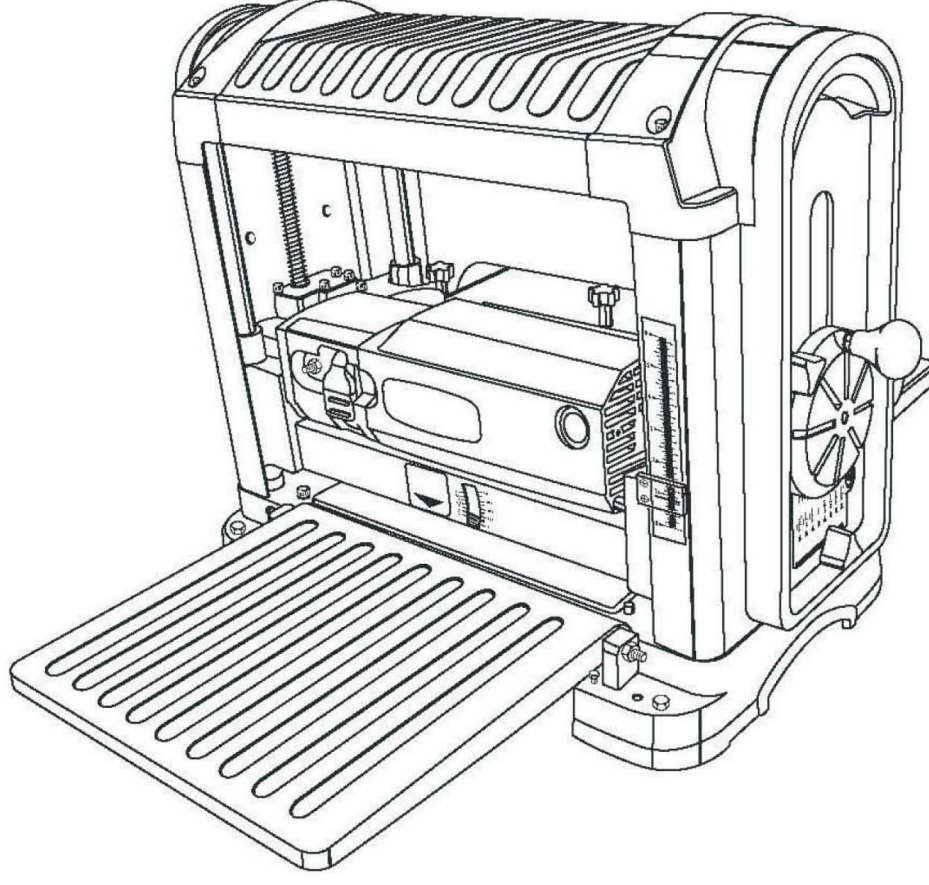


Owner's Manual

CT-330X 13" SPIRAL HEAD THICKNESSER

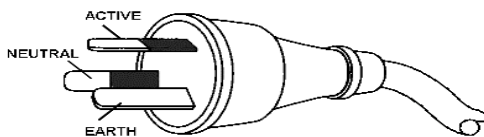
CARBA-TEC

TOOLS FOR WOOD



RULES FOR SAFE OPERATION

- **KEEP THE WORK AREA CLEAN.** Cluttered work areas and work benches invite accidents. **DO NOT** leave tools or pieces of wood on the planer while it is in operation.
- **DO NOT USE IN DANGEROUS ENVIRONMENTS.** Do not use power tools near gasoline or other flammable liquids, in damp or wet locations, or expose them to rain. Keep the work area well lit.
- **KEEP CHILDREN AND VISITORS AWAY.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord while operating.
- **MAKE WORKSHOP CHILDPROOF** with padlocks and master switches or by removing starter keys.
- **DO NOT FORCE THE TOOL** it will do the job better and safer at the rate for which it was designed.
- **USE THE RIGHT TOOL FOR THE JOB.** Do not force the tool or attachment to do a job it was not designed for. Use it only the way it was intended.
- **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. Use only a cord 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.



- **INSPECT TOOL CORDS AND EXTENSION CORDS PERIODICALLY** and, if damaged, have repaired at your nearest authorized service center. Stay constantly aware of cord location and keep it well away from the moving blade.
- **DRESS PROPERLY.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that can get caught and draw you into moving parts. Nonslip footwear is recommended. Also wear protective hair covering to contain long hair.
- **ALWAYS WEAR SAFETY GLASSES WITH SIDE SHIELDS.** Everyday eyeglasses have only impact-resistant lenses; they are **NOT** safety glasses.
- **WEAR A DUST MASK** to keep from inhaling fine particles.
- **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
- **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
- **DO NOT OVERREACH.** Keep proper footing and balance at all times.

- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
- **DISCONNECT ALL TOOLS.** When not in use, before servicing, or when changing attachments, all tools should be disconnected.
- **AVOID ACCIDENTAL STARTING.** Be sure switch is off when plugging in any tool.
- **USE RECOMMENDED ACCESSORIES.** Consult the operator's manual for recommended accessories. The use of improper accessories may cause risk of injury.
- **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the blade is unintentionally contacted.
- **CHECK DAMAGED PARTS.** Before using the tool, a guard or other part that is damaged should be carefully checked to determine that it 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 must be properly repaired or replaced by an authorized service center to avoid risk of personal injury.
- **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction or rotation of the blade or cutter only.
- **NEVER LEAVE TOOL RUNNING UNATTENDED, TURN THE POWER OFF.** Do not leave tool until it comes to a complete stop.
- **FIRMLY CLAMP OR BOLT** your tool to a workbench or table at approximately hip height.
- **KEEP HANDS AWAY FROM CUTTING AREA.** Do not reach underneath work or in blade cutting path with your hands and fingers for any reason. Always turn the power off.
- **DO NOT ABUSE CORD.** Never yank cord to disconnect it from receptacle. Keep cord from heat, oil, and sharp edges.
- **USE ONLY OUTDOOR EXTENSION CORDS.** Use only extension cords with the marking "Acceptable for use with outdoor appliances; store cords indoors while not in use". Use extension cords with an electrical rating not less than the planer's electrical rating. Always disconnect the extension cord from the outlet before disconnecting the product from the extension cord.
- **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by an authorized service center.
- **KEEP TOOL DRY, CLEAN, AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean tool.

RULES FOR SAFE OPERATION

- **NEVER PERFORM THE PLANING OPERATION** with the cutter head or cutter guard removed.
 - **NEVER MAKE A PLANING CUT** deeper than 1/8 in. (3 mm).
 - **DO NOT PLANE MATERIAL** shorter than 7" in (177.8mm) or narrower than 3/4 in. (19 mm).
 - **MAINTAIN THE PROPER RELATIONSHIP** between the infeed and outfeed surfaces and the cutter head blade path.
 - **SUPPORT THE WORKPIECE ADEQUATELY** at all times during operation; maintain control of the work at all times.
 - **DO NOT BACK THE WORK** toward the infeed table.
 - **DO NOT ATTEMPT TO PERFORM** an abnormal or little used operation without the use of sturdy and adequate jigs, fixtures, stops, and the like.
 - **NEVER** plane more than one piece at a time. **DO NOT PLANE** more than one workpiece on the planer table at a time.
 - **BEFORE STARTING UP**, recheck to make certain all holding screws are tight.
 - **STOP THE MACHINE** and recheck the hex head bolts and blades for tightness after about 50 hours of operation.
 - **DO NOT FORCE FEED THE WORKPIECE** through the machine. Let the planer apply the proper feed rate.
 - **CHECK THE FEED ROLLERS** occasionally to be sure there are no chips or sawdust between any components.
 - **PLANE ONLY SOUND LUMBER**; there should be no loose knots and as few tight knots as possible. Make sure the workpiece is free from nails, screws, stones, or other foreign objects that could break or chip the blades.
 - **NEVER STAND DIRECTLY IN LINE** with either the infeed or outfeed sides. Stand off to one side.
 - **MAKE SURE THE BLADES ARE ATTACHED** as described in the operation section. The blades are sharp and can easily cut your hand. Use caution in handling the blades and cutter head guard.
 - **NEVER PUT YOUR FINGERS** into the dust chute or under the cutter guard.
 - **ALLOW THE CUTTER HEAD** to reach full speed before using the planer.
 - **REPLACEMENT PARTS.** All repairs, whether electrical or mechanical, should be made at your nearest authorized service center.
 - **DO NOT** attempt to turn cutter head with hands.
 - **WHEN SERVICING**, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.
 - **NEVER USE THIS TOOL IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.
 - **IF ANY PART OF THIS TOOL IS MISSING** or should break, bend, or fail in any way, or should any electrical component fail to perform properly, shut off the power switch, remove the plug from the power source and have damaged, missing, or failed parts replaced before resuming operation.
 - **DO NOT OPERATE THIS TOOL WHILE UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR ANY MEDICATION.**
 - **ALWAYS STAY ALERT!** Do not allow familiarity (gained from frequent use of your planer) to cause a careless mistake. **ALWAYS REMEMBER** that a careless fraction of a second is sufficient to inflict serious injury.
 - **STAY ALERT AND EXERCISE CONTROL.** Watch what you are doing and use common sense. **Do not operate tool when you are tired. Do not rush.**
 - **MAKE SURE THE WORK AREA HAS AMPLE LIGHTING** to see the work and that no obstructions will interfere with safe operation **BEFORE** performing any work using your planer.
 - **ALWAYS TURN OFF THE TOOL** before disconnecting it to avoid accidental starting when reconnecting to power supply. **NEVER** leave the tool unattended while connected to a power source.
 - **SAVE THESE INSTRUCTIONS.** Refer to them frequently and use them to instruct other users. If you loan someone this tool, loan them these instructions also.
-

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 harm. Some examples of these chemicals are:

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

SAVE THESE INSTRUCTIONS

GLOSSARY OF TERMS FOR PLANERS

Cutter Head

A rotating piece with blades. The cutter head removes material from the workpiece.

Depth of Cut

A term used to indicate how deep the cutter blades cut into the workpiece.

Gum

A sticky, sap based residue from wood products.

Infeed Table Extension

The infeed table extension is where the workpiece is placed before being picked up by the feed rollers.

Kickback

An uncontrolled grabbing and throwing of the workpiece back toward the operator by the rotating cutter head.

Leading End

The end of the workpiece which is pushed into the cutter head first.

Outfeed Table Extension

The outfeed table extension is what supports the workpiece after it has passed under the cutter blades.

Planer Table

The combination of infeed and outfeed table surfaces which support the workpiece during a cutting operation.

Planing

Removing wood from the widest surface or face of a board so as to make it flat and smooth.

Resin

A sticky, sap base substance that has hardened.

Revolutions Per Minute (RPM)

The number of turns completed by a spinning object in one minute.

Snipe

A depression made at either end of a workpiece by the cutter blades when the board is not properly supported.

Throw-Back

Throwing of a workpiece in a manner similar to a kickback. Usually associated with a cause other than the kerf closing, such as a workpiece being pushed into the rotating cutter head assembly.

Trailing End

The end of the workpiece which is last planed by the cutter head.

Workpiece

The item on which the cutting operation is being performed. The surfaces of a workpiece are commonly referred to as faces, end, and edges.

FEATURES

SPECIFICATIONS

Feed Rate.....	26FPM
Input.....	240volts, 50Hz, AC only, 10 Amp
No Load Speed.....	9000/min
Max. Planning Height.....	152mm
Max. Planning Width.....	330mm
Max. Planning Depth.....	3mm @ 152mm 1.5mm @ 330mm
Net Weight.....	37.8kg
Cuts Per Minute.....	10,000

FEATURES

KNOW YOUR PORTABLE PLANER

Before attempting to use your planer, familiarize yourself with all operating Features and Rules for Safe Operation.

⚠ WARNING:

Do not allow familiarity with your tool to make you careless. Remember that a careless fraction of a second is sufficient to inflict severe injury.

AUTOMATIC FEED

Infeed and outfeed rollers feed the wood through the planer.

DEPTH ADJUSTMENT HANDWHEEL

The depth adjustment handwheel is used to raise and lower the cutter head assembly.

DEPTH GAGE

A depth gage is located on the front of your planer and measures depth of cuts up to 1/8 in. (3 mm).

REPEAT CUT

The repeat cut, located on the right side of the machine housing, has preset measurements for repetitive planing.

RESET BUTTON

Opens the power line circuit when the motor temperature exceeds a safe level, when the motor is overloaded, or when a lower voltage condition exists.

SCALE

Quickly check the thickness of a workpiece.

SNIPE LOCK

Firmly locks the cutter head assembly to help eliminate snipe.

SWITCH AND SWITCH KEY

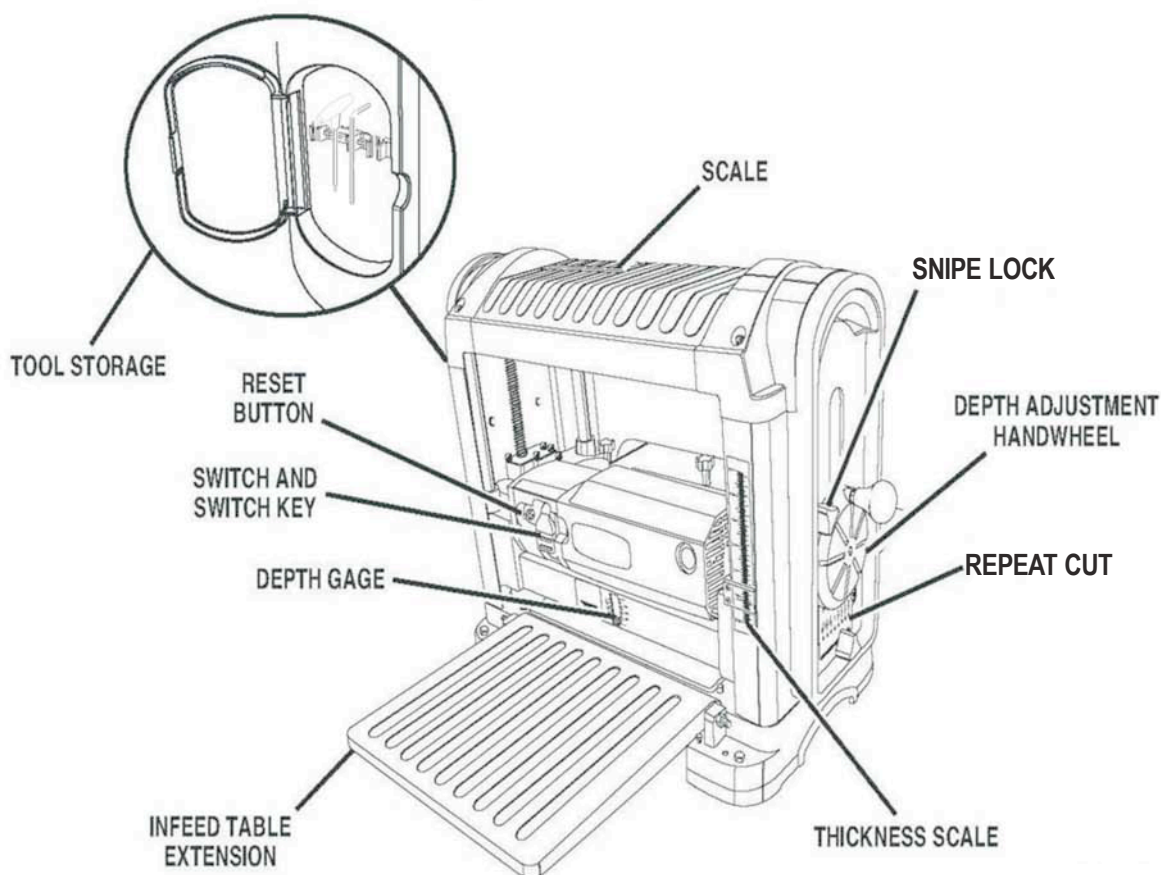
Your planer has an easy access power switch. To lock in the **OFF** position, remove the switch key. Place the key in a location inaccessible to children and others not qualified to use the tool.

TABLE EXTENSIONS

Infeed and outfeed table extensions are attached to the machine and fold "upright" for easy storage. These table extensions are helpful when planing long workpieces.

THICKNESS SCALE

The thickness scale accurately displays the height of the cutter blades to a maximum of 6 in. (152 mm).



UNPACKING

Your planer has been shipped completely assembled except for the dust chute and handwheel knob.

NOTE: Every Thickness Planer is tested at the factory to insure its performance. You may see small amounts of wood dust and chips on your new planer.

- Remove all loose parts from the carton. Separate and check with the list of loose parts.
- Remove the packing materials from around your tool.
- Carefully lift tool from the carton and place it on a level work surface. This tool is heavy. To avoid back injury, get help when needed.
- Remove the protective oil that is applied to all unpainted metal surfaces. Use any ordinary household type grease and spot remover

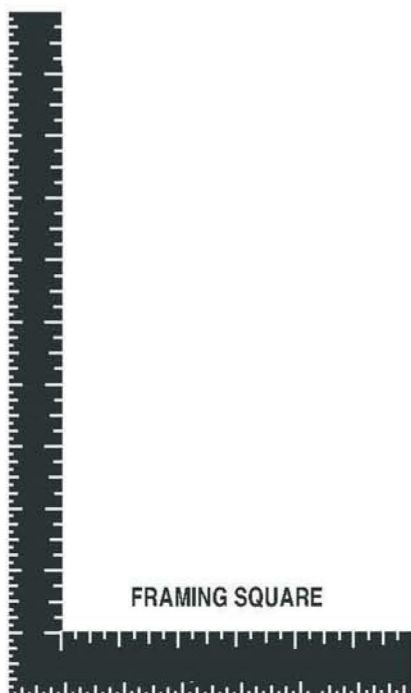
- Do not discard the packing materials until you have carefully inspected the tool, identified all loose parts, and satisfactorily operated your new tool.
- Examine all parts to make sure no breakage or damage has occurred during shipping.

⚠ WARNING:

If any parts are missing, do not attempt to plug in the power cord and turn "ON" the machine. The machine should only be turned "ON" after all the parts have been obtained and installed correctly.

TOOL NEEDED

The following tool (not included) is needed for checking adjustments of your planer:

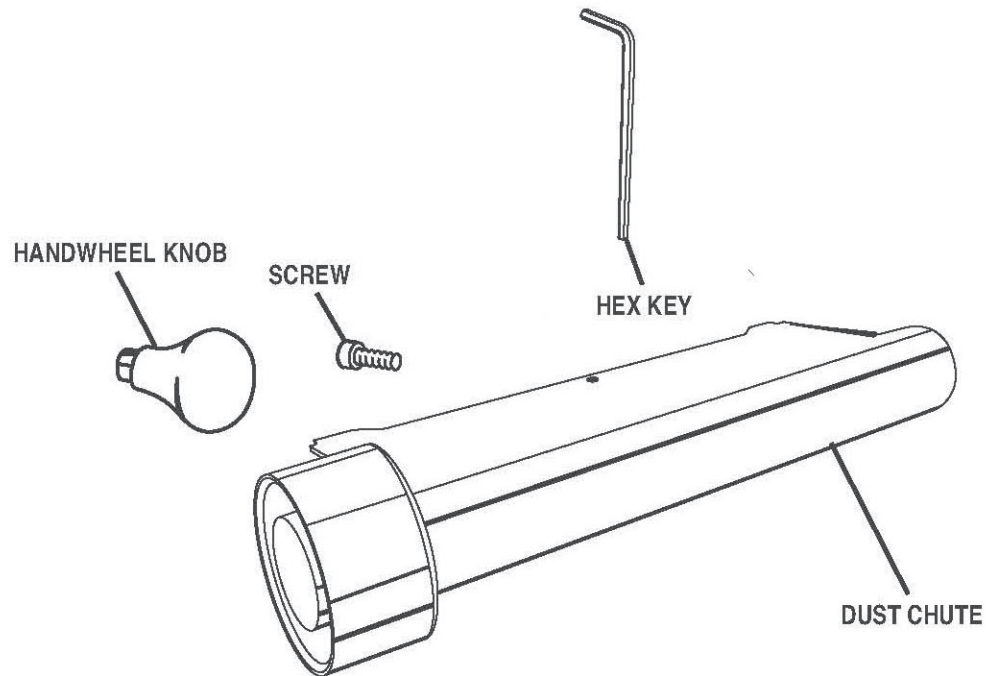


FRAMING SQUARE

LOOSE PARTS LIST

The following items are included with your Planer:

- Hex Key
- Dust Chute
- Handwheel Knob
- Screw
- Operator's Manual



⚠ WARNING:

The use of attachments or accessories not listed might be hazardous and could cause serious personal injury.

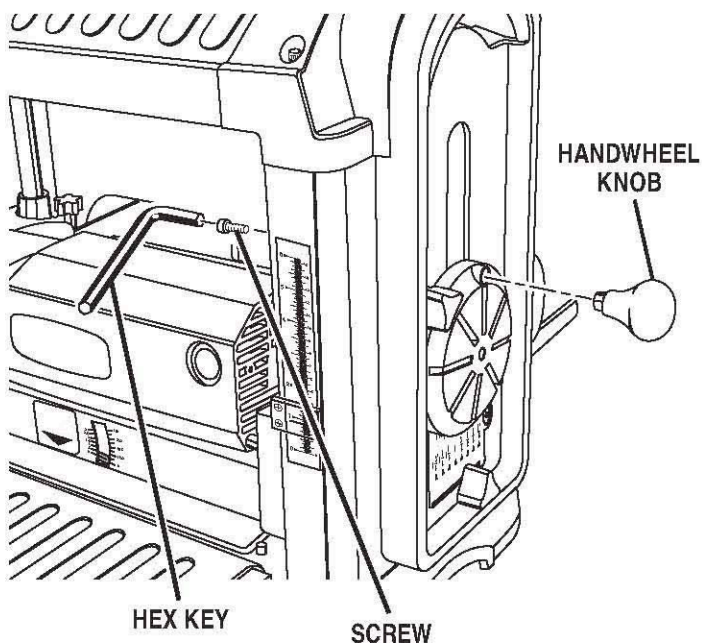
ASSEMBLY

⚠ WARNING:

To prevent accidental starting that could cause possible serious personal injury, assemble all parts, make sure all adjustments are complete, and make sure all fasteners are secure before connecting tool to power supply. The tool should never be connected to power supply when you are assembling parts, making adjustments, installing or removing blades, or when not in use.

INSTALLING HANDWHEEL KNOB

- Remove the handwheel knob and screw from the hardware bag.
- Turn the depth adjustment handwheel until the hole for the handwheel knob is aligned with the slot in the planer housing.
- Place the handwheel knob over the hole and tighten it using the screw.



ASSEMBLY

MOUNTING PLANER TO WORKBENCH

If your planer is to be used in a permanent location, it is recommended you secure it to a workbench or other stable surface. When mounting the planer to a workbench, holes should be drilled through the supporting surface of the workbench.

- Mark holes on workbench where planer is to be mounted using holes in planer base as a template for hole pattern.
- Drill four holes through workbench.
- Place planer on workbench aligning holes in the planer base with holes drilled in the workbench.
- Insert four bolts (not included) and tighten securely with lock washers and hex nuts (not included).

NOTE: All bolts should be inserted from the top. Install the lock washers and hex nuts from the underside of the workbench.

Supporting surface where planer is mounted should be examined carefully after mounting to insure that no movement during use can result. If any tipping or walking is noted, secure workbench or support surface before beginning planing operation.

CLAMPING PLANER TO WORKBENCH

If the planer is to be used as a portable tool, it is recommended you fasten it permanently to a mounting board that can easily be clamped to a workbench or other stable surface. The mounting board should be of sufficient size to avoid tipping while planer is in use. Any good grade plywood or chipboard with a 3/4 in. (19 mm) thickness is recommended.

- Mark holes on board where planer is to be mounted using holes in planer base as a template for hole pattern.
- Follow last three steps in section *Mounting Planer to Workbench*.

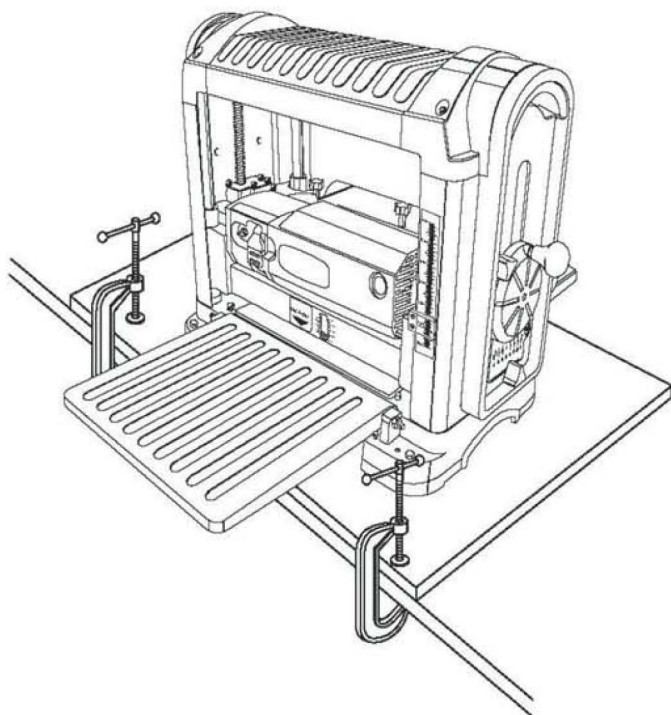
If lag bolts are used, make sure they are long enough to go through holes in planer base and material the planer is being mounted to. If machine bolts are used, make sure bolts are long enough to go through holes in planer base, the material being mounted to, and the lock washers and hex nuts.

INSTALLING THE DUST CHUTE

- Unplug your planer.

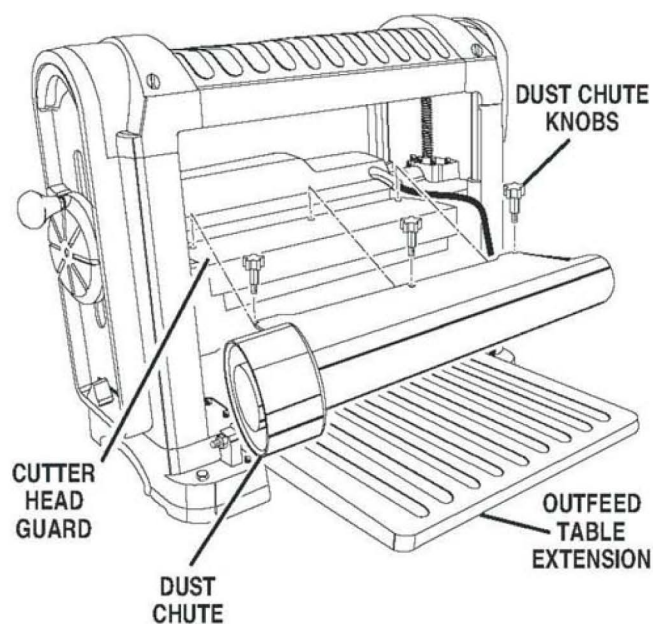
⚠ WARNING:

Failure to turn the tool off, remove the switch key, and unplug the tool before servicing or making adjustments could result in accidental starting causing possible serious personal injury.



- From the back of the machine, locate the dust chute knobs on the cutter head assembly. Turning counterclockwise, loosen each screw.
- Aligning the dust chute over the holes on the cutter head assembly, replace the dust chute knobs by turning them clockwise.

NOTE: To minimize sawdust accumulation on your workpiece, attach either a 2-1/2 in. (64 mm) or 4 in. (102 mm) shop vac hose to either the left or right end of the dust chute. Insert removable plug into end not in use. Opposite the Dust Collector Hose.



ASSEMBLY

LEVELING THE TABLE EXTENSIONS

The infeed and outfeed table extensions are attached to the planer. Shipped in a folded, "upright" position, the table extensions must be in the "down" position before planing can begin. For accurate planing, table extensions must be level with the planer table.

NOTE: For optimum performance, always check to make sure the table extensions are level before beginning planing operations.

To Level:

- Unplug your planer.

⚠ WARNING:

Failure to unplug the tool could result in accidental starting causing possible serious personal injury.

- Place a straight edge or level across both the planer table and table extensions.
- If adjustment is necessary, lift table extensions and loosen lock nuts. Adjust stop screws (one on each side) until extension table is level with planer table.
- Press down on the table extension to ensure the table extension is properly seated.
- Tighten lock nuts securely when adjustments are complete.

NOTE: Four screws attach table extensions to support bars; loosening these screws may aid in leveling table extensions.

BLADE HEIGHT ADJUSTMENT

Raising and lowering the depth adjustment handwheel controls the depth of cut on your planer.

NOTE: Never adjust blade height with cutter lock in the "locked" position (pushed to the far right).

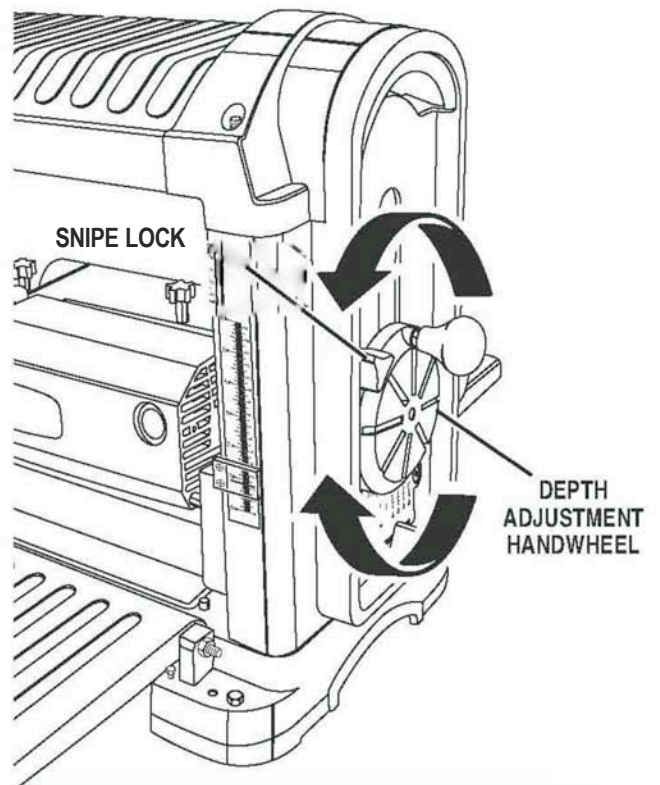
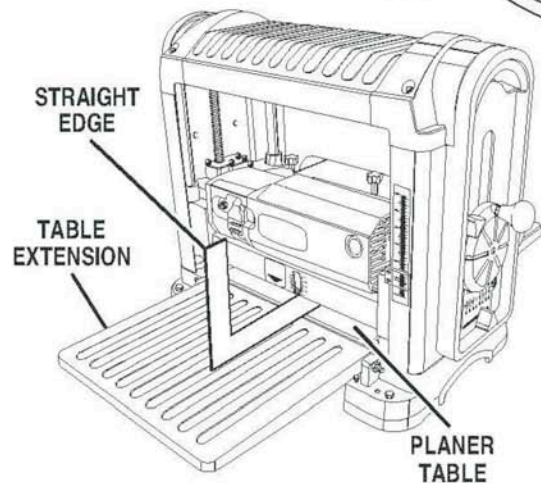
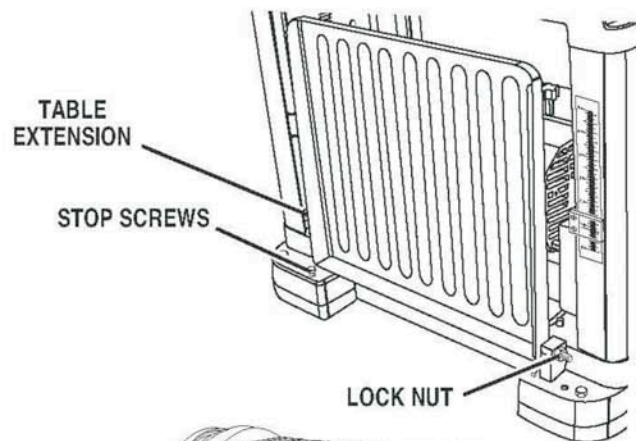
To Raise:

- Push cutter lock to the left to unlock cutter head assembly.
- Turn the depth adjustment handwheel clockwise to the desired height.
- Once the cutter head is in desired position, lock the cutter head assembly in place by pushing the cutter lock handle to the right.

To Lower:

- Push cutter lock to the left to unlock cutter head assembly.
- Turn the depth adjustment handwheel counterclockwise to the desired height.
- Once cutter head assembly is in the desired position, lock cutter head in place by pushing cutter lock handle to the right.

NOTE: Each complete rotation of the handle moves the cutter head assembly 1/64 in. (1.60 mm).



ASSEMBLY

THICKNESS SCALE ADJUSTMENT

Located on the right front of the planer, the thickness scale shows the depth of the finished workpiece. Inaccurate cuts can be prevented by routinely checking the alignment of the thickness scale.

- Table extensions must be level with planer table.
- Plane a scrap piece of wood and measure the depth of the finished piece.
- If properly adjusted, the depth of the finished piece should be the same as indicated on the thickness scale.
- If out of adjustment, loosen the scale indicator screws holding the scale indicator and adjust the thickness indicator to the correct setting.
- Retighten screws securely.

REPEAT CUT

Plane a scrap piece of wood and measure the depth of the finished piece. If an adjustment is needed:

- Unplug your planer.

⚠ WARNING:

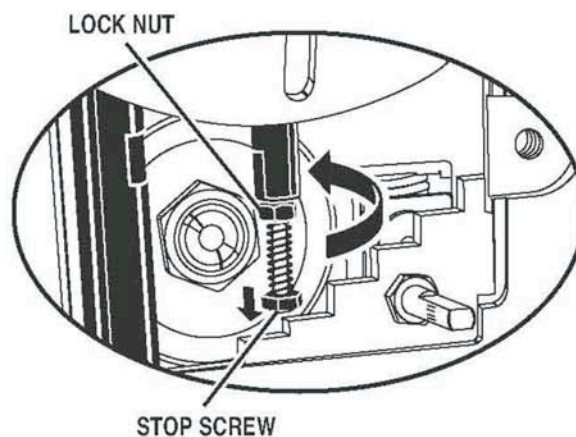
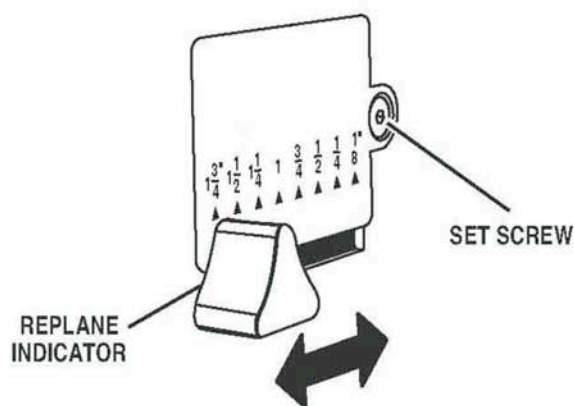
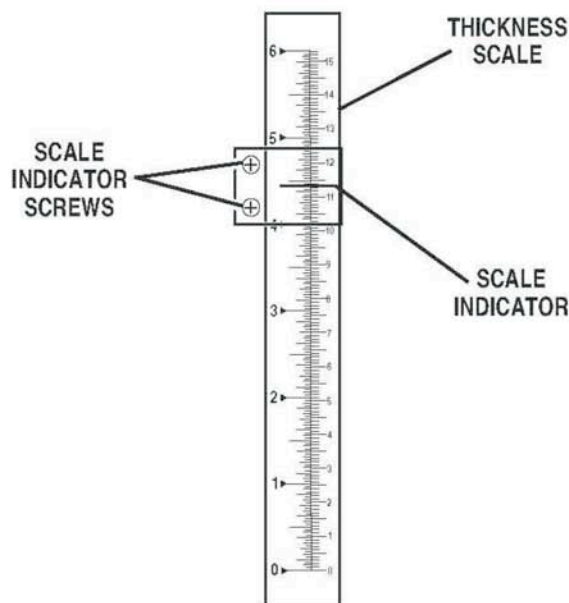
Failure to turn the tool off, remove the switch key, and unplug the tool could result in accidental starting causing possible serious personal injury.

- Pull the replane indicator straight out to remove.
- Remove the set screw on the right-hand side of the planer Repeat Cut cover
- Carefully lift and pull the Repeat Cut cover off.
- Lower the cutter head assembly until it stops against the stop screw.
- Using an accurate ruler or a scrap piece of wood, check the measurement against the replane indicator setting.
- If adjustment is necessary, use a wrench to loosen the lock nut and adjust the stop screw to the correct height.
- Once the adjustment is made, retighten the lock nut and stop screw securely.
- Replace the Repeat Cut cover and secure using the set screw.
- Replace the replane indicator.

APPLICATIONS

You may use the planer for the purposes listed below:

- Planing the surface of a piece of lumber.



⚠ WARNING:

The use of this planer on materials not listed may damage the planer and may cause serious personal injury.

OPERATION

GETTING STARTED

Before turning on the planer, check for loose fasteners, fittings, or hardware. Be sure the dust cover is securely mounted and that the blade cutter rotates freely.

Lower the cutter head assembly to approximately 1 in. (25 mm) above the planer table surface. Without putting any load on the planer, test the motor by turning the planer on and allowing it to reach full speed. If the planer sounds excessively loud or has excessive vibration, turn off the machine immediately and check again for any loose hardware, retightening any you may find.

THICKNESS PLANING

Thickness planing sizes workpiece to desired thickness while creating a smooth, level surface. Thickness of each cut will depend on type of wood (hardwood versus softwood), width of workpiece, straightness, dryness, and grain composition. Whenever working with a new type of wood, make thin test cuts on a scrap piece of wood first to determine potential problems with the workpiece.

PLANING

Thickness planers work best if at least one side of the workpiece has a flat surface. When both sides of a workpiece are rough, use a surface planer or jointer first to define the initial flat surface. Plane one side of the workpiece then flip the workpiece and plane the surface of the reverse side.

Always plane both sides of a workpiece to reach the desired thickness. This will leave the workpiece with uniform moisture to prevent warp during the drying process.

When one end of the workpiece is thicker than the opposite end by more than 1/8 in. (3 mm), make several cuts with the planer starting with light planing cuts first. Remember, light cuts create a finer finish than heavier cuts.

- Do not plane a workpiece less than 3/16 in. (5 mm) thick.
- Do not plane a workpiece less than 3/4 in. (19 mm) wide.
- Do not plane workpiece shorter than 7 in (177.8mm) long as this will cause kickback.
- Do not plane more than one workpiece at a time.
- Do not lower the cutter head assembly lower than 3/16 in. (5 mm)

Do not continuously use the planer set at the maximum depth of cut (1/16 in, 1.5mm) and at full width of cut (13 in., 330 mm). Continuous use at maximum cutting capacity will damage the motor.

WARNING:

Never plane workpiece with loose knots or foreign objects. Do not plane workpieces that are severely bowed, twisted, or knotted. Cutter blades can dull, chip, or break causing possible serious personal injury.

WARNING:

Do not force feed the workpiece through the machine. Let the planer apply the proper feed rate.

WARNING:

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

OPERATION

DEPTH GAUGE

The depth gauge indicates the amount of wood being removed in a planing pass. The workpiece must be positioned under the depth gauge on the front of the planer.

Never make a planing cut deeper than:

- 1/8 in. (3 mm) for material up to 6 in. (152 mm) wide
- 1/16 in. (1.6 mm) for material 6 in. (152 mm) - 13 in. (330 mm) wide

Do not continuously use the planer at the maximum depth of cut, 1/8 in. (3 mm), as it will damage the motor.

REPLANING/USING REPEAT CUT

Your planer has a replane feature using preset markers for repetitive planing. The Repeat Cut allows you to plane material at a set measurement of 1/4 in. (6 mm). The maximum depth of the replane indicator is 1-3/4 in. (44 mm).

- Push Snipe Lock to the left to unlock cutter head assembly.
- Raise cutter head assembly to a height greater than 1-3/4 in. (44 mm).
- Move the replane indicator to the desired height.
- Lower the cutter head assembly until it stops.
- Lock cutter head assembly in place by pushing the Snipe Lock to the right.

AVOIDING SNIPE

Snipes, or depressions made at either end of a workpiece by cutter blades, can occur when the board is not properly supported. Engaging the cutter lock before planing will minimize snipe. Although snipe may be barely noticeable, it is important to keep the workpiece parallel and flat with the planer table to minimize snipe. Butting workpieces end-to-end as they are fed through the planer will minimize the problem, especially for shorter pieces, because it provides a more stable feed.

For workpieces longer than 48 in. (122 cm), greater care must be taken to reduce the problem because the additional length means more of the total weight is unsupported by the planer table and rollers causing the shifting weight to work against keeping the stock flat.

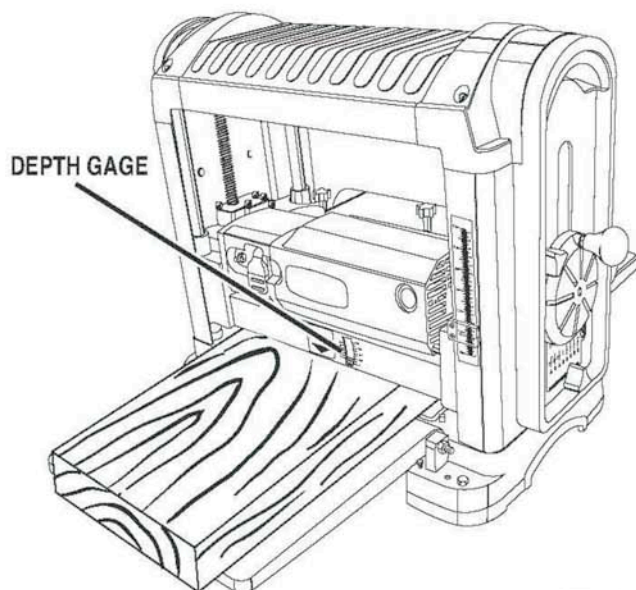
To remove snipe from a finished workpiece, cut off the end of the workpiece where snipe is noticeable.

WARPED WOOD

Little or no warpage is the ideal condition for planing a workpiece. Simply turn the workpiece over and plane it to the desired thickness. Otherwise, plane the top flat first, turn the workpiece and plane the bottom half.

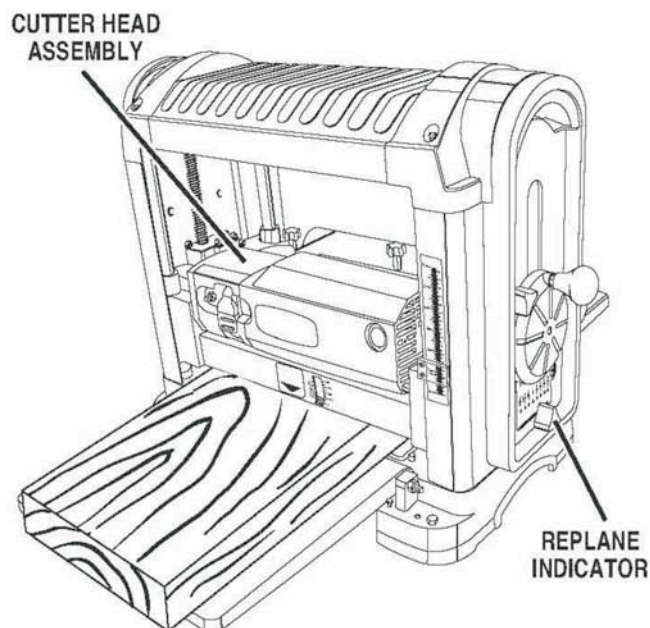
For a board that is cupped or bowed across its width, the best method is to rip the board lengthwise down the middle and plane the pieces separately. This method eliminates much of the waste in planing cupped or bowed workpieces.

The only way to remove the bow from a workpiece that is cupped or bowed down its length is to use a jointer.



Avoid using severely warped wood as it can jam the planer. If it must be used, rip it in half before planing to help minimize the possibility of jamming. If jamming does occur, turn the switch off and unplug the planer immediately. Raise the cutter head assembly high enough to remove the workpiece easily. Carefully check to make sure no damage to the tool has occurred before making the next planing pass.

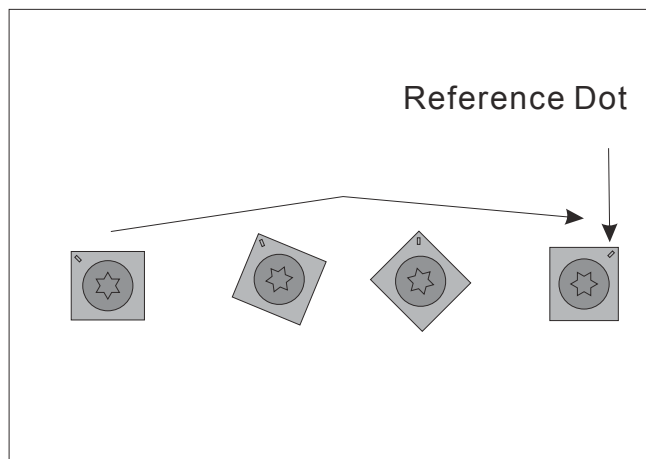
Always feed the workpiece in the direction of the grain. This allows the cutter blades to sever the wood fibers instead of tearing them. Feeding against the grain can also cause the cutter blades to chip the workpiece.



Tools Needed:	Qty
T-Handle Wrench w/T25 Torx Bit.....	1

The 13" cutterhead is equipped with 26 indexable high speed steel cutters; Each cutter can be rotated to reveal any one of its two cutting edges. Therefore, if one cutting edge becomes dull or damaged, simply rotate it 90 to reveal a fresh cutting edge

In addition , each cutter has a reference dot on one corner. As the cutter is rotated , the reference dot location can be used as an indicator of which edges are used and which are new. When the reference dot revolves back around to its starting position, the cutter should be replaced.



Cutter rotating sequence.

To rotate or change a high speed steel cutter:

1. DISCONNECT THE PLANER FROM THE POWER SOURCE!
2. Remove any sawdust from the head of the high speed steel cutter Torx screw.
3. Remove the Torx screw and high speed steel Cutter.
4. Clean all dust and dirt off the cutter and the cutterhead pocket from which the cutter was removed, and replace the cutter so a fresh, sharp edge is facing outward.

Note: Proper cleaning is critical to achieving a smooth finish. Dirt or dust trapped between the cutter and cutterhead will slightly raise the cutter, and make a noticeable marks on your workpieces the next time you plane.

5. Lubricate the Torx screw threads with a light machine oil, wipe the excess oil off the threads, and torque the Torx screw to 48-50 inch/ pounds. When rotating a tips, the tips will seat itself before tightening.

If available, try using pitch and gum remover to be sure all of the wood residue is off the cutterhead and inserts before attempting to rotate them.

Using a shot of compressed air is also helpful, be sure to wear safety glasses.

MAINTENANCE

CORD STORAGE

For convenience, your planer comes equipped with a cord storage area. When not in use, the power cord should be wrapped around the left-hand side of the planer.

⚠ CAUTION:

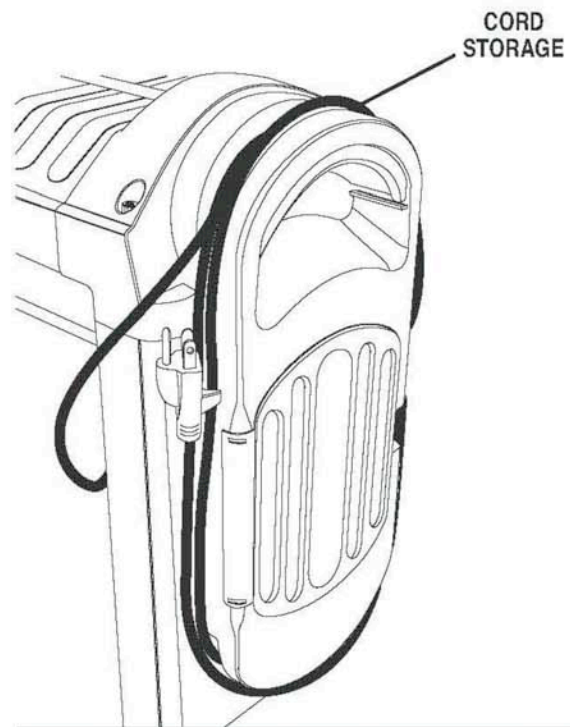
Check extension cords before each use. If damaged, replace immediately. Never use tool with a damaged cord since touching the damaged area could cause electrical shock resulting in serious injury.

⚠ WARNING:

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

⚠ WARNING:

To ensure safety and reliability, all repairs should be performed by a qualified service technician at a Authorized Service Center to avoid risk of personal injury.



MAINTENANCE

GENERAL MAINTENANCE

⚠ WARNING:

Always begin by disconnecting the power supply.

- Periodically check all clamps, nuts, bolts, and screws for tightness and condition.
- Stop the machine and recheck the cutter head torx screw and blades for tightness after about 50 hours of operation.
- **Clean plastic parts only with a soft damp cloth. DO NOT** use any aerosol or petroleum solvents.

LUBRICATION

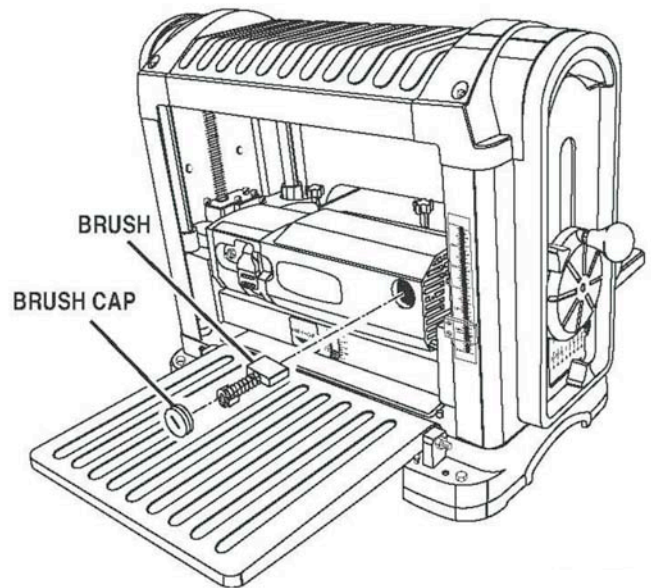
Periodically, check all moving parts (spindle, roller surfaces, handles, etc.) to ensure they are clean and well lubricated. A light film of oil wiped on the face of the cutter blades will keep them rust-free. All of the bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. No further lubrication is required.

MOTOR/ELECTRICAL

The universal motor is easy to maintain but must be kept clean. Do not allow water, oil or sawdust to accumulate on or in it. The sealed bearings are permanently lubricated and need no further attention.

BRUSH REPLACEMENT

Your planer has externally accessible brush assemblies that should be checked every 10 to 15 operating hours for wear. To inspect or replace these brushes, unscrew the brush cap located at the right front and left rear of the planer. Be sure to replace the brush cap securely after inspection or repairs.



CLEANING

Sawdust buildup and other debris can cause the tool to plane inaccurately. Periodic cleaning and waxing is needed for accurate, precision planing.

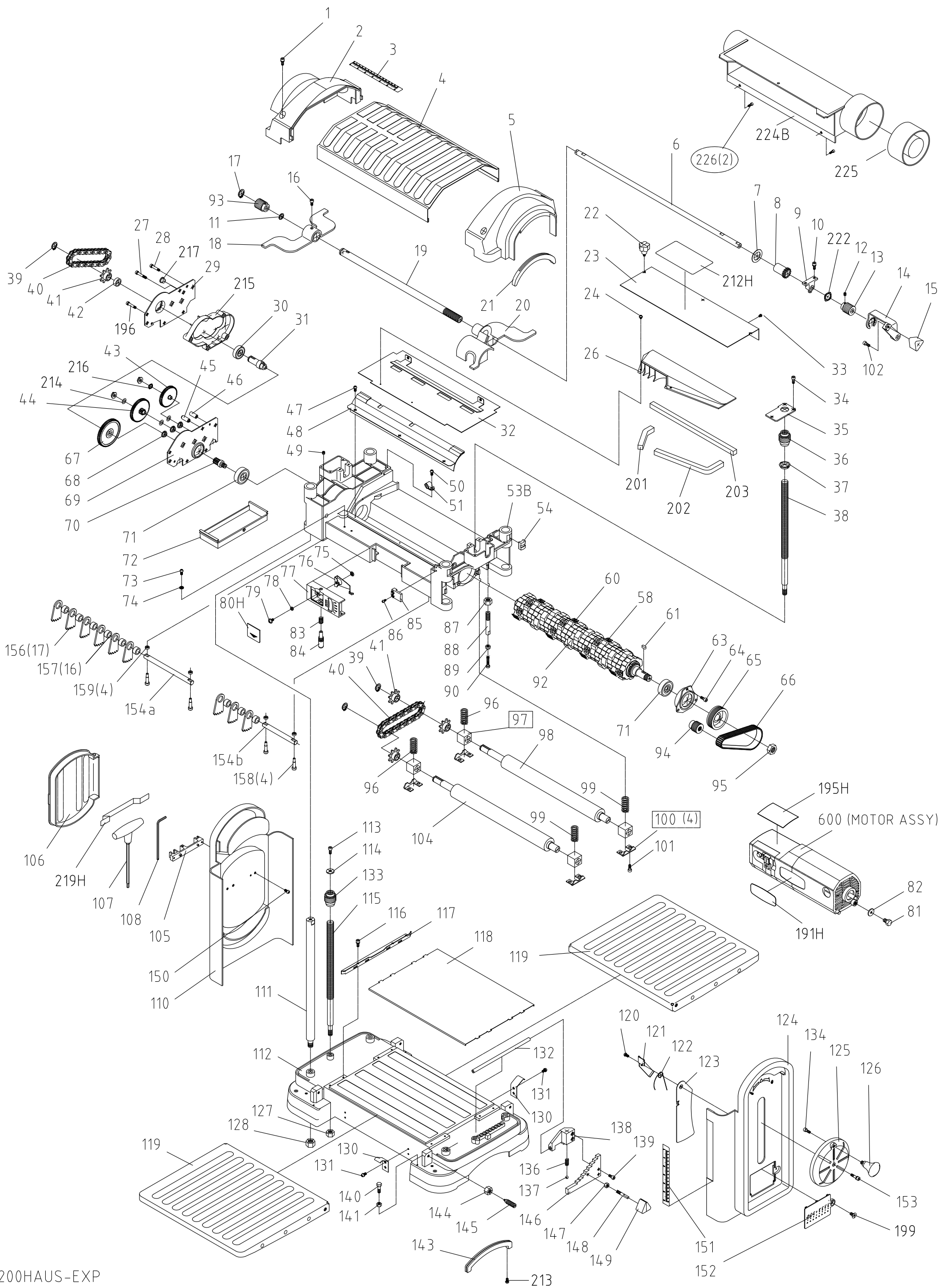
Do not allow sawdust to accumulate on the planer. Clean the dust chute after each use. Moving parts should be cleaned regularly with penetrating oil and lubricated with a light coating of medium-weight machine oil.

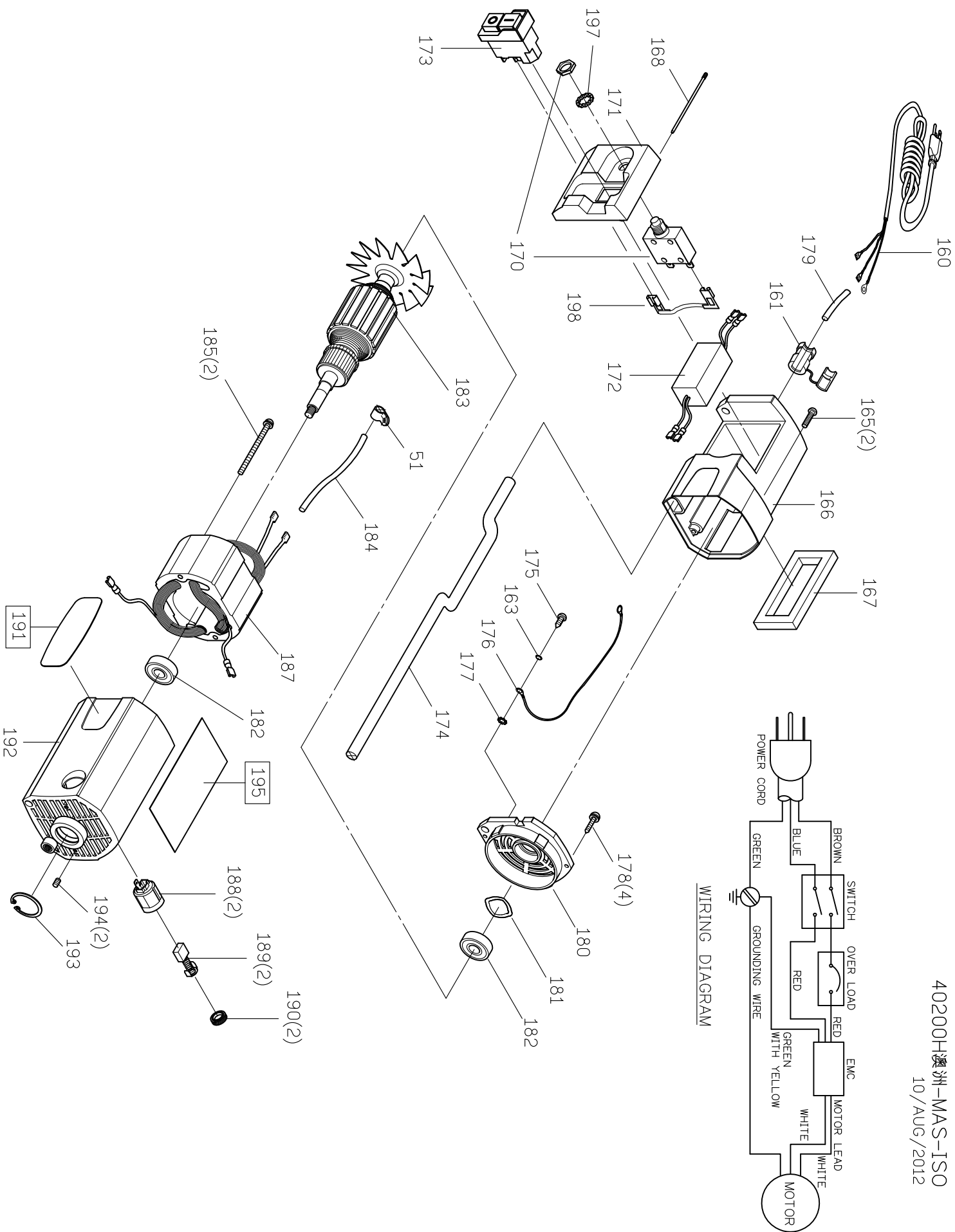
Paste wax should be applied to the planing table surface to ease the movement of workpieces across it. Paste wax can also be used on infeed and outfeed support surfaces but be careful not to use so much that it will be absorbed into the wood and interfere with staining.

Check feed rollers after each use for resin buildup because they must be clean to be effective. If buildup occurs, use a mild, nonflammable tar and pitch remover.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Snipe (depressions at ends of workpiece)	<ol style="list-style-type: none"> 1. Dull cutter blades 2. Incorrect butted stock 3. Unit not securely mounted 4. Cutter head not locked 	<ol style="list-style-type: none"> 1. Replace, turn or sharpen cutter blades 2. Butt pieces end-to-end as they are fed into planer 3. Securely tighten mounting hardware 4. Lock cutter head
Torn grain	<ol style="list-style-type: none"> 1. Too deep a blade setting 2. Workpiece being fed against grain 3. Dull cutter blades 	<ol style="list-style-type: none"> 1. Reduce depth of cut 2. Feed other end of board first 3. Replace, turn or sharpen cutter blades
Fuzzy/Rough grain	<ol style="list-style-type: none"> 1. High wood moisture content 2. Dull cutter blades 3. Too deep a blade setting 4. Incorrect feeding speed 	<ol style="list-style-type: none"> 1. Dry wood before planing 2. Replace, turn or sharpen cutter blades 3. Reduce depth of cut 4. Check for adequate power supply, check cord and plug for damage, check condition of motor brushes
Uneven depth of cut	<ol style="list-style-type: none"> 1. Cutter head assembly not level with planer surface 2. Unstable roller spring pressure 3. Feed roller worn unevenly 	<ol style="list-style-type: none"> 1. Adjust elevation screws 2. Have service performed by an Authorized Service Center 3. Have service performed by an Authorized Service Center
Board thickness does not match depth scale indicator	<ol style="list-style-type: none"> 1. Depth scale incorrectly set 2. Dirty planing table 	<ol style="list-style-type: none"> 1. Adjust depth scale 2. Clean and wax planing table
Cutter head height difficult to adjust	<ol style="list-style-type: none"> 1. Dirty spindle 2. Worn chain 	<ol style="list-style-type: none"> 1. Clean and lubricate 2. Have service performed by an Authorized Service Center
Will not start	<ol style="list-style-type: none"> 1. Not plugged in 2. No power at outlet 3. Motor failure 4. Loose wire 5. ON/OFF Switch malfunction 	<ol style="list-style-type: none"> 1. Check power source 2. Replace fuse, reset breaker or call Electrician 3. Have service performed by an Authorized Service Center 4. Have service performed by an Authorized Service Center 5. Have service performed by an Authorized Service Center
Interrupted operation	<ol style="list-style-type: none"> 1. Unit overloaded 2. Circuit overloaded 	<ol style="list-style-type: none"> 1. Reduce load 2. Operate on circuit separate from other appliances or motors or connect to circuit with adequate amp rating





序號 Ser. No.	圖號 Drawing No.	英 文 名 稱 Description	規 格 Size	數量 Qty	
1	13P001A	SCR SEMS L/WASH	M6XP1.0X20L 染黑	4	
2*	13013	CAP LEFT		1	
3*	13006	SCALE LENGTH		1	
4*	13015	COVER UPPER		1	
5*	13014	CAP RIGHT		1	
6	13029	SHAFT TRANSMISSION		1	
7	13093	WASHER	φ 21.5×φ 34×1.8	1	
8	13027	NUT LOCK	M17×2.0	1	
9	13077	BEARING		2	
10	13P010A	SCR SEMS L/WASH	M5XP0.8X12L 染黑	4	
11	13024	WASHER	φ 12×φ 16×1	1	
12	13P012	SCR SOC SET CUP PT	M5XP0.8X8L 染黑	2	
13	13026	WORM ELEVATION		1	
14	13037	HANDLE		1	
15*	13018	HANDLE		1	
16	13P016	SCR HEX SOC HD LOCK	M5XP0.8X12L 染黑	1	
17	817453-1	RING RETAINING	C17 染黑	1	
18	13023	PLATE LOCK LEFT		1	
19	13019	SLEEVE		1	
20	13022	PLATE LOCK RIGHT		1	
21*	13056	PAD UPPER		2	
22*	13076	KNOB CHUTE		3	
23*	13064	COVER SHROUD		1	
24	13P024A	SCR SEMS W/WASH	M4XP0.7X6L 染黑	2	
26*	13033	MANIFOLD AIR		1	
27	13P027A	SCR SEMS L/WASH	M5XP0.8X35L 染黑	3	
28	13P028A	SCR SEMS L/WASH	M5XP0.8X27L 染黑	2	
29	13103	COVER GEARBOX OUTSIDE		1	
30	13P030	BEARING BALL	6002ZZ	1	
31	SPL1057N	SHAFT GEAR		1	
32*	13030	CHUTE DUST		1	
33	13P033	SCR PAN CR	M4XP0.7X6L 染黑	2	
34	13P034	SCR HEX SOC HD LOCK	M5XP0.8X10L 染黑	6	
35	13072	COVER		2	
36	13097	WORM GEAR R.H.		1	
37	13083	BUSHING		2	
38	13095	SCREW ELEVATING R.H.		1	
39	817453-4	RING RETAINING EXT	STW15 染黑	3	
40	13127	CHAIN	#410-26 目	2	
41	13101	SPROCKET		4	
42	13102	SPACER	φ 15×φ 20×7	1	
43		GEAR ASM SMALL	52T+12T	1	
43-1	SPL1053N	GEAR DRIVE	52T+12T	2	
44		GEAR ASM INTER	58T+12T	1	
45	SPL1050N	SPACER UNDERCUT		4	
46	SPL1049N	SPACER	φ 5.5×φ 9×20	2	
47	13P047	SCR PAN CR	M5XP0.8X6L 染黑	3	
48	13086	PLATE DUST CHUTE		1	
49	13P049	SCR HX SOC SET CUP	M5XP0.8X8L 染黑	1	
50	13P050	SCR PAN CR	M5XP0.8X8L 染黑	1	
51	13094	CLAMP CORD	GCL-5/16 S	1	

13" Planer 40200H AU Parts List

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序號 Ser. No.	圖號 Drawing No.	英 文 名 稱 Description	規 格 Size	數量 Qty	
52	13053	SPRING COIL		1	
53B		FRAME UPPER		1	10/29修改
54	13028	BLOCK SUPPORT		4	
55		SPIRAL CUTTER HEAD ASSY		1	
58		BLADE		26	
60		SPECIAL TORX SCREW	M5XP0.8X8L 染黑	26	
61	818654-9	KEY	5X12L	1	
63	13116	RETAINER BEARING		1	
64	820379-6	SCR HEX SOC CAP	M5XP0.8X12L 染黑	3	
65	13117	PULLEY CUTTER HEAD		1	
66	13126	BELT DRIVE	135J6	1	
67	SPL1055N	GEAR LARGE	70T	1	
68	SPL1051N	BUSHING GEAR		5	
69	13111	COVER GEARBOX INSIDE		1	
70	SPL1047N	GEAR PINION	12T	1	
71	13P071	BEARING BALL	6203ZZ	2	
72	13112	COVER GEAR BOX		1	
73	13P073	SCR PAN CR TYTT	M5X8L 染黑	2	
74	813314-8	LOCKWASHER EXT	M5 染黑	2	
75	13089	NUT	M4	1	
76*	13044	POINTER		1	
77*	13043	HOUSING POINTER		1	
78	13090	BUSHING	4.2X11X3	1	
79	13P079A	SCR SEMS W/WASH	M4XP0.7X10L 染黑	1	
80H	13066	COVER POINTER		1	
81	813310-0	SCREW HEX HD	M8XP1.25X20 染黑	1	
82	13P082	WASHER	M8X23 邊X2T 染黑	1	
83	13046	SPRING COIL	8.5X19X0.8	1	
84	13045	ROD POINTER ELEVATING		1	
85*	13054	INDICATOR DEPTH		1	
86	13P086	SCREW PAN CR	M3XP0.5X16L 染黑	2	
87	13P087	NUT HEX SPECIAL	M10 X14 邊XP1.5 染黑	1	
88	13036	ROD STEP		1	
89	813164-6	NUT HEX	M5XP0.8 染黑	1	
90	13136	SCRW HEX HD	M5XP0.8X25L 染黑	1	
92		SPIRAL CUTTER HEAD		1	
93	13096	WORM GEAR L.H.		1	
94	13119	PULLEY MOTOR		1	
95	13118	NUT HEX	M16XP2.0L.H	1	
96	13082	SPRING COIL LEFT		2	
97	13120	BLOCK BEARING		4	
98	13009	ROLLER OUTFEED		1	
99	13079	SPRING COIL RIGHT		2	
100	13122	PLATE RETAINER RIGHT		2	
101	13P034	SCR HEX SOC CAP	M5XP0.8X10L 染黑	8	
102	820379-9	SCR HEX SOC CAP	M5XP0.8X10L 染黑	1	
104	13008	ROLLER INFEED		1	
105*	13098	HOLDER TOOL		1	
106*	13060	COVER TOOL BOX		1	
107		TORX WRENCH	T25	1	
108	13081	WRENCH HEX'L	4mmX100L 鍍鎳	1	

序號 Ser. No.	圖號 Drawing No.	英 文 名 稱 Description	規 格 Size	數量 Qty	
110*	13016	COVER SIDE LEFT		1	
111	13020	ROD SUPPORT		4	
112*	13001	BASE		1	
113	820379-1	SCR HEX SOC CAP	M5XP0.8X8L染黑	1	
114	13092	WASHER	§ 5.5X § 19X2T	1	
115	13049	SCREW ELEVATING L.H.		1	
116	13P116A	SCR SEMS L/WASH	M5XP0.8X10L染黑	8	
117	13123	RAIL GUIDE		2	
118	13012	PLATE WEAR		1	
119	13031	EXTENSION TABLE		2	
120	13P047	SCR PAN CR TYTT	M5XP0.8X6L染黑	1	
121	13055	PLATE STIFFENER		1	
122	13061	SPRING TORSION		1	
123	13042	PLATE SIDE GUARD		1	
124*	13017	COVER SIDE RIGHT		1	
125*	13032	HUB HANDWHEEL		1	
126*	13071	KNOB HANDWHEEL		1	
127	13P127	NUT LOCK	M10XP1.5	2	
128	813164-10	NUT HEX	M12XP1.75染黑	4	
130	13050	SPRING FLAT		4	
131	13P131A	SCR SEMS L/WASH	M5XP0.8X10L染黑	8	
132	13035	ROD PIVOT		1	
133	13025	WORM GEAR L.H.		1	
134	820379-9	SCR HEX SOC CAP	M5XP0.8X10L 染黑	1	
136	13087	SPRING COIL	§ 7.62X § 15.75X § 0.7	1	
137	823742-1	BALL STEEL	10MM	1	
138	13034	BLOCK GUARD		1	
139	820379-2	SCR HEX SOC CAP	M5XP0.8X16L 染黑	2	
140	821388-3	SCREW HEX	M6XP1.0X25L 染黑	4	
141	813164-7	NUT HEX	M6XP1.0染黑	4	
143*	13057	PAD BASE		2	
144*	13P087-1	NUT HEX SPECIAL	M10X14邊XP1.5染黑	4	
145*	13075	BOLT ADJUSTING SCREW		4	
146	13038	BLOCK STEP		1	
147	813164-7	NUT HEX	M6XP1.0染黑	1	
148	13039	PIN STEP BLOCK		1	
149*	13059	KNOB STEP		1	
150	13P150	SCR PAN CR TYTT	M4.8X8L 染黑	2	
151*	13010	SCALE THICKNESS		1	
152*	13085	COVER SIDE R.H.		1	
153	13P153A	SCR SEMS L/WASH	M5XP0.8X20L 染黑	1	
154*		LONG BAR		1	
155*		SHORT BAR		1	
156*		ANTI-KICK JAW		17	
157*		SPACER		16	
158*		SPECIAL HEX SOC SCREW		4	
159*		PAD		4	
191H*		CUSTOMER LABEL		1	
192H*		CSA LABEL		1	
193H*		AFTER-CARE LABEL		1	
195H*		MOTORR LABEL		1	

13" Planer 40200H AU Parts List

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序號 Ser. No.	圖號 Drawing No.	英 文 名 稱 Description	規 格 Size	數量 Qty	
196	13P196A	SCR SEMS L/WASH	M5XP0.8X30L 染黑	1	
199	13P199	SCR HEX SOC FLT HD	M6XP1.0X12L 染黑	1	
201	13078	GASKET RIGHT		1	
202	13088	GASKET LEFT		1	
203	13100	GASKET COVER		1	
212H*		LABEL WARNING DUST CHUTE		1	
213	13P150	SCR PAN CR TYTT	M4.8X8L 染黑	4	
214	13160	WASHER	§ 8.2X § 14X0.1T	3	
215	13161	COVER GEARBOX	PP7633 黑	1	
216	13162	WASHER WAVE	§ 8.5X § 12	1	
217	13163	PLUG	橡膠、黑	1	
219H*				1	
222	13168	WASHER WAVE	§ 12.5X § 17X0.3T	1	
224B		DUST HOOD		1	10/29修改
225	13153	DUST HOOD COVER		1	
226	21789-051	SCR SEMS L/WASH	M5XP0.8X12L 染黑	2	10/29新增
600*	13MAS	MOTOR/SWITCH ASM		1	

13" PLANER 40200H AU MOTOR PARTS LIST

[頁碼]/1

序號 Ser. No.	圖號 Drawing No.	英 文 名 稱 Description	規 格 Size	數量 Qty	備 註
51	13094	CLAMP CORD	GCL-1/4 S	1	
160*	13M15	CORD W/PLUG		1	
161	13M07	GUARD CORD	HALO(6P3-4)	1	
163	13092	WASHER	φ 5.3×φ 8×1t 染黑	1	
165	13P165	SCREW PAN HD CR	M5X20L 染黑	2	
166*	13M01	HOUSING SWITCH		1	
167	13M13	GASKET FOAM		1	
168	13M05	SCREW SPECIAL		1	
170	13M12	SWITCH RESET	10A	1	
171*	13M04	BEZEL SWITCH		1	
172	AU13-172	WAVE FILTER		1	
173	AU13-173	SWITCH LOCKING		1	
174	13M14	ROD MOTOR PIVOT		1	
175	13P073	SCR PN CR TYTT	M5X8L 染黑	1	
176	40200H-176	LEAD WIRW	300MM +/- 3MM	1	
177	813314-8	LOCKWASHER EXT	M5 染黑	1	
178	13P178A	SCR SEMS L/WASH	M4.2X20L 染黑	4	
180	13M03	CAP MOTOR END		1	
181	13P181	WASHER SPRING WAVY		1	
182	820722-3	BEARING BALL	6201LLB	2	
183	13M09AS	ARMATURE ASM		1	
184	13M21	SLEEVE		1	
185	13P185A	SCR SEMS L/WASH	M4.8X70L	2	
187	13M08AS	FIELD ASM		1	
188	13M16	HOLDER BRUSH		2	
189	13M18	BRUSH		2	
190	13M17	CAP BRUSH		2	
191*	826463-4	LABEL RIDGID		1	
192*	13M02	HOUSING MOTOR		1	
193	13P193	RING RETAINING	RTW32 染黑	1	
194	13P194	SCR HEX SOC SET	M5X12L 染黑	2	
197	R13197	LOCKWASHER EXT	φ 12×φ 21×1t 鍍鋅	1	
198	13M33	CONNECTION LEAD WIR	80MM	1	
513	13047	BAG POWER CORD		1	

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