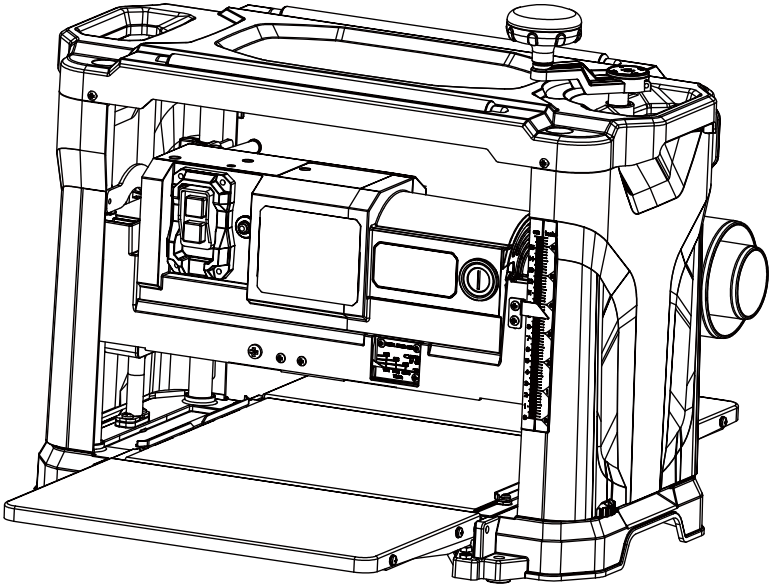
WOODSTARTER



Thickness Planer

TP20K-Pro

USER MANUAL V 1.0

*Please read carefully before use. Please keep it for future reference.

CONTENT

SAFETY PRECAUTIONS

IMPORTANT SAFETY INSTRUCTIONS FOR ALL TO0LS

AWARNING: For your own safety, read the instruction manual before operating the planer. Failure to heed these warnings may result in personal injury and serious damage to the planer. When servicing this tool, use only identical replacement parts. Have damaged cords replaced by an authorized service center.

1. Do not allow children to touch and play with the planer. keep the work area clean, a messy workbench can lead to accidents. Do not work near flammable and explosive items, or liquids, So as to avoid explosion. Do not use in wet environment, and stop working when the weather is thundering and lightning.
2. Do not operate the planer when you are fatigued and after drinking, and stop operation during taking medicine. Do not wear loose clothes. Do not wear jewelry, and please do not wear your hair down.
3. For your physical and mental health, please wearing goggles, mask and earplug. when not in use, before maintenance, when replacing the plane blade, please unplug the power plug. Make sure the switch is in the "OFF" position before starting the machine, to avoid unexpected accidents.
4. Do not stand on the planer.
5. Unplug the Thickness planer when it is not in use or when people leave, and make sure it is in a power-off state. provide power according to the voltage and frequency required by the nameplate of the machine.
6. Do not force tool. It will do the job better and safer at the rate for which it was designed.
7. Check damaged part. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determent that will operate properly and perform its intended. Function-check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

Additional Specific Safety Rules for Planers

- **To reduce the risk of injury, user must read and understand instruction manual before operating planer.**

1. Keep hands away from the underside of the cutter head carriage. To avoid injury, never rotate the cutter block directly with your hands.
2. Direction of feed. Feed work into planer according to direction of feed arrows on top of the unit.
4. Never clear clogs, make cutter knife replacement, or any other repairs/adjustments with unit plugged in.
5. Be sure that the cutter knives are mounted as described in the instruction manual and check that all bolts are firmly.
6. Exhaust chute: remove shavings with brush or vacuum after power has been shut off and cutter head has stopped rotating.
7. Make sure all screws are tightened before working.
8. For smooth, lump-free wood work only. Make sure the wood is free of nails, screws, stones and other things that can damage the blade.
9. Do not face the entrance and exit, as the wood may bounce and hurt you.
10. start working only when the blade shaft speed reaches the maximum.
11. Do not use a blunt blade, which will easily cause clogging and uneven planing surface.
12. Both blades should be replaced at the same time, using the original blade of the same specification.
13. Do not plug in planer unless the switch is in the off position. After turning the switch on, allow the planer to come to full speed before operating.
14. Do not force cut. Slowing or stalling will overheat motor. Allow automatic feed to function properly.
15. Always feed from in feed side to out feed side, and do not attempt to reverse direction of work piece being planed while it is being fed through the planer.
16. Keep planer maintained. Follow maintenance instructions.

WARNING: For your own safety, it is recommended that two people carry this machine or serious injury could result.

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

SPECIFICATIONS

• Machine specifications

Power: ····· 120V~ 60Hz ; 15A
No-load Speed: ····· 10000 RPM
Number of cutting blade: ····· 3
Dust chute adapter sizes ·····1-2/5 , 2-1/2 , 4 inches
Single planing depth: ····· 0-1/8 inches
Max. planing width: ·····13 inches
Max. planing height of workpiece (material): ····· 6 inches
Min. planing height of workpiece (material): ·····1/4 inches
Feed Rate ····· 21 FPM

• Planing instruction

Single planing width 0-3”····· Max. planing thinkness 1/8 inches
Single planing width 3”-6”····· Max. planing thinkness 1/12 inches
Single planing width 6”-13” ····· Max. planing thinkness 1/24 inches

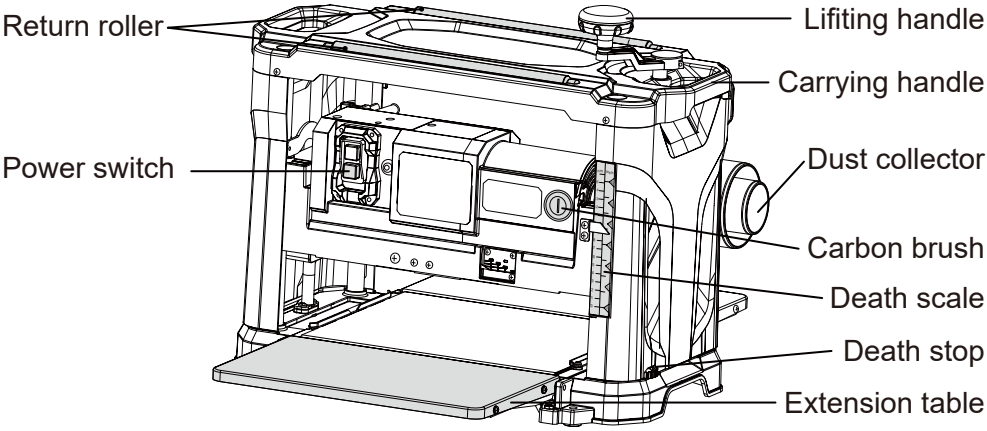
In order to prolong the service life of the product, the lifting handle is adjusted by half a circleof planing once, that is, a single planing is 0.75mm thickness.

Recommend wearing noise protection earplugs and goggles.

The thicknesser can only be used for planing flat wooden boards, and it is forbidden to plane other mater materials such as metal, plastic, branches and trunks, etc.

The thicknesser is not suitable for industrial use.

PART LIST



PARTS DESCRIPTION

Main Machine

Accessories

Lifting handle

Dust collector

Disassembly wrench
(Pre-install back of the machine)

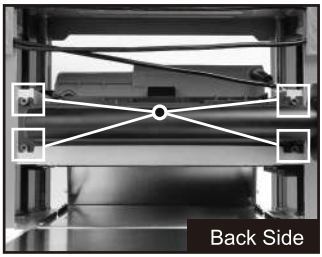
INSTALLATION INSTRUCTIONS

Lifting handle installation



Align the flat side of the handle with the lifting shaft and press it, fix it with screws, and finally turn it correctly to use.

Dust collection cover installation and disassembly

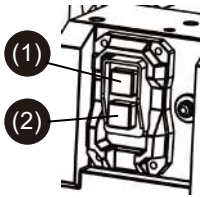



Take out the wrench and loosen the four fixing screws on the back, align the dust collection cover with the holes and tighten the fixing screws to complete the installation. [Pay attention to the direction of the dust port, to the left or right is all fine]

OPERATION

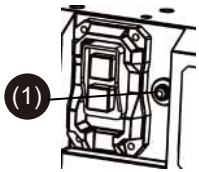
It is strongly recommended to fix your thicknesser on the support stand before use. I disagree that you did not place the machine on a stable level surface before use. Fixing the thicknesser on the support stand for work will prevent your machine from tipping over. You can fix the thicknesser on a work table and mark the four places to be punch holes. Move the thicknesser base to the corresponding hole position to punch four holes. And fix it with suitable screws, nuts, and gaskets. (operation)

On/Off Switch



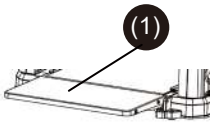
The ON / OFF switch is located on the front of the planer motor. To turn the planer on, press the green button (1). To turn the planer off, press the red button (2).

CIRCUIT BREAKER



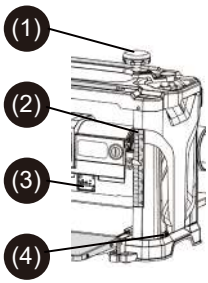
This planer is equipped with a circuit breaker to protect the motor (1). The breaker will automatically shut the planer off when excessive current is drawn. If the breaker is tripped, turn the planer off, wait a moment to allow the breaker to cool down, and reset the circuit by pressing the button. If the button pops back out, wait a few more minutes to allow it to cool down more. Reduce the depth of the cut, reset the breaker, and try again.

Table Extensions



Before using your planer, fold down the table extensions(1)in the front and back of the tool.

HEIGHT OF CUT



Rotate the depth adjustment handle(1) to adjust the height of the roller case, relative to the base. The depth scale (2) shows the height of the cutter head above the main table. The quality of the finished surface depends on the operator's experience and judgment about the depth of the cut. Each full rotation of the depth-adjustment handle adjusts the planer's height by 1/16''(1.5mm). For example, 1/2 of a rotation is 1/32"(0.75mm), and 1 full rotation is 1/16"(1.5mm)

NOTE: When adjusting the height of the roller case, ensure the depth stop preset (4) is in the lowest (thinnest) position. Failure to do so may result in damage to the depth stop preset or the roller case.

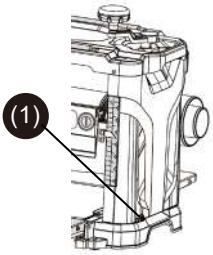
NOTE: A spring-loaded depth-of-cut gauge (3) is attached to the front of the roller case. The pointer on the depth of-the cut gauge accurately displays the depth of cut per pass when the work piece is positioned below the gauge.

DEPTH OF CUT

1. The depth of cut depends on the width, species, hardness, moisture content, grain direction, and grain structure of the wood.
2. The maximum depth of cut is 1/8"(3mm) for work pieces less than 3'' wide, 1/12"(2mm) for work pieces wider than 3" less than 6", and 1/24"(1mm) for work piece wider than 6'' less than 13''. The wider the work piece, the shallower the depth of cut should be. The harder the species of wood, the shallower the depth of cut should be.
3. The smaller the depth of cut, the better the finished surface. It is better to take multiple shallow passes on a workpiece, rather than one deep pass; This is better for the motor and cutting inserts, and will prolong their lives.
4. If boards are cupped or bowed, use a jointer to flatten them out, or take multiple shallow passes until the work has one flat side. Once a level surface has been created, flip the work piece and create parallel sides. It is easiest to do this if you can rip-cut the boards into multiple pieces beforehand.
5. As a rule of thumb, it is best to alternate sides of the board being planned until the desired thickness is reached. This will result in the board having a more-uniform moisture content, since half of the total depth of cut has been taken from each side. Any additional drying should not cause warping or cupping.

6. Scrap wood is your best friend. Cut a test piece to verify the finish produced, as well as the accuracy of the depth of cut and the thickness of the finished product.

DEPTH STOP



The depth stop preset (1) is a simple way to set the desired thickness of a work piece. Move the knob to the desired finished thickness. For example, if you want a work piece 1-1/4”thick, move the knob to the 1-1/4”setting. The finished workpiece will be 1-1/4”thick. This feature is best used when planning multiple work pieces, to ensure that all work pieces have a uniform thickness.

NOTE: when adjusting the height of the roller case, ensure the depth stop preset is in the lowest (thinnest) position. Failure to do so may result in damage to the depth stop preset or the roller case.

PREPARING WORK

Thickness planers work best when at least one side of the lumber is flat. Use a surface planer or a jointer to create a flat surface. Twisted or severely warped boards can jam the planer and should not be used. Rip lumber in half to reduce the magnitude of the warpage.Work should be fed into the planer in the same direction as the grain of the wood. Sometimes the grain will change direction in the middle of the board. In such cases, if possible, cut the board in the middle before planning, so that the grain direction is correct. Always plan with the grain.

CHECK FOR WORN CUTTING INSERTS

The cutting inserts’ condition will affect cutting precision. Observe the quality of the cut that the planer produces to check the condition of the cutting inserts. Dull cutting inserts will tear wood fibers and produce fuzzy surfaces. Raised grain will occur when dull cutting inserts pound on wood that has varying density. Raised edges will also be produced where the cutting inserts have been nicked. The cutting inserts on this planer are adjustable. Keeping a spare set of cutting inserts on hand is recommended.

AVOIDING SNIPE

Thickness planers tend to leave a small bit of snipe at the end of the planed boards, particularly for longer workpieces. Snipe is a small dip that is caused by the board's own weight pulling one end downwards as the board enters or exits the planer, thus pushing the other end into the cutter head and creating an uneven finish. A snipe will occur when boards are not supported properly, or when only one feed roller is in contact with the work at the beginning or end of the cut.

The best way to avoid snipe is to cut your work piece long enough that you can saw off the snipe after the board has been planned. Leave 1" to 2" on both ends so it can be removed later. Other, less efficient methods include gently pushing the board up while feeding the work until the out feed roller starts advancing it. Then, move to the rear and receive the planed board by gently pushing it up when the in feed roller loses contact with it. The third option is to have another dummy board flush against the beginning and end of the work piece. That way, this piece of scrap wood will be the recipient of all of the snipe. Snipe is more apparent when deeper cuts are taken. Lower depths help prevent snipe.

It is also recommended to have the infeed and outfeed extension tables slightly inclined upwards to form a V shape, with the difference between the outermost edges of the extension tables and the center of the main table being about 1 mm (see p. 14 for adjustments)

THE DO'S AND DONT'S OF GRAIN DIRECTION

Always plane with the grain of the wood (in the same direction as the grain). There are six sides to every board: two face grains, two side/edge grains, and two end grains. Never plane with the end grain facing upwards. Only plane side and face grains. Otherwise, the board could splinter and explode inside the planer, which could cause serious injury and damage. When planing the face and side/edge grain, always plane in the direction of the grain. Do not plane perpendicular to the grain, otherwise the board could splinter and explode.

FEEDING WORK

The planer is supplied with cutting inserts mounted in the cutter head, and the in feed and out feed rollers pre-adjusted to the correct heights. The feed rate (the rate at which the work piece travels through the planer) is automatic, but will vary slightly depending on the depth of cut and type of wood.

To feed the work piece:

1. Align the work perpendicular to the roller case so that the work feeds through the planer straight, making sure that the board is traveling in the same direction as the grain and that you are only planing either side or face grain. Boards longer than 33-1/2" should have additional support from free-standing material stands. Position the work piece with the face to be planned on top.
2. Raise / lower roller case to produce the depth of cut desired.
3. Stand on the side of the planer. Do not stand directly in front or behind the planer.
4. Turn the planer ON and direct the board into the planer. Gently slide work pieces into the in feed side of the planer until the in feed roller advances the work piece. Let go of the work piece and allow the automatic feed to advance the board through the planer.
5. Do not push or pull on the workpiece. Catch the planned lumber by grasping it in the same manner as it was fed as it comes out the backside. Make sure not to stand directly behind the planer while catching fed lumber. Do not grasp any portion of the board that has not gone past the outfeed roller.
6. Repeat as needed. The planer has two return rollers on top so an assistant can easily pass the work back to the operator. Keep in mind that multiple shallow cuts result in smoother surfaces than a single deeper cut.

MAINTENANCE

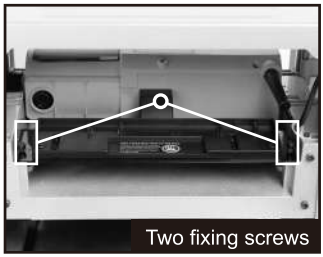
AWARNING: To reduce the risk of serious personal injury, turn tool off and disconnect tool from power source before making any adjustments or removing/installing attachments or accessories.

1. ADJUSTING/REPLACING CUTTING BLADE

Note: the thicknesser adopts adjustment-free double-edged planing blade, which can be installed directlyIf one side of the planing blade is damaged, the other side can be replaced to continue usingIf the dust collection cover has been added, it should be removed first.

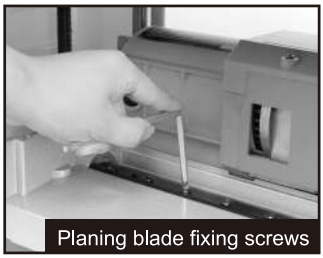

Disassembly wrench

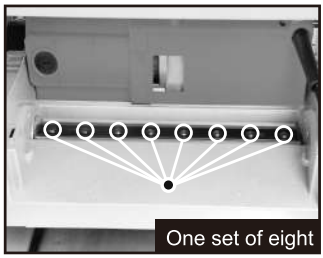

Dust port screw


Two fixing screws

1. Find the disassembly wrench placed on the back of the machine and disassemble the two set screws as shown above.


Dust cover

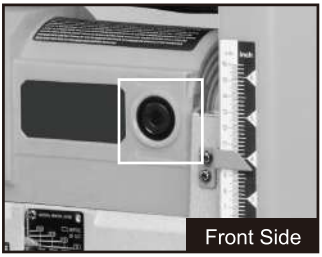

Planing blade fixing screws

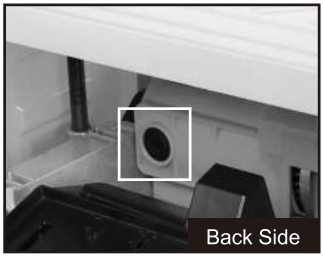

One set of eight

2. Take out the cover, you can see the fixing screws of planing blade (there are 16 screws in total for two planing blade), loosing screws to take out the planing blade pressure plate, so the planing blade can be replaced.

   [Note: after the installation of the planing blade, be sure to tighten fixing screws]

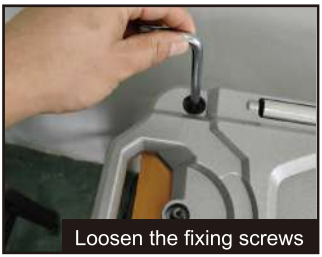
2. ADJUSTING/REPLACING CARBON BRUSH

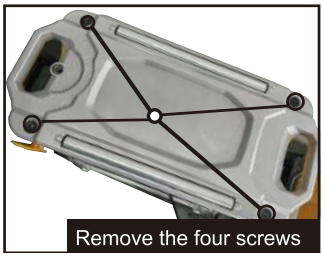

Front Side


Back Side

1. Loosen the carbon brush cover with a flat-head screwdriver to take out the carbon brush for replacement. [One carbon brush on each side of the motor, need to replace at the same time]

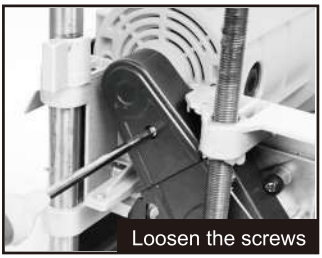
3. ADJUSTING/REPLACING BELT

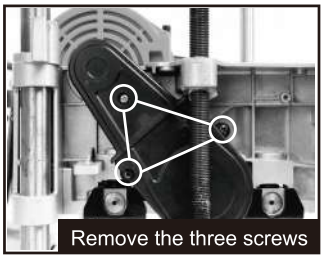

Loosen the fixing screws

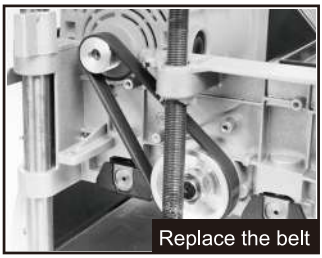

Remove the four screws


Take out the casing

1. After raising the motor to the top, remove the lifting handle and loosen the four screws fixing the casing as shown in the picture above, and take out the casing.


Loosen the screws

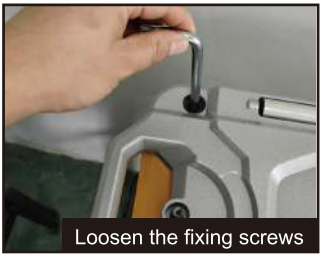

Remove the three screws

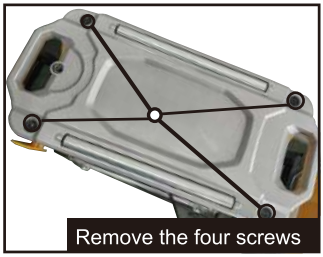

Replace the belt

1. As shown in the picture above, remove the three fixing screws in turn and remove the belt cover to replace the belt.After the replacement is completed, tighten the screws in turn to install the belt coverand the casing.

Summary: 1. Disconnect the power. 2. Rise the machine to the uppermost side to remove the lifting handle. 3.Take out the casing. 4.Take out the side belt cover. 5.Replace the belt. 6.Replacementcompleted, install back in turn.

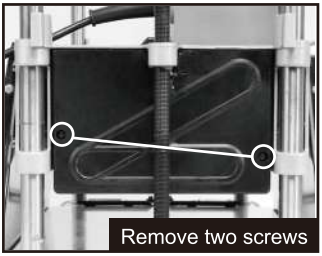
4. ADJUSTING/REPLACING CHAIN/CHAIN WHEEL

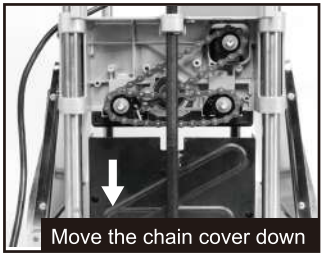

Loosen the fixing screws


Remove the four screws


Take out the casing

1. After raising the motor to the top, remove the lifting handle and loosen the four screws fixing the casing as shown in the picture above, and take out the casing.


Remove two screws


Move the chain cover down


Three chain screws in tota

2. Remove the two fixing screws as shown in the picture above, pull the chain cover to the bottom to expose the chain and loosen the chain screws to replace the chain/chain wheel.

5. CLEANING THE PLANER

Keep the planer clean of any wood chips, dust, dirt, or debris. We strongly recommend always using a dust collection system. Make sure to clean out the planer after every use. After 10 hours of operation, the drive chains and sprockets should have wood chips, dust, and old grease removed. While wearing safety glasses, use a couple of puffs of compressed air (do not exceed 50 PSI) to blow dust and chips out of the gearbox and drive chains. Use common automotive bearing grease to lubricate all drive chains and sprockets. Spray the gearbox with a light coat of dry lubricant. Clean the table and infeed /outfeed rollers using a soft, damp cloth. Do not use any waxes, oils, or solvents on the table.

6. ADJUSTING THE INFEED/OUTFEED EXTENSION TABLES

1. Locate the table elevation adjustment bolt on each side of the table. Raise the table to expose the bolt.
2. Using a wrench and screwdriver, loosen the bolt. Keep track of the number of turns applied to each bolt. Make sure that the bolt on the left and right sides of the table are turned the same number of times.
3. Test the table height. If adjustments need to be made, repeat step 2 as needed, ensuring that both bolts have been turned the same number of times.
5. Repeat steps 1 – 3 for the other table until you are satisfied with the height.
6. Test the adjustments on a scrap piece of wood, making further adjustments as necessary until you are satisfied.

TROUBLE SHOOTING

1. IF THE MATERIAL DOES NOT FEED PROPERLY, CHECK FOR:

- Dull knives, rotate or replace as necessary. Refer to Changing the Planer blade in the maintenance section
- Excess clogging in the dust hood. Refer to the Dust Collection cover installation paragraph.
- Excess oil/debris/pitch on feed rollers.
- Excessively twisted, cupped, or bowed material.
- A broken drive belt. Refer to replacing a New Belt paragraph in the maintenance section.

2. IF THE UNIT IS NOT RUNNING, CHECK TO SEE:

- If the unit is plugged in. Ensure the unit is plugged into the appropriate outlet.
- If the motor brushes are depleted, replace them as necessary. Refer to the Brushes paragraph under the maintenance section.

3. The circuit breaker keeps tripping.

- Dull cutting blade. Check the cutting blade. Rotate or replace as necessary.
- Excessive depth of cut. Reduce the depth of the cut.
- Internal motor problem. Contact customer service for assistance.

4. Drive rollers do not work, or excessively loud grinding noise.

- Broken gearbox, drive chain, or sprocket. Contact customer service for assistance.

5. Marks on the workpiece.

- Dull cutting inserts. Check cutting inserts. Rotate or replace as necessary.
- Excessive depth of cut. Reduce the depth of the cut.
- Workpiece being fed against the grain. Reverse workpiece.
- Table or feed rollers are dirty. Clean table and/or feed rollers.
- Dust or debris between cutting inserts and cutter head. Clean cutting inserts and cutter head.

6. Snipe.

- Dull cutting inserts. Check cutting inserts. Rotate or replace as necessary.
- Improper support being used. Support workpieces properly (especially long workpieces).
- Table or feed rollers are dirty. Clean table and/or feed rollers.

WARRANTY INFORMATION

WOODSTARTER offers a one-year warranty along with lifetime technical support to ensure your satisfaction. For any inquiries or feedback, please contact our team at support@woodstarter.com or visit our support page at www.woodstarter.com for assistance.

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