) year after such cause of action first arose.

The validity, construction and performance of this Warranty and any sale of machinery by WAHUDA shall be governed by the law of the State of Tennessee, without regard to conflicts of law's provisions of any jurisdiction. Any action related in any way to any alleged or actual offer, acceptance or sale by WAHUDA or any claim related to the performance of and agreement including without limitation this Warranty, shall take place in the federal or state courts in Shelby County, Tennessee.

WAHUDA reserves the right to change the specifications of its machines without prior notice.

### **PRODUCT SPECIFICATIONS**

2 Speed Feed - High/ Low 26 FPM / 18 FPM

Cutterhead speed RPM 10,000

Motor RPM 23000+/-10% (No Load)

Cutterhead diameter 2"

Max planer capacity 6" x 13"

Max depth of cut @ 6" width 1/8"

Max depth of cut @ 13" width 1/16"

Minimum Length of Stock 9 1/2"

Minimum Thickness of Stock 1/8"

Carbide cutter inserts qty 26 (4-sided)

Motor power input 120 V, 60 Hz, AC Only, 15 Amp

Shipping Weight 92 lbs

Net Weight 77 lbs

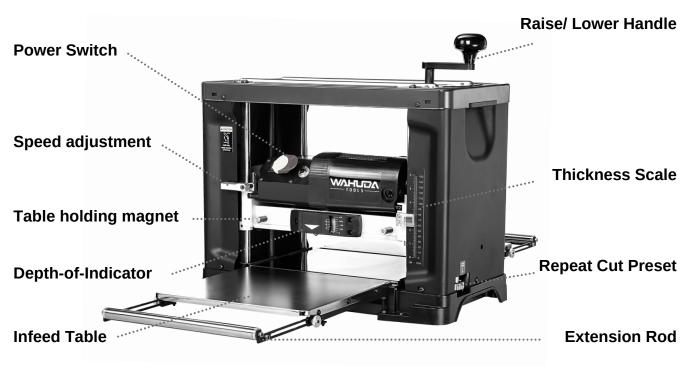
Shipping Dimensions 25.2" W x 20" D x 21.6" H

Machine Overall Dimensions (extensions out - crank handle mounted) 22" W x 45" D x 20 ¾" H

Machine Dimensions (tables up – crank handle removed) 22" W x 14" D x 17 1/4" H

Dust Port Opening 4" (2 ½" with provided adapter)

### FEATURE IDENTIFICATION



### **GENERAL SAFETY**

**NOTE**: The **WARNING!** and **CAUTION!** symbols indicate a potentially hazardous situation which, if not avoided, COULD result in death or serious injury. READ THIS MANUAL completely before assembling and operating this machine.

**WARNING!** TO AVOID serious injury, death, or damage to the machine, please read, understand, and follow, all Safety and Operating Instructions before assembling and operating this machine. This manual is not totally comprehensive. It does not and cannot convey every possible safety and operational problem which may arise while using this machine. The manual will cover many of the basic and specific safety procedures needed in an industrial environment.

All federal and state laws, and any regulations having jurisdiction covering the safety requirements for use of this machine, take precedence over the statements in this manual. Users of this machine must adhere to all such regulations.

<u>WARNING!</u> Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. The dust may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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.

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

**WARNING!** ALWAYS wear eye protection. Any machine can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are NOT safety glasses. ALWAYS wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.

**WARNING!** ALWAYS wear hearing protection. Plain cotton is not an acceptable protective device. Hearing equipment should comply with ANSI S3.19 Standards.

**WARNING!** ALWAYS wear a NIOSH/OSHA approved dust mask to prevent inhaling dangerous dust or airborne particles.

ALWAYS keep the work area clean, well lit, and organized. DO NOT work in an area that has slippery floor surfaces from debris, grease, and wax.

### **GENERAL SAFETY** (cont.)

<u>CAUTION!</u> ALWAYS unplug the machine from the electrical receptacle when making adjustments, changing parts or performing any maintenance.

AVOID ACCIDENTAL STARTING. Make sure that the power switch is in the "OFF" position before plugging in the power cord to the electrical receptacle.

<u>WARNING!</u> AVOID a dangerous working environment. DO NOT use electrical tools in a damp environment or expose them to rain or moisture.

<u>WARNING!</u> CHILDPROOF THE WORKSHOP AREA by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks.

**CAUTION!** DO NOT use electrical tools in the presence of flammable liquids or gasses.

DO NOT FORCE the machine to perform an operation for which it was not designed. It will do a safer and higher quality job by only performing operations for which the machine was intended.

<u>WARNING!</u> DO NOT stand on a machine. Serious injury could result if it tips over or you accidentally contact any moving part.

DO NOT store anything above or near the machine.

**WARNING!** DO NOT operate any machine or tool if under the influence of drugs, alcohol, or medication.

EACH AND EVERY time, check for damaged parts prior to using any machine. Carefully check all guards to see that they operate properly, are not damaged, and perform their intended functions.

Check for alignment, binding or breakage of all moving parts. Any guard or other part that is damaged should be immediately repaired or replaced.

<u>WARNING!</u> Ground all machines. If any machine is supplied with a 3-prong plug, it must be plugged into a 3-contact electrical receptacle. The third prong is used to ground the tool and provide protection against accidental electric shock. DO NOT remove the third prong.

<u>CAUTION!</u> Keep visitors and children away from any machine. DO NOT permit people to be in the immediate work area, especially when the machine is operating.

KEEP protective guards in place and in working order.

### **GENERAL SAFETY** (cont.)

<u>CAUTION!</u> MAINTAIN your balance. DO NOT extend yourself over the tool. Wear oil resistant rubber soled shoes. Keep floor clear of debris, grease, and wax.

MAINTAIN all machines with care. ALWAYS KEEP machine clean and in good working order. KEEP all blades and tool bits sharp.

NEVER leave a machine running, unattended. Turn the power switch to the OFF position. DO NOT leave the machine until it has come to a complete stop.

REMOVE ALL MAINTENANCE TOOLS from the immediate area prior to turning the machine ON.

**WARNING!** STAY ALERT, watch what you are doing, and use common sense when operating any machine. DO NOT operate any machine tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

**WARNING!** USE ONLY recommended accessories. Use of incorrect or improper accessories could cause serious injury to the operator and cause damage to the machine. If in doubt, DO NOT use it.

THE USE of extension cords is not recommended for 230V equipment. It is better to arrange the placement of your equipment and the installed wiring to eliminate the need for an extension cord. If an extension cord is necessary, refer to the chart in the Grounding Instructions section to determine the minimum gauge for the extension cord. The extension cord must also contain a ground wire and plug pin.

**CAUTION!** Wear proper clothing, DO NOT wear loose clothing, gloves, neckties, or jewelry. These items can get caught in the machine during operations and pull the operator into the moving parts. Users must wear a protective cover on their hair, if the hair is long, to prevent it from contacting any moving parts.

SAVE these instructions and refer to them frequently and use them to instruct other users.

**NOTE:** Information regarding the safe and proper operation of this tool is also available from the following sources:

Power Tool Institute 1300 Summer Avenue Cleveland, OH 44115-2851 www.powertoolinstitute.org American National Standards Institute 23 West 43rd Street, 4th Floor New York, NY 10036 www.ansi.org

National Safety Council 1121 Spring Lake Drive Itasca, IL 60143-3201 ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor Relations www.osha.gov

#### **PRODUCT SAFETY**

- 1. Serious personal injury may occur if normal safety precautions are overlooked or ignored. Accidents are frequently caused by lack of familiarity or failure to pay attention. Obtain advice from supervisor, instructor, or another qualified individual who is familiar with this machine and its operations.
- 2. Every work area is different. Always consider safety first, as it applies to your work area. Use this machine with respect and caution. Failure to do so could result in serious personal injury and damage to the machine.
- 3. Prevent electrical shock. Follow all electrical and safety codes, including the National Electrical Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only
- 4. WARNING! TO REDUCE the risk of electrical shock. DO NOT use this machine outdoors. DO NOT expose to rain. Store indoors in a dry area.
- 5.STOP using this machine, if at any time you experience difficulties in performing any operation. Contact your supervisor, instructor or machine service center immediately.
- 6. Safety decals are on this machine to warn and direct you to how to protector yourself or visitors from personal injury. These decals MUST be maintained so that they are legible. REPLACE decals that are not legible.
- 7.DO NOT leave the unit plugged into the electrical outlet. Unplug the unit from the outlet when not in use and before servicing, performing maintenance tasks, or cleaning.
- 8. WARNING! DO NOT handle the plug or planer with wet hands
- 9. USE only accessories as described in this manual and recommended by WAHUDA.
- 10.DO NOT pull the planer by the power cord. NEVER allow the power cord to come in contact with sharp edges, hot surfaces, oil or grease.
- 11.ALWAYS turn the power switch "OFF" before unplugging the planer. DO NOT unplug the planer by pulling on the power cord. ALWAYS grasp the plug, not the cord.
- 12. REPLACE a damaged cord immediately. DO NOT use a damaged cord or plug.
- 13.DO NOT use the planer as a toy. DO NOT use near or around children.
- 14. ENSURE that the machine sits firmly before using. Attach or clamp planer to a bench top prior to operation.
- 15. This machine is designed to process wood ONLY.
- 16. **WARNING!** NEVER position fingers or thumbs near the cutterhead.
- 17. Long pieces of stock should ALWAYS be supported with some type of fixtures
- 18.DO NOT operate the planer with dull or damaged blades.
- 19. MAKE CERTAIN that the planer is properly adjusted prior to use.
- 20. DO NOT try and remove excessive amounts of wood in one single pass.
- 21.INSPECT all stock before beginning operations ensuring that there are no foreign objects embedded in the wood, loose knots, or knots that may become loose during operation.
- 22. WARNING! DO NOT attempt to remove jams until power is disconnected and all moving parts have come to a complete stop.
- 23. MAKE SURE that there is adequate operating space on both the infeed and outfeed sides of the planer before operating.
- 24. WARNING! DO NOT attempt to plane wood that is less than 9 1/2" long, narrower than 3/4", or less than 1/8" thick.

### **GROUNDING INSTRUCTIONS**

**WARNING!** This machine MUST BE GROUNDED while in use to protect the operator from electric shock. In the event of a malfunction or breakdown, GROUNDING provides the path of least resistance for electric current and reduces the risk of electric shock. The plug MUST be plugged into a matching electrical receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.

If a plug is provided with your machine DO NOT modify the plug. If it will not fit your electrical receptacle, have a qualified electrician install the proper connections to meet all electrical codes local and state. ALL connections must also adhere to NEC and OSHA mandates.

<u>WARNING!</u> IMPROPER ELECTRICAL CONNECTION of the equipment-grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment-grounding conductor. DO NOT connect the equipment-grounding conductor to a live terminal if repair or replacement of the electric cord or plug is necessary.

Check with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

<u>WARNING!</u> Electrocution or fire could result if this machine is not grounded properly or if the electrical configuration does not comply with local and state electrical codes.

MAKE CERTAIN the machine is disconnected from power source before starting any electrical work. MAKE SURE the circuit breaker does not exceed the rating of the plug and receptacle.

The motor supplied with your machine is a 115 volt, 60 hertz, single phase motor. Never connect the green or ground wire to a live terminal. A machine with a 115 volt plug should only be connected to an outlet having the same configuration as the plug.

**WARNING!** To reduce the risk of fire or electrical shock, use the proper gauge of extension cord. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw.

The smaller the gauge-number, the larger the diameter of the extension cord is. If in doubt of the proper size of an extension cord, use a shorter and thicker cord. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.

**CAUTION!** USE ONLY a 3-wire extension cord that has a 3-prong grounding plug and a 3-pole receptacle that accepts the machine's plug. If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.

### **GROUNDING INSTRUCTIONS (cont.)**

Make certain the extension cord is properly sized, and in good electrical condition. Always replace a worn or damaged extension cord immediately or have it repaired by a qualified person before using it.

Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)					
	115 VOLT OPERATION ONLY				
	25' LONG 50' LONG 100' LONG 150' LONG				
0 to 6 Amps	18 AWG	16 AWG	16 AWG	14 AWG	
6 to 10 Amps	18 AWG	18 AWG	14 AWG	12 AWG	
10 to 12 Amps	16 AWG	16 AWG	14 AWG	12 AWG	

### **UNPACKING & INVENTORY**

Check shipping carton and machine for damage before unpacking. Carefully remove packaging materials, parts and machine from shipping carton. Always check for and remove protective shipping materials around motors and moving parts. Lay out all parts on a clean work surface.

#### Be EXTREMELY CAREFUL working around the cutter tips as they are VERY SHARP!!!

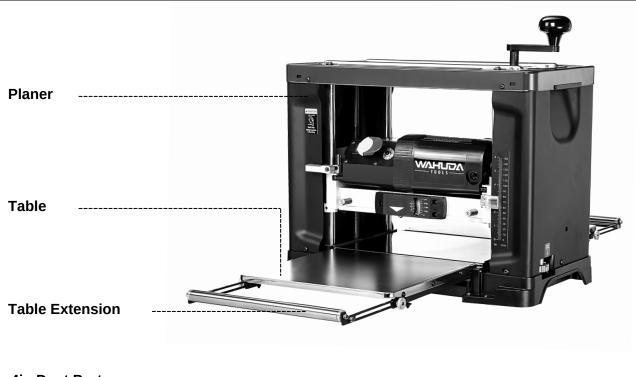
Remove any protective materials and coatings from all of the parts and the planer except for the cutterhead. Specific cutterhead cleaning instructions follow. The protective coatings can be removed by wiping the surfaces with a soft cloth.

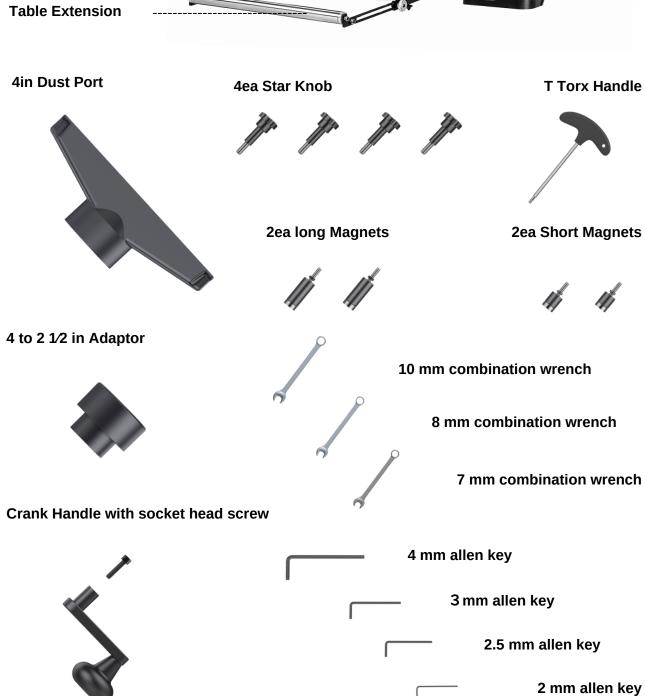
NOTE: See later instructions for cleaning the cutterhead and insert tips which may be required before operation.

NOTE: Some parts pictured may already be installed on your machine at the factory. Go through the entire manual before contacting WAHUDA.

Compare the items to inventory figures and verify that all items are accounted for. If any parts are missing, do not attempt to power on the machine. For missing parts, or shipping damage, contact WAHUDA at techservices@wahudatools.com or call **877-568-8879**.

# IN THE BOX





#### **ASSEMBLY**

WARNING! SOURCE.

### MAKE CERTAIN THAT THE MACHINE IS DISCONNECTED FROM THE POWER

#### ATTACHING DEPTH ADJUSTMENT CRANK HANDLE

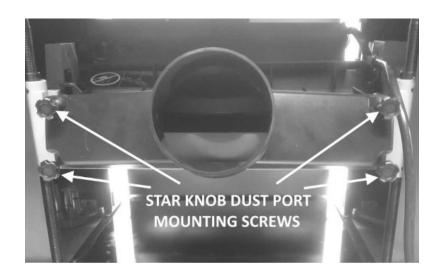
Attach the raise/lower adjustment handle to the shaft located on top of the planer and fasten in place with 1 Hex Socket Head screw M5\*25, Tighten screw using supplied hex wrench.



#### ATTACHING DUST PORT

- 1. Facing the rear of the machine, place the outfeed table in the down position.
- 2. Attach the dust on the cutterhead assembly using 4 of the plastic star knob screws making sure the 4" port is facing at an upward angle.

NOTE: When operating the planer, we recommend using full size dust collector with a 4" hose, or a good sized shop vacuum with a cyclone type collection device installed between the planer and the shop vac using the  $2\,1/2$ " supplied adapter.



### **ASSEMBLY** (cont.)

#### **TABLE MAGNETS**

The table magnets keep the tables from falling during transport of the planer. The 2 long table magnets should be attached into the holes on the front of the cutterhead assembly and tightened with the provided nut.

The 2 short table magnets are optional. They can be attached into the inner holes on the rear of the cutterhead assembly only when the dust port is removed.

### **ADJUSTMENTS**

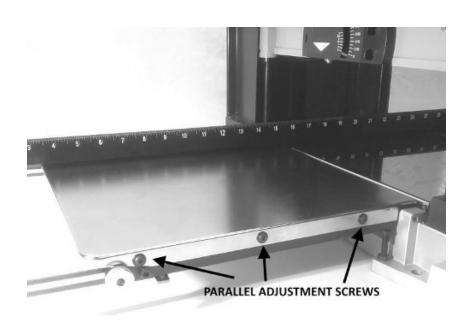
WARNING! MAKE CERTAIN THAT THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE BEFORE ANY ADJUSTMENTS ARE MADE.

WARNING! BE VERY CAREFUL WORKING NEAR THE CUTTERHEAD INSERT TIPS. THEY ARE EXTREMELY SHARP AND CAN CAUSE INJURY.

#### LEVELING INFEED AND OUTFEED TABLES

The infeed and outfeed tables must be parallel and level with the planer center wear plate located under the cutterhead assembly. These have been preset at the factory but may need readjustment.

Using the crank handle, raise the cutterhead assembly to its highest position. Being extremely careful of the cutterhead insert tips, lay a metal straight edge on the infeed table and center wear plate at both left and right sides of the table. If the table is not parallel with the wear plate, you can loosen the table side mounting screws (3 on each side) to get the table parallel and then retighten the screws. Repeat this procedure for the outfeed table.



### **ADJUSTMENTS** (cont.)

Next, using the metal straight edge in the same 2 locations as above, check to see if the table is coplanar with the wear plate. It should be one continuous flat surface from the outside edge of the table going across the wear plate. If an adjustment is necessary, raise the table, then loosen the lock nuts and adjust the hex head screws under each side of the table until the infeed table is coplanar with the wear plate. A 10mm wrench or small adjustable wrench is required but not included. Clockwise will raise the table and counterclockwise will lower the table. This adjustment will raise or lower (slightly tilt) the outer leading edge of the table, whichever is needed. Once coplanar, tighten the lock nuts. See picture below

Recheck to make sure the infeed table is coplanar and parallel to the wear plate and make any necessary re-adjustments. Repeat this process for leveling the outfeed table.



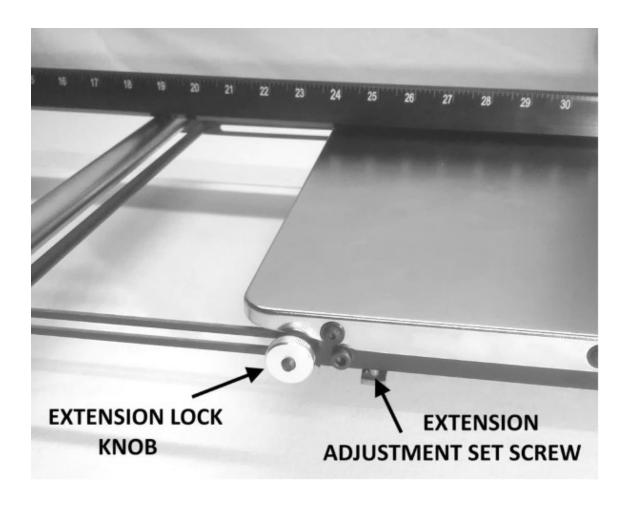
### **ADJUSTMENTS** (cont.)

#### LEVELING INFEED AND OUTFEED PULLOUT EXTENSIONS

The table pullout extensions offer the user additional support for longer stock. They must be parallel to, and at the same height as, the table they are attached to.

- 1. With the infeed table in the down position, loosen the 2 silver knurled extension lock knobs on both sides of the table and pull the extensions to their outward position.
- 2. Lay your metal straight edge on one side of the infeed table and out over the extension rod.
- 3. If the end of the extension rod is not level with the table, loosen the lock nut and using the supplied 2mm hex wrench, turn the extension adjustment set screw located under the table clockwise to raise the extension, or counterclockwise to lower it, and tighten the lock nut
- 4. Move the straight edge to the other side of the table and extension and repeat this procedure.
- 5. Once you have the extension parallel and level with the table, repeat this procedure on the outfeed extension.

NOTE: The extensions rollers can be further adjusted if needed by loosening the nuts at the end of the rollers and adjusting up or down.



### **CLEANING SPIRAL CUTTERHEAD & TIPS**

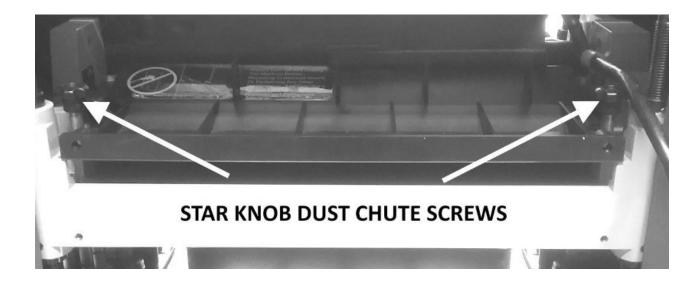
WARNING! MAKE CERTAIN THAT THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE BEFORE PERFORMING ANY MAINTENANCE PROCEDURES

<u>WARNING!</u> To prevent serious personal injury NEVER rotate the cutterhead by hand. Cutter tips are razor sharp! Always wear heavy leather gloves when handling the cutterhead. Avoid touching the cutter insert by hand without protection.

NOTE: Do not get solvent on any painted portion of the machine.

**WAHUDA** spiral cutterheads are machined with a film of oil that may be left over from the process. Removal of this oil residue, if apparent, should be done before you use your new machine.

- 1) Place the machine at a comfortable working height and supply ample lighting.
- 2) Facing the rear of the machine, remove the dust port.
- 3) Remove the dust chute by removing the 2 star knob screws to expose the cutterhead.



- 4) Lower the cutterhead assembly, using the crank handle, to about 1" on the front depth scale.
- 5) Insert the supplied 4mm Hex Wrench into the side panel hole and into end of the cutterhead to hold it in position. See picture following page page
- 6) Then, using the supplied T-25 T-Torx wrench, carefully remove the cutter tips. Continue rotating the cutterhead with the Hex Wrench and remove the remaining tips. See picture following page.

### **CLEANING SPIRAL CUTTERHEAD & TIPS (cont.)**



- 7) Separate the tips from the screws and place in separate containers with a bit of mineral spirits or non-chlorinated brake cleaner.
- 8) Once all are removed, wipe down the bare cutterhead using rags with whichever solvent you chose mentioned above.
- 9) Once the oil is wiped off, use an air compressor or a can of pressurized air to clear each seat and screw hole on the cutter head. This will aid in knife and cutter tips reinstallation.
- 10) Lubricate the Torx screw threads with light machine oil, wipe the excess oil off the threads.
- 11) Place each insert tip in the seat and slightly snug each screw using the Hex Wrench to hold the cutterhead in position. Once you get a row of tips seated and slightly tightened down, repeat by going back over each cutter tip and tighten down the screws securely to 48 to 50 inch / lbs. **NOTE:**NOT FT / LBS !!!!
- 12) Install the remaining insert tips in the same fashion.
- 13) Reinstall the dust chute and dust port

NOTE: Periodically inspect the insert tips for wear and pitch build up. Remove and replace or clean as necessary.

NOTE: After all assembly and adjustment instructions are completed, use a sacrificial board after cleaning to test for remaining oil. If oil is still apparent, repeat the cleaning method you used above.

### **OPERATIONS**

**NOTE:** This operations section was designed to give instructions on the basic operations of this planer. However, it is in no way comprehensive of every planer operation. It is strongly recommended that you read books, trade magazines, or get formal training to maximize the potential of your planer while minimizing the risks.

**NOTE:** This planer is designed to process wood ONLY. The use of any other material will void your warranty.

#### SECURING PLANER TO A TABLE OR WORKBENCH

During operation, the planer MUST be secured to a supporting surface such as a solid and sturdyworkbench or table. Four holes are provided (2 are shown below) to securely mount the planer. 2 holes are located in the front and 2 at the rear of the planer The surface you are mounting the planer to should be flat. The mounting hole diameter is 3/8" and the length of the mounting bolts (not supplied) will be determined by the thickness of your workbench/table. For reference, the thickness of the base at the mounting holes is 1 / 2". Make sure to use washers, split lock washers, and nuts of the appropriate size, to secure the planer to your work top.



#### 2 - SPEED SELECTOR SWITCH

The 26 FPM speed of the 50250PL-WHD planer allows normal speed for production type feed rates. The slower 18 FPM speed allows for a very smooth finish even on figured stock.

NOTE: The position of the selector switch may not exactly match the image on the label

<u>IMPORTANT NOTE:</u> THE SPEED SELECTOR SWITCH SHOULD ONLY BE SHIFTED FROM ONE SPEED TO ANOTHER WHILE THE MACHINE IS SWITCHED ON (RUNNING) AND NOT PLANING ANY STOCK (NO LOAD) DOING OTHERWISE WILL DAMAGE THE SPEED MECHANISM!



#### RAISING AND LOWERING HEAD ASSEMBLY

The cutterhead assembly consists of the cutterhead, insert tips, feed rollers, roller chains, gearbox, and cutterhead dust chute. Raising and lowering of the head assembly controls the depth of cut on the planer.

To raise the cutterhead assembly, turn the adjusting crank handle clockwise. To lower the head assembly, turn the adjusting crank handle counterclockwise.

**NOTE:** One revolution of the handle will move the cutterhead up or down approximately 1/16". You can confirm this by referencing the thickness scale on the front right side of the planer.

#### **POWER SWITCH**

The planer is turned ON by flipping the switch into the left position and it is turned OFF by flipping the switch to the right. This planer is also equipped with a special lockout toggle switch that prevents unauthorized use. To prevent unauthorized use of the planer, simply pull out the yellow safety key located on the face of the switch. When installing the yellow safety key, make sure it is inserted completely and a faint "click" is felt.



#### **DEPTH-OF-CUT INDICATOR**

The Depth-Of-Cut Indicator, located on the front of the machine, is a convenient way to quickly determine how much material is being planed off in one pass.

- 1. With the machine powered OFF, and the cutterhead raised, insert your workpiece just under the indicator arrow.
- 2. Crank the cutterhead down until the button comes in contact with the workpiece. As you rotate the raise / lower handle, the needle on the depth of cut scale will move showing how much material will be removed in that pass. Note, the needle may jump during the planing of your stock. This is normal.



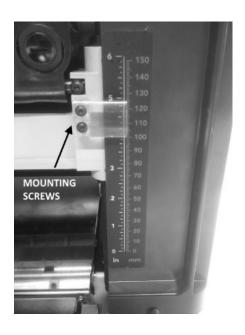
#### REPEAT CUT PRESET

The Repeat Cut turret style dial indicator, located on the bottom right hand side of the planer, provides a simple way to preset the finished thickness of a workpiece. With the machine powered off, turn the dial indicator to the desired finished thickness. Use this feature when thickness planing multiple workpieces to ensure a uniform thickness of all workpieces. When lowering the head assembly, ensure the Repeat Cut preset is in the lowest desired thickness position. Failure to do so may result in excess downward pressure by the cutterhead assembly onto the mechanism and cause damage to the adjustment rod and upper frame.



#### THICKNESS SCALE ADJUSTMENT

The thickness scale, located on the front right of the planer, shows the thickness of the finished workpiece. To make sure the scale is set properly, run a piece of wood through the planer and measure the thickness of the wood. If the scale is out of alignment, loosen the two round head mounting screws while holding the scale indicator and adjust the thickness indicator to the correct setting. Make sure to re-tighten the two screws once the adjustment is complete. Do not overtighten these screws as it may damage the clear indicator.



#### THICKNESS PLANING

Thickness planing sizes the workpiece to a desired thickness, while at the same time creating a smooth and level surface. The thickness of each cut will depend on the type of wood, width of the workpiece, and condition of the lumber (i.e. dryness, grain composition, straightness, etc). Always make thin test cuts on a scrap piece of wood prior to performing final cuts.

#### **GETTING PREPARED**

It is always a good idea to use a piece of scrap wood for your first planing attempt. Also, before each use of the planer, make it a habit of checking for loose fasteners, fittings or hardware. Turn the planer ON and allow it to reach full speed. Pay close attention to any excessively loud noises that may be coming from the planer or any excessive vibration. If either occurs, shut down the planer immediately checking again for loose hardware. Go through the ASSEMBLY and ADJUSTMENTS sections again if necessary.

#### **BASIC OPERATION**

**WARNING!** To avoid serious personal injury, NEVER stand directly in line with the front or rear of the planer. If an object is thrown from the planer, it can travel in either direction.

- 1) Stand to either the left or right side of the planer.
- 2) Flip the switch to the ON position.
- 3) Once powered on, select desired feed speed
- 4) Lift the workpiece onto the infeed table by grabbing the edges of the board at the middle of the length. NOTE: For longer pieces, be sure to use additional supports such as roller stands.
- 5) Push slightly on the board to start feed and allow the feed rollers to pull the board through the planer. Once the feed rollers start to pull the workpiece through, let go of the board and allow the rollers to do their job. DO NOT push or pull on the workpiece once the rollers have engaged.
- 6) Move to one side of the rear of the planer and receive the planed workpiece by grabbing the edges of the wood like you did when feeding the workpiece in. You can either carry the piece back to the front of the planer or stack it on the top bars to easily pass it back to the front of the planer.
- 7) It normally takes several passes of varying depths to achieve a smooth finish, so repeat this process as many times as necessary. Remember the less you take off in a pass, the smoother the finish will be, but you may still need to finish the surface by sanding.

#### **GENERAL TIPS AND GUIDELINES**

- Thickness planing always works best when at least one side of the workpiece has a flat surface. If both sides of the workpiece are rough, feed one face of the board through the planer until the entire surface is flat.
- 2. ALWAYS plane both sides of the workpiece to reach the desired thickness.
- 3.DO NOT plane workpieces less than 1/8" thick, less than 3 / 4" wide, or shorter than 9 1 / 2" in length.
- 4. It is not recommended to continuously use the planer at its maximum depth of cut of 1/16" and at its full width 13" as this will shorten the life of the motor. Use shallower cuts of 1/32" or less.
- 5. Light depth of cuts create a smoother finish than heavier cuts.

#### **AVOIDING SNIPE**

Snipe, gouging or depression of the board at the ends, can occur when the board is not properly supported. For workpieces longer than 5 ft, greater care must be taken to reduce the problem because the additional length of the workpiece translates into more unsupported weight pulling down on the end of the board. This unsupported weight will work against keeping the stock flat. Make sure to use supports, such as roller stands, whenever long pieces are being planed to avoid this problem. Since snipe can occur at both ends of the board, it is good practice to start with a workpiece that is slightly longer than what you need so that you can simply cut off the ends if necessary.

Snipe locks are not a necessity on all bench top portable planers. Here are a few methods you can use to reduce or eliminate snipe if it's apparent:

- 1) Plane boards that are longer than your finished length and cut the snipe ends off... if it exists.
- 2) Run scrap pieces of the same thickness in front and after the stock making sure the stock butts up to the end of the scrap pieces and to each other as you feed them.
- 3) Adjust the tables upwards a bit if your model allows. But be aware that you will have to readjust as the stock gets thinner and/or for your next project
- 4) Make a planer thru table surfacing jig to whatever length you like that is one continuous surface. They are usually portable (removable). There are many online videos showing how to make this jig. Some are very complex while others designs are extremely simple
- 5) Skew the board slightly before feeding. The very corner of the work piece will "absorb" the snipe
- 6) Take less depth of cut per pass
- 7) The most widely used method: Lift the stock slightly when feeding until the rear roller catches.

  Then slightly lift again when exiting the planer to keep the end of the stock out of the cutterhead

If you are still experiencing snipe, please contact techservices@wahudatools.com or call at 877-568-8879

#### **MAINTENANCE**

WARNING! MAKE CERTAIN THAT THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE BEFORE PERFORMING ANY MAINTENANCE PROCEDURES

Your planer should provide you with a long time of service provided you take the time to perform the following maintenance operations.

#### **CLEANING**

Sawdust buildup and other debris can cause the tool to plane incorrectly. Periodic cleaning and waxing is needed for accurate, precision planing. Any moving parts should be cleaned regularly with a penetrating oil and lubricated with a light coating of medium weight machine oil

**CAUTION!** With the machine unplugged, blow off motor with low pressure air to remove dust or dirt. Air pressure above 50 P.S.I. should not be used as high-pressured air may damage insulation. The operator should always wear a respirator and eye protection when using compressed air. Do not allow chips and dust to accumulate under the machine. Keep area clean and in safe order.

Having clean feed rollers is essential for optimal results. Check feed rollers after each use for buildup of pitch, gum, or resin, and be sure to clean off with a non-flammable tar and pitch remover that is not harmful to rubberized surfaces.

Periodically clean, wax, and buff the tables. This will aid in the prevention of improper feeding of the workpiece.

#### HARDWARE TIGHTNESS

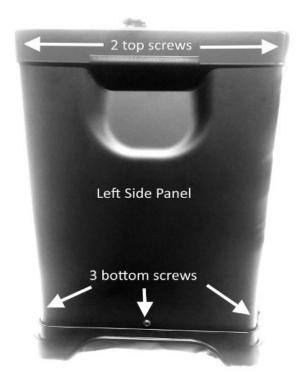
Periodically check all clamps, nuts, bolts, and screws, for tightness and condition. Stop the machine and recheck the cutterhead screw and knives, or tips, for tightness after about 50 hours of operation. Recheck periodically.

# MAINTENANCE (cont.)

#### **GEAR BOX LUBRICATION**

The gears in the gear box should be lubricated periodically if necessary. Facing the front of the machine, remove the left side panel. There are 5 screws to remove.

- 1. Remove the top 2 screws, one in front and one in back, along the top edge of the cover.
- 2. Remove the 3 socket head screws located around the bottom edge and remove the side panel to expose the gearbox by pulling out on the bottom of the panel.



3. Remove the gearbox cover and lube the gears with multi-purpose grease and then replace cover and side panel that you removed.

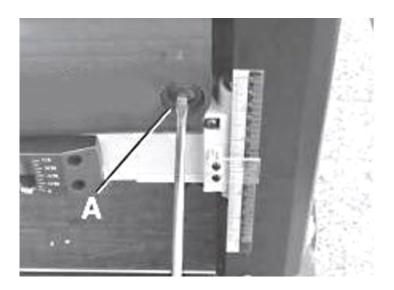


# MAINTENANCE (cont.)

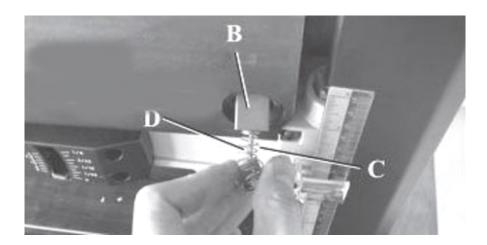
#### **BRUSH REPLACEMENT**

Brush life will vary depending on the load placed on the motor. The brushes should be inspected every 10-15 hours of use. To inspect or replace:

1. Remove the brush holders (A). The other is located in the same position on the rear of the motor assembly. The Brush Holder can be removed using a flat blade screwdriver.



2. Once the brush has been removed, inspect the carbon (B), the spring (C), and the wire (D).

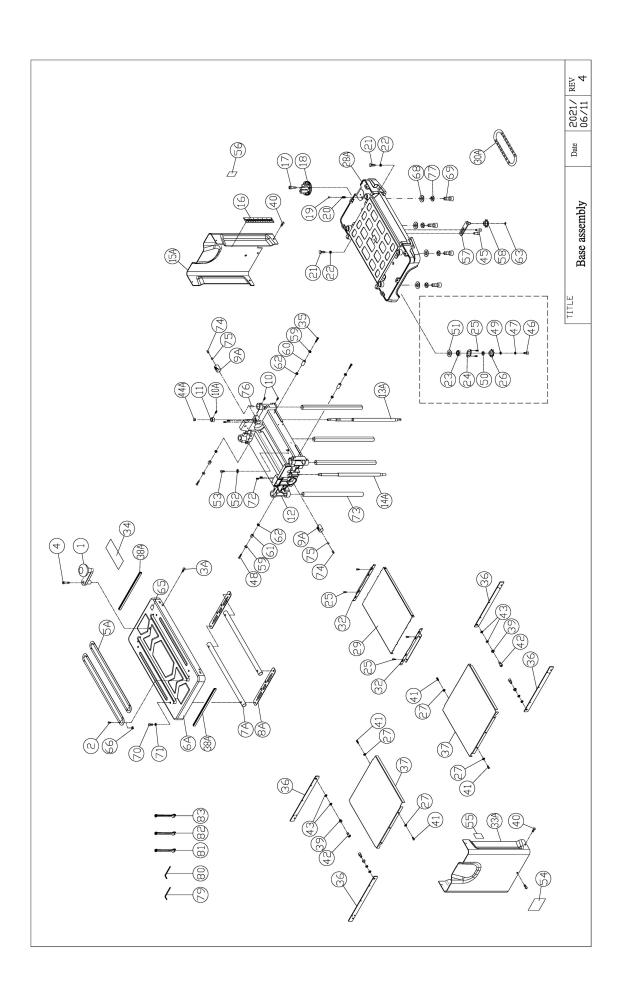


3. If the carbon of either brush is worn down to 3/16" or less, both brushes should be replaced. Also if the spring or wire are burned or damaged in any way, both brushes should be replaced.

# TROUBLESHOOTING GUIDE

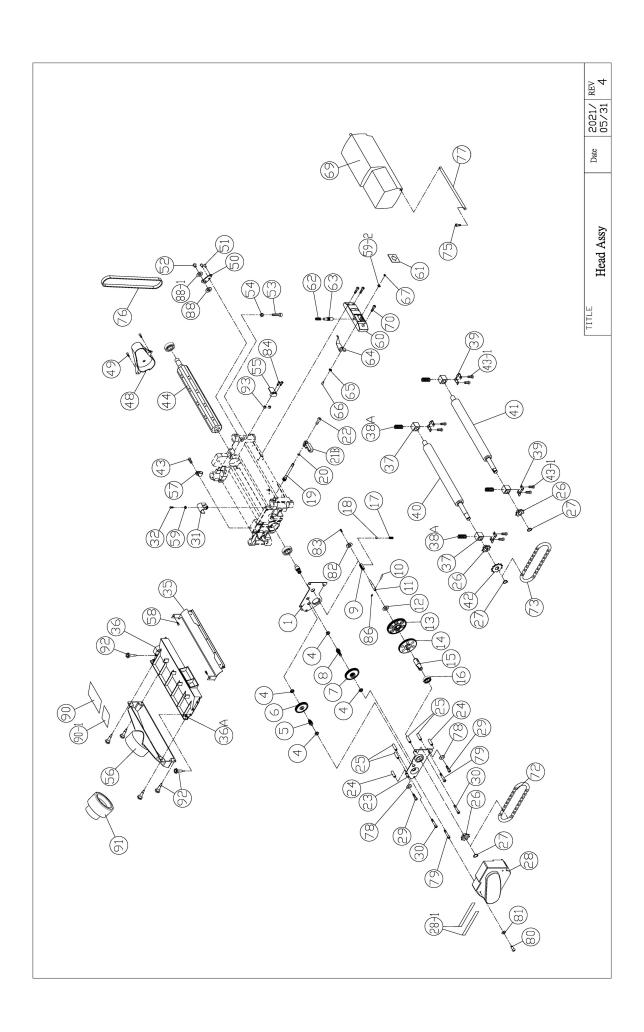
PROBLEM	LIKELY CAUSE	SOLUTION
Snipe	Dull Blades	Replace or rotate tips. Readjust
(depressions at	Infeed or outfeed tables out of	tables. Feed scrap of same
end of workpiece)	adjustment.	thickness before and after
		workpiece.
		Take less depth of cut per pass
		See page 24 for more info
Torn grain. Tear out	Too deep or shallow blade	Reduce or increase the depth of cut.
	setting.	Feed other end of board first.
	Work piece being fed against	Replace or turn blades.
	grain.	Try skewing board when feeding.
	Dull cutter blades	VERY slightly dampen work piece
		before feeding.
Fuzzy/rough grain.	High wood moisture content.	Dry wood before planing.
	Dull blades	Replace or turn blades
	Too deep a blade setting.	Reduce depth of cut
Board thickness	Depth scale incorrectly set.	Adjust depth scale.
does not match		
depth scale indicator.		
Will not start.	Not plugged in.	Check the power source.
	Blown circuit.	Replace fuse, reset breaker, or call
	Lockout safety key removed.	electrician.
		Replace lockout key.
Interrupted operation	Unit overloaded.	Reduce load.
	Circuit overloaded.	Operate on circuit separate from
		other appliances or motors or
		connect to circuit with adequate amp
		rating.
Planer not feeding	Too much material being	Reduce cut depth.
properly	removed.	Replace knives or tips.
	Knives or tips dull.	Clean tables and apply paste wax.
	Build up on tables.	Clean rollers with a cleaner safe for
	Build up on rollers.	rubber surfaces.

# **PARTS**



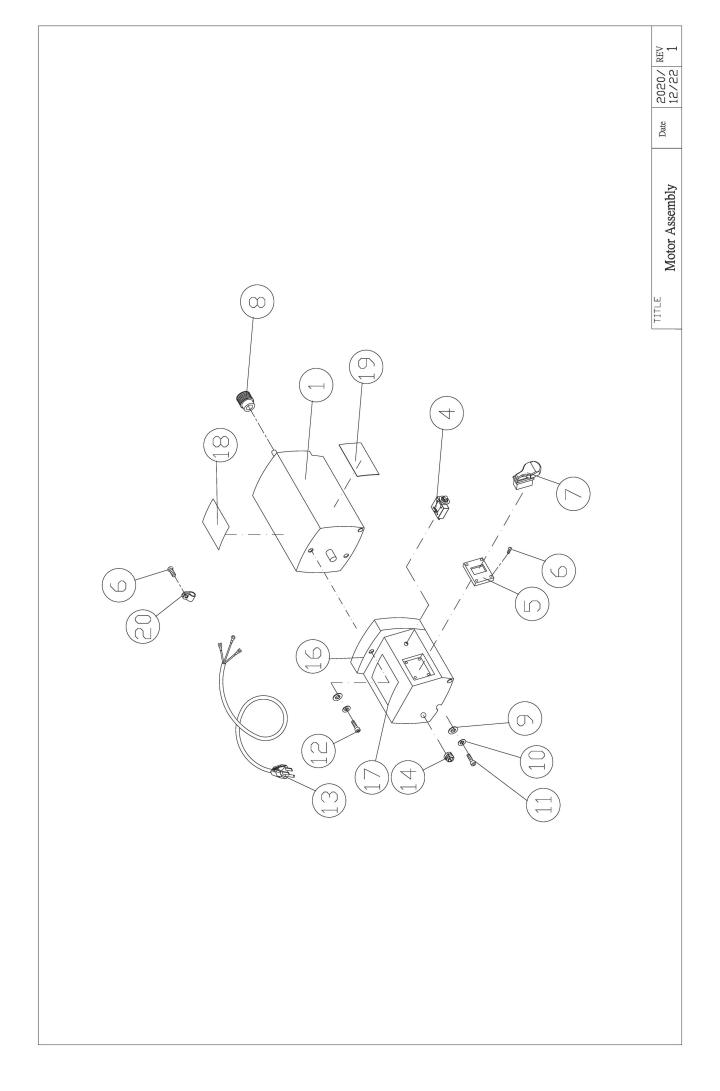
Base Assembly				
PART NO.		DESCRIPTION	SPECIFICATION	QTY
60200	A1	Crack Handle		1
60200	A2	Socket Head Button Screw	M4x6	8
60200	A3A	Socket Head Button Screw	M6x12	4
60200	A4	Socket Head Cap Screw	M5x25	1
60200	A5	Plug		2
60200	A5A	Cover		1
60200	A6A	Top Cover		1
60200	A7A	Steel Pipe		2
60200	A8A	Steel Plate		2
60200	A9A	Nut		2
60200	A10	Set Screw	M5x6	8
60200	A10A	Set Screw	M5x4	1
60200	A11	Stop Bushing		1
60200	A12	Head		1
60200	A13A	Leader Screw, Driver side		1
60200	A14A	Leader Screw, Drived side		1
60200	A15A	Aside Cover, Right		1
60200	A16	Cutting Scale		1
60200	A17	Screw	M6x18	1
60200	A18	Cutting Thickness Gauge		1
60200	A19	Steel Ball	ψ10	1
60200	A20	Spring		1
60200	A21	Hex Bolt	M6x35	4
60200	A22	Hex Nut	M6	4
60200	A23	Ball Bearing	6000	2
60200	A24	Ball Bearing Cover Plate		2
60200	A25	Socket Head Button Screw	M5x10	8
60200	A26	Sprocket Wheel		2
60200	A27	Flat Washer	M4	12
60200	A28A	Base		1
60200	A29	Surface Plate		1
60200	A30A	Chain		1
60200	A32	Guide		2
60200	A33A	Aside Cover, Left		1
60200	A34	Logo		1
60200	A35	Flat Head Screw	M3x40	2
60200	A36	Extension Table Support		4
60200	A37	Extension Table		2
60200	A38A	Grip		2
60200	A39	Bushing		4
60200	A40	Socket Head Button Screw	M6x15	6

60200         A41         Socket Head Button Screw         M4x10           60200         A42         Socket Head Cap Screw         M6x15           60200         A43         Wave Washer         Ø8xD15           60200         A44A         Bushing         M8x10           60200         A45         Socket Head Cap Screw         M4x 10           60200         A46         Socket Head Cap Screw         M4x 10           60200         A47         Lock Washer         M4           60200         A48         Flat Head Screw         M3x25           60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A56         Block thinckness limiter label         60200           60200         A56         Block thinckness limiter label         60200           60200         A59         Magnet         Magnet Stand	12 4 8 1 2 2 2 2 2 2 2 2 2 1 1 1 1
60200         A43         Wave Washer         Ø8xD15           60200         A44A         Bushing         8xx10           60200         A45         Socket Head Cap Screw         M4x 10           60200         A46         Socket Head Cap Screw         M4x 10           60200         A47         Lock Washer         M4           60200         A48         Flat Head Screw         M3x25           60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A51         Spacer         M5           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A55         Feeding Speed Label         60200         A56         Block thinckness limiter label           60200         A58         Driven wheel         60200         A59         Magnet           60200         A60         Magnet Stand         Magnet Stand	8 1 2 2 2 2 2 2 2 2 2 1 1 1
60200         A44A         Bushing           60200         A45         Socket Head Cap Screw         M8x10           60200         A46         Socket Head Cap Screw         M4x 10           60200         A47         Lock Washer         M4           60200         A48         Flat Head Screw         M3x25           60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         M5x10           60200         A55         Feeding Speed Label         60200           60200         A56         Block thinckness limiter label         60200           60200         A58         Driven wheel         60200           60200         A59         Magnet         60200           60200         A60         Magnet Stand         60200	1 2 2 2 2 2 2 2 2 2 1 1 1
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60200         A46         Socket Head Cap Screw         M4x 10           60200         A47         Lock Washer         M4           60200         A48         Flat Head Screw         M3x25           60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A55         Feeding Speed Label         60200           60200         A56         Block thinckness limiter label         60200           60200         A57         Adjustment block         60200           60200         A59         Magnet         60200           60200         A60         Magnet Stand         Magnet Stand	2 2 2 2 2 2 2 2 1 1 1
60200         A47         Lock Washer         M4           60200         A48         Flat Head Screw         M3x25           60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label           60200         A55         Feeding Speed Label           60200         A56         Block thinckness limiter label           60200         A57         Adjustment block           60200         A58         Driven wheel           60200         A59         Magnet           60200         A60         Magnet Stand	2 2 2 2 2 2 2 1 1 1
60200         A48         Flat Head Screw         M3x25           60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A55         Feeding Speed Label         60200         A56         Block thinckness limiter label           60200         A57         Adjustment block         60200         A58         Driven wheel           60200         A59         Magnet         Magnet Stand         60200         A60         Magnet Stand	2 2 2 2 2 2 1 1 1
60200         A49         Flat Washer         M4           60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A55         Feeding Speed Label         60200 A56         Block thinckness limiter label           60200         A57         Adjustment block         60200 A58         Driven wheel           60200         A59         Magnet         60200 A60         Magnet Stand	2 2 2 2 2 1 1 1
60200         A50         Spacer         M10           60200         A51         Spacer         M12           60200         A52         External Tooth Washer         M5           60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A55         Feeding Speed Label         60200 A56         Block thinckness limiter label           60200         A57         Adjustment block         60200 A58         Driven wheel           60200         A59         Magnet         60200 A60         Magnet Stand	2 2 2 2 1 1 1
60200 A51 Spacer M12 60200 A52 External Tooth Washer M5 60200 A53 Pan Head Screw M5x10 60200 A54 ID Label 60200 A55 Feeding Speed Label 60200 A56 Block thinckness limiter label 60200 A57 Adjustment block 60200 A58 Driven wheel 60200 A59 Magnet 60200 A60 Magnet Stand	2 2 2 1 1 1
60200 A52 External Tooth Washer M5 60200 A53 Pan Head Screw M5x10 60200 A54 ID Label 60200 A55 Feeding Speed Label 60200 A56 Block thinckness limiter label 60200 A57 Adjustment block 60200 A58 Driven wheel 60200 A59 Magnet 60200 A60 Magnet Stand	2 1 1 1 1
60200         A53         Pan Head Screw         M5x10           60200         A54         ID Label         ID Label           60200         A55         Feeding Speed Label         Feeding Speed Label           60200         A56         Block thinckness limiter label         Feeding Speed Label           60200         A57         Adjustment block         Feeding Speed Label           60200         A57         Adjustment block         Feeding Speed Label           60200         A58         Driven wheel         Feeding Speed Label           60200         A58         Driven wheel         Feeding Speed Label           60200         A59         Magnet         Feeding Speed Label           60200         A60         Magnet Stand         Feeding Speed Label	2 1 1 1
60200         A54         ID Label           60200         A55         Feeding Speed Label           60200         A56         Block thinckness limiter label           60200         A57         Adjustment block           60200         A58         Driven wheel           60200         A59         Magnet           60200         A60         Magnet Stand	1 1 1 1
60200         A55         Feeding Speed Label           60200         A56         Block thinckness limiter label           60200         A57         Adjustment block           60200         A58         Driven wheel           60200         A59         Magnet           60200         A60         Magnet Stand	1 1 1
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60200         A57         Adjustment block           60200         A58         Driven wheel           60200         A59         Magnet           60200         A60         Magnet Stand	1
60200 A58 Driven wheel 60200 A59 Magnet 60200 A60 Magnet Stand	
60200 A59 Magnet 60200 A60 Magnet Stand	1
60200 A60 Magnet Stand	'
	4
	2
60200 A61 Magnet Stand-short	2
60200 A62 Hex Nut M3	4
60200 A63 S-Ring S-10	1
60200 A65 Handwheel Label	1
60200 A66 Nylon Nut M4	8
60200 A68 Flat Washer M10	4
60200 A69 Socket Head Cap Screw M10x30	4
60200 A70 Socket Head Button Screw M6x10	4
60200 A71 Flat Washer M6	4
60200 A72 Set Screw M5x8	4
60200 A73 Column	4
60200 A74 Set screw 1/4"-20UNCx1-4"	2
60200 A75 PU block	2
60200 A76 Resistance Pad	8
60200 A77 Spring washer M3	4
60200 A79 Allen key 3mm	1
60200 A80 Allen key 2mm	1
60200 A81 Combination wrench 10mm	1
60200 A82 Combination wrench 7mm	1
60200 A83 Combination wrench 8mm	1

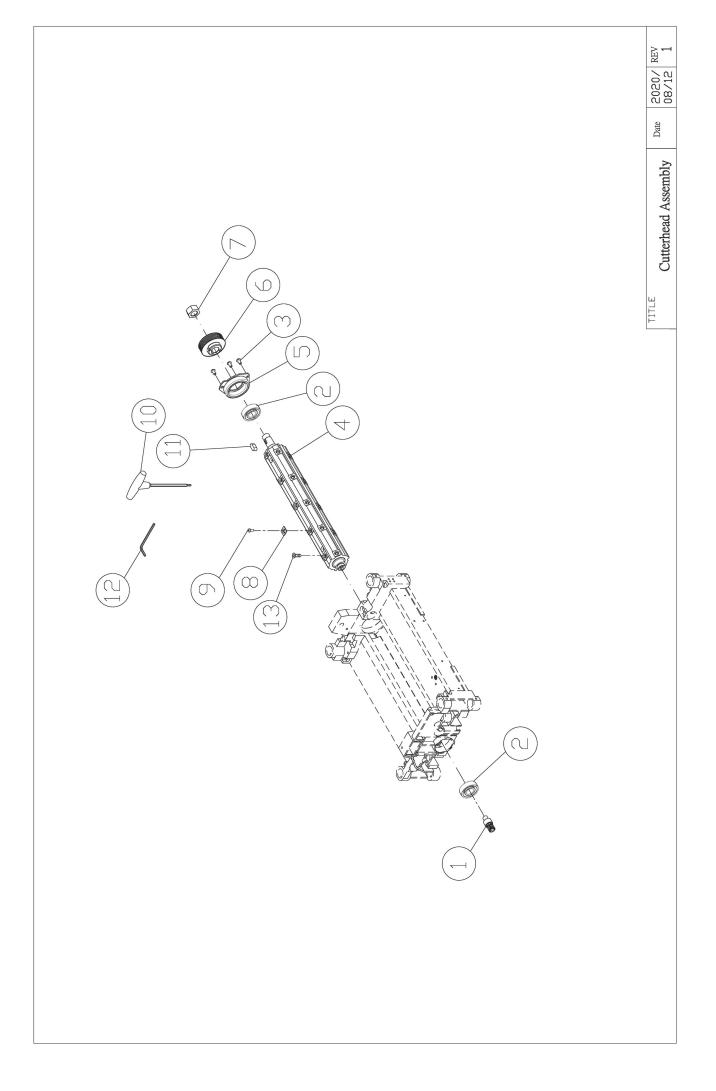


Head Assembly					
PAI	RT NO.	DESCRIPTION	SPECIFICATION	QTY	
60200	B01	Gear Plate (Included #4 & #12)		1	
60200	B04	Spacer		4	
60200	B05	Gear Shaft	12t	1	
60200	B06	Gear	52T	1	
60200	B07	Gear		1	
60200	B08	Pinion Gear		1	
60200	B09	Rack		1	
60200	B10	Pin	Ø4*24mm	1	
60200	B11	Shaft-Actuator		1	
60200	B12	Spacer		1	
60200	B13	Gear	80 T	1	
60200	B14	Gear	75 T	1	
60200	B15	Shaft		1	
60200	B16	Ball Bearing	6002	1	
60200	B17	Spring		1	
60200	B18	Steel Ball	Ø8	1	
60200	B19	Speed Adjustment Shaft		1	
60200	B20	S-Ring	S-8	1	
60200	B21B	Handle		1	
60200	B22	Socket Head Cap Screw	M4x12	1	
60200	B23	Bracket (included #4 & #16)		1	
60200	B24	Spacer		2	
60200	B25	Spacer		4	
60200	B26	Chain Gear	8T	3	
60200	B27	S-Ring	S-15	3	
60200	B28	Gear Guard (Included Sponge)		1	
60200	B28-1	Sponge		2	
60200	B29	Socket Round Head Screw	M5x35	2	
60200	B30	Socket Head Cap Screw	M5x45	2	
60200	B31	Cover		1	
60200	B32	Socket Round Head Screw	M4x6	1	
	B35	Deflector Plate		1	
	B36	Deflector Cover		1	
	B36A	Nut	M5	2	
	B37	Block		4	
	B38A	Spring	36.6mm	4	
	B39	Plate		4	
	B40	Outfeed Roller		1	
	B41	Infeed Roller		1	
	B42	Chian	11 t	1	
	B43	Socket Round Head Screw	M5x10	1	
	B43-1	Socket Head Cap Screw	M5x10	8	
	B44	Cutterhead		1	

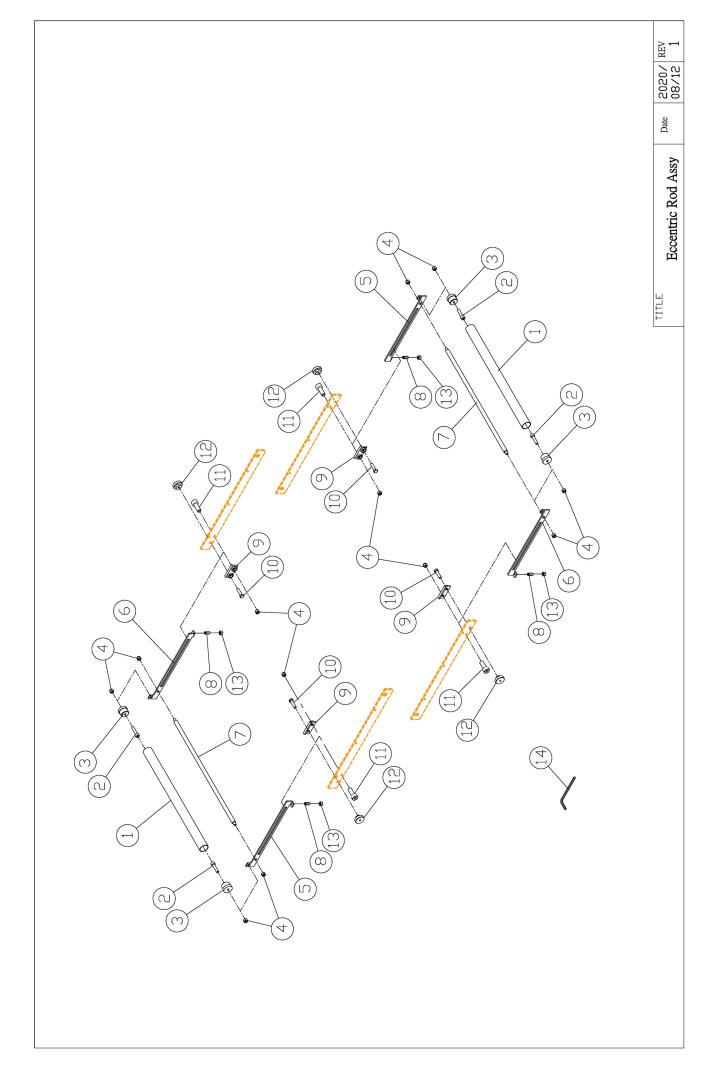
60200	B48	Belt Guard		1
60200	B49	Socket Head Button Screw	M4x10	2
60200	B50	Plate		1
60200	B51	Socket Round Head Screw	M6x10	2
60200	B52	Socket Round Head Screw	M8x20	1
60200	B53	Hex Bolt	M8x45	1
60200	B54	Hex Nut	M8	1
60200	B55	Pointer		1
60200	B56	Dust Chute		1
60200	B57	Clamp		1
60200	B58	Socket Round Head Screw	M5x12	2
60200	B59	Flat Washer	M4	1
60200	B59-2	Flat Washer	M4	1
60200	B60	Cutting Depth Gauge		1
60200	B61	Arrow Plate		1
60200	B62	Spring		1
60200	B63	Shaft		1
60200	B64	Pointer		1
60200	B65	Spacer		1
60200	B66	Socket Round Head Screw	M4x12	1
60200	B67	Hex Nut	M4	1
60200	B69	Motor Assembly (Included #68 & #70)		1
60200	B70	Socket Head Cap Screw	M4x12	3
60200	B72	Chain	Long	1
60200	B73	Chain, infeed/ outfeed roller	Short	1
60200	B75	Socket Round Head Screw	M5x20	2
60200	B76	Belt	140J-6	1
60200	B77	Shaft		1
60200	B78	Lock Washer	M5	2
60200	B79	Bolt, Special	M5	2
60200	B80	Socket Round Head Screw	M4x12	2
60200	B81	Flat Washer	M4	2
60200	B82	Flat Washer	M3	1
60200	B83	Socket Round Head Screw	M3x8	1
60200	B84	Socket Head Button Screw	M4x20	2
60200	B86	Set Screw	M4x5	1
60200	B88	Flat Washer	M8*2t	1
60200	B88-1	Flat Washer	M8*3t	1
60200	B90	Warning label for Knife replacement		1
60200	B90-1	Warning label for Knife replacement		
60200	B91	Dust collector adapter		1
60200	B92	Knob	M5x12	6
60200	B93	Bushing		2



	Motor Assembly				
-	PART NO.	DESCRIPTION	SPECIFICATION	QTY	
60200	C1	Motor (included #17 & #18)		1	
60200	C2	Motor Carbon Brush with Cap (not shown)		2	
60200	C3	Motor Ground wire (not shown)		1	
60200	C4	Overload Protector Assembly	20A	1	
60200	C5	Switch Plate		1	
60200	C6	Machine Screw	M5x12	5	
60200	C7	Switch		1	
60200	C8	Motor Pulley		1	
60200	C9	Flat Washer	M5	2	
60200	C10	Lock Washer	M5	2	
60200	C11	Socket Round Head Screw	M5x16	1	
60200	C12	Socket Round Head Screw	M5-0.8Px 35	1	
60200	C13	Power Cable		1	
60200	C14	Strain Relief		1	
60200	C15	Wire, overload to switch (not shown)		1	
60200	C16	Switch cover, included sponge		1	
60200	C17	Warning Label		1	
60200	C18	Motor Label		1	
60200	C20	Clamp		1	



	Cutterhead Assembly				
	PART NO. DESCRIPTION SPECIFICATION QTY				
60200	D1	Shaft Gear	12t	1	
60200	D2	Ball Bearing	6203ZZ	2	
60200	D3	Socket Round Head Screw	M5x10	3	
60200	D4	Cutterhead	13"	1	
60200	D4A	Pin (Do not show)		5	
60200	D5	Bearing Seat		1	
60200	D6	Spindle Pulley		1	
60200	D7	Nut (L. H.)	M16xP2.0	1	
60200	D8	Insert		26	
60200	D9	Screw		26	
60200	D10	Torx Wrench		1	
60200	D11	Key	5x5x12	1	
60200	D12	Allen Key	4mm	1	
60200	D13	Flat head Screw	M5x15	4	



	Extension Rod Assembly				
	PART NO.	DESCRIPTION	SPECIFICATION	QTY	
60200	E01	Eccentric rod		2	
60200	E02	Socket Head Cap Screw	M5x22	4	
60200	E03	Fixed block		4	
60200	E04	Nylon Nut	M5	12	
60200	E05	Extension plate-Right		2	
60200	E06	Extension plate-Left		2	
60200	E07	Fixed rod		2	
60200	E08	Set Screw	M4*10	4	
60200	E09	Fixed Plate		4	
60200	E10	Hex Bolt	M5x20	4	
60200	E11	Socket Head Cap Screw	M5x15	4	
60200	E12	Nut		4	
60200	E13	Nut	M4	4	
60200	E14	Allen Key	2mm	1	