

RYOBI

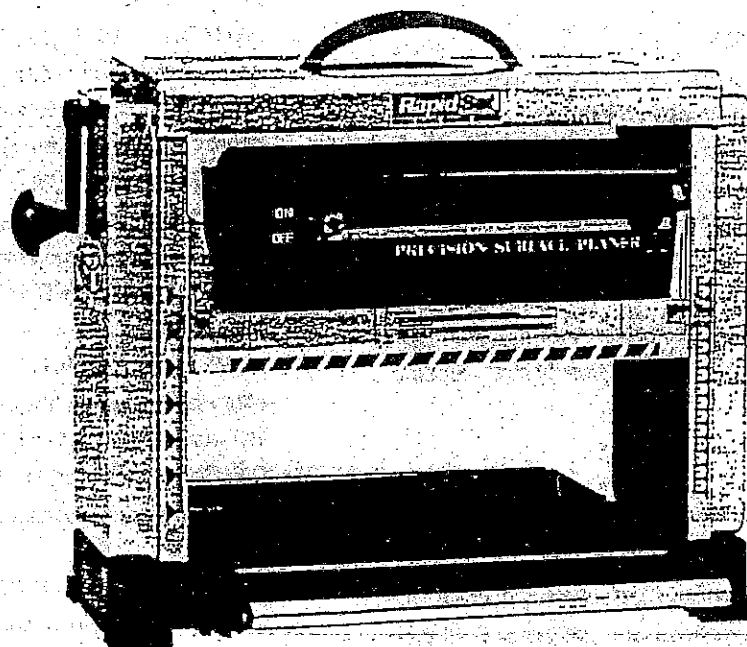
OWNER'S OPERATING MANUAL

12-5/16" THICKNESS PLANER / AP-12

アメリカ

1980022(C) ©

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SPECIFICATIONS

Input	115 V, 14 amp
Horsepower	2 HP
No-load speed	8,000 RPM
Feed speed	26.2 FPM
Planing capacities	
Planing width	12-5/16"
Planing height	6"
Planing depth	0-1/8"
Overall dimensions(LxWxH)	21.9" x 11.4" x 15.4"
Net weight	62.8 lbs

THANK YOU BUYING A RYOBI THICKNESS PLANER

Your new 12-5/16" thickness planer has been engineered and manufactured to Ryobi's high standard for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.

To ensure your safety and satisfaction, carefully read through this owner's manual before using your new thickness planer.

Pay especially close attention to the safety instructions, warnings, and cautions. If you use the planer properly and only for what it is intended, you will enjoy years of safe, reliable service.

Please fill out and return the Warranty Service Registration Card so that we can be of future service to you.

Thank you again for buying a Ryobi planer.

SAFETY INSTRUCTIONS

KNOW YOUR POWER TOOL

Safe operation of this power tool requires that you read and understand this owner's manual and all labels affixed to the tool. Learn its applications and limitations as well as the potential hazards peculiar to a thickness planer. Keep this manual readily available for future reference.

GROUNDING INSTRUCTIONS

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with a three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal.

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.

Safety Precautions

WARNING: Do not connect your thickness planer to a power source until you have assembled and adjusted the planer as described in this manual and have read and understood all precautions and operating instructions.

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury. Use common sense. Some of these basic safety precautions include the following:

1. **KEEP GUARDS IN PLACE** and in good working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Get in the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
3. **KEEP THE WORK AREA CLEAN.** Cluttered work areas and work benches invite accidents.
4. **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 lighted.
5. **KEEP CHILDREN AWAY FROM POWER TOOLS.** All visitors should be kept at a safe distance from the work area.
6. **MAKE THE WORKSHOP CHILD-PROOF** with padlocks and master switches or by removing starter keys.
7. **DO NOT FORCE A CUTTING TOOL.** It will do the job better and more safely if it is cutting at the rate for which it was designed.
8. **USE THE RIGHT TOOL.** Do not force the tool or attachment to do a job for which it was not designed.

9. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that could get caught in moving parts. Nonslip footwear is recommended. Wear protective covering over long hair.
10. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses have only impact-resistant lenses; they are NOT safety glasses.
11. **PROTECT YOUR LUNGS.** Wear a face or dust mask if the cutting operation is dusty.
12. **PROTECT YOUR HEARING.** Wear earmuffs or plugs during periods of extended use.
13. **SECURE THE WORK.** Use clamps or a vise to hold the work when practical. It's safer than using your hand and frees both hands to operate the tool.
14. **DO NOT OVERREACH.** Keep proper footing and balance at all times.
15. **MAINTAIN CUTTING TOOLS WITH CARE.** Keep blades sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
16. **DISCONNECT POWER TOOLS BEFORE SERVICING** or before changing accessories such as blades, bits and cutters.
17. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is in the OFF position before plugging in the tool.
18. **USE ONLY THE MANUFACTURER'S RECOMMENDED ACCESSORIES.** Consult this owner's manual for recommended accessories. Using incorrect accessories may increase the risk of injury.
19. **NEVER STAND ON THE TOOL.** Serious injury could occur if the tool is tripped over or if the cutting tool is accidentally touched.
20. **PERIODICALLY CHECK FOR WORN OR DAMAGED PARTS.** Check for alignment of moving parts, binding of moving parts, breakage of parts, loose mounting brackets, and any other conditions that might affect operation. A guard or other part that is damaged should be properly repaired or replaced. Before the tool is used again, make sure that the repaired or replaced part is operating properly and performing its intended function.
21. **NEVER LEAVE THE TOOL RUNNING UNATTENDED.** Turn off the power. Do not leave the tool until it comes to a complete stop.
22. **STAY ALERT.** Never operate a power tool when tired or while under the influence of drugs, alcohol, or medication.
23. **ALL REPAIRS, WHETHER ELECTRICAL OR MECHANICAL,** should be made at a RYOBI Authorized Service Center. Use only RYOBI replacement parts.
24. **MAKE SURE A TOOL IS CONNECTED** only to the voltage marked on the nameplate.

25. NEVER USE A TOOL if its cover or any bolts are missing. If the cover or bolts have been removed, replace them prior to use. Maintain all parts in good working order.
26. NEVER START A TOOL when its rotating component is in contact with the workpiece.
27. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

ADDITIONAL SAFETY RULES FOR THICKNESS PLANERS

1. SECURE THE TOOL to any supporting structure being used if, during normal operations, there is any tendency for the tool to tip over, slide, or walk on the supporting surface.
2. NEVER PERFORM THE PLANING OPERATION with the cutter head or drive guard removed.
3. NEVER MAKE A PLANING CUT deeper than $3/32"$.
4. DO NOT PLANE MATERIAL shorter than 14" or narrower than $3/4"$.
5. MAINTAIN THE PROPER RELATIONSHIP between the infeed and outfeed surfaces and the cutter head knife path.
6. SUPPORT THE WORKPIECE ADEQUATELY at all times during operation; maintain control of the work at all times.
7. DO NOT BACK THE WORK toward the infeed table.
8. DO NOT ATTEMPT TO PERFORM an abnormal or little used operation without the use of study and adequate jigs, fixtures, stops, and the like.
9. BEFORE STARTING UP, recheck to make certain all holding screws are tight.
10. ALWAYS STOP THE MOTOR and disconnect the power source before making any adjustments or changing blades.
11. STOP THE MACHINE and recheck the cutter head gib screws and knives for tightness after about 50 hours of operation.
12. DO NOT FORCE-FEED THE WORKPIECE through the machine. Let the planer apply the proper feed rate.
13. CHECK THE FEED ROLLERS occasionally to be sure there are no chips or sawdust between any components. If the rollers are not seated firmly, they will not hold the stock firmly against the bed and are likely to cause kickback.

14. 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 knives.
15. NEVER STAND DIRECTLY IN LINE with either the infeed or outfeed sides. Stand off to one side.
16. MAKE SURE THE KNIVES ARE ATTACHED as described in the operation instructions. The knives are sharp and can easily cut your hand; use caution in handling the knives and cutter head assembly.
17. NEVER PUT YOUR FINGERS into the chip chute or under the knife guard.
18. ALLOW THE CUTTER HEAD to reach full speed before using the planer.

EXTENSION CORDS

When using a power tool at a considerable distance from a power source, use an extension cord heavy enough to carry the current that the tool will draw. An undersized extension cord will cause a drop in line voltage, resulting in a loss of power and overheating of the electric motor. Use the chart provided to determine the minimum wire size required in an extension cord. Only round jacketed cords listed by Underwriter's Laboratories (UL) should be used.

When working with the tool outdoors, use an extension cord that is designed for outside use. This is indicated by the letters "WA" on the cord's jacket.

Before using an extension cord, inspect it for loose or exposed wires and cut or worn insulation.

Also, do not use an extension cord on a take up reel. The electric current passing through the extension cord will generate heat and if the cord is wrapped around a reel, a heat buildup will result that could melt the insulation, causing a fire and/or electric shock.

CAUTION: Keep the cord away from the cutting area and position the cord so that it will not be caught on the workpiece, tools or other objects during cutting.

Ampere rating (on faceplate)	0 - 2.0	2.1 - 3.4	3.5 - 5.0	5.1 - 7.0	7.1 - 12.0	12.1 - 15.0
CORD LENGTH	Wire Size (A.W.G.)					
25'	16	16	16	16	14	14
50'	16	16	16	14	14	12
100'	16	16	14	12	10	
150'	16	14	12	12		
200'	14	14	12	10		

ELECTRICAL CONNECTION

Your Ryobi 12-5/16" thickness planer is powered by a precision built Ryobi electric motor. It should be connected only to a power source that satisfies the power input listed on the tool's nameplates. If the nameplate is marked 115 V. AC, or 60 Hz, the tool must be operated only with alternating current (normal household current). Never operate the tool on direct current (DC) or current that is lower or higher than the specified voltage. A voltage drop of more than 10 percent will cause a loss of power and overheating. If the planer does not operate when plugged into an outlet, double-check the power supply rating.

GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.

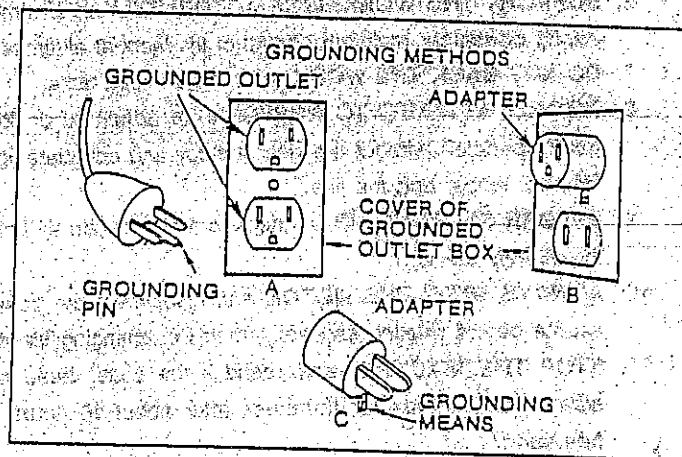
Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

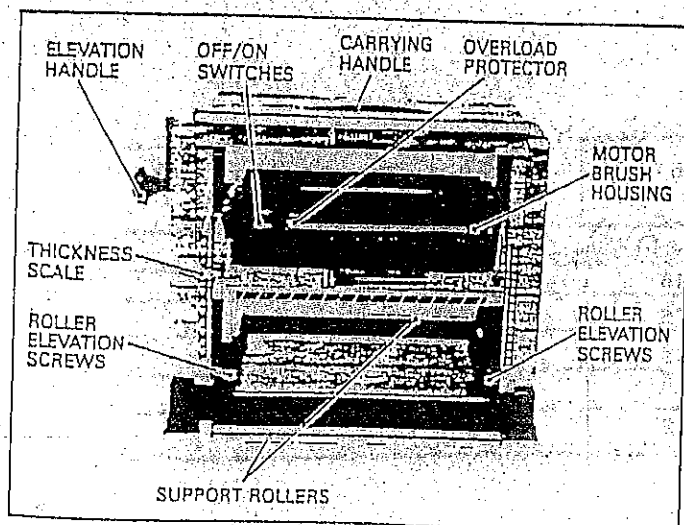
Repair or replace a damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet like the one shown in part A of the figure and has a grounding plug like the one in part A. A temporary adapter, like the one shown in B and C, may be used to connect this plug to a 2-pole receptacle as shown in part B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.



UNPACKING

1. Carefully remove all parts from the shipping carton.
2. Do not discard the packing material until you have identified all the parts using the parts list.



3. If all parts have been included, proceed to assembly.
4. If you are missing a part, contact your dealer to obtain it before attempting to assemble the tool.
5. Examine all the parts to make sure no breakage has occurred during shipping. Any damaged part should be replaced before attempting to use the tool.

LOOSE PARTS LIST

Assemble the following parts according to the instructions on the following pages.

- L shape wrench
- 3 mm hex wrench key
- 5 mm hex wrench key
- 10/12 mm open-end wrench
- Lag bolts (4)

FEATURES

Familiarize yourself with the following components of the 12-5/16" thickness planer before connecting the power cord or using the planer.

2 HP MOTOR

The planer's universal motor has sealed ball bearings, develops 2 HP, and turns at 8,000 rpm.

AUTOMATIC FEED

Front and rear rollers feed the wood through the planer at 26.2 feet per minutes.

ELEVATION HANDLE

The elevation handle on the side of the planer is used to raise and lower the cutter head. Each revolution of the handle moves the cutter head 5/64"

RAPID SET BLADE CHANGE SYSTEM

The rapid set blade change system is equipped to:

- Change the blades rapidly and accurately.
- Help eliminate score marks produced by chipped or nicked blades.

THICKNESS SCALE

The thickness scale accurately displays the height of the cutter blades. It measures from 0" to 6" high.

SUPPORT ROLLERS

The infeed and outfeed support rollers keep the workpiece flat and parallel with the cutter blades as it enters and exits the planer.

CARRYING HANDLE

The thickness planer weighs only 62.8 pounds, and the carrying handle on top of the planer allows you to easily carry it from worksite to work site or from workbench to a storage shelf.

CARBON BRUSHES

The carbon brush is externally accessible through the brush cap in the motor housing. Replacement is a simple procedure you can do yourself.

ASSEMBLY

Your planer comes with everything needed to assemble the AP-12 except a Phillips screwdriver.

WARNING: For your own safety, never connect the plug to a power source outlet until all the assembly steps are completed and you have read and understand the safety and operating instructions.

STEPS FOR ASSEMBLY

1. Take out the main body from the carton by holding the carrying handle on top of the machine.

The planer should be mounted to a bench or stand. In this case, the planer must be securely fastened to an adequately stable stand or workbench.

CAUTION: The surface to which the planer is mounted must not be warped or uneven. Mounting the base to a warped surface will cause distortion and poor operation.

2. Attach the elevation control handle with the socket head bolt and spring washer (Figure 1). Tighten with the 5 mm hex wrench key.
3. Attach the dust cover to the roller case above the rear feed roller (Figure 2). Use the two wing bolts provided and tighten them securely by hand.
4. Check all fasteners for tightness.

WARNING: Make certain that the switch is in the OFF position before inserting the plug into a power source. Do not connect the power until you are ready to operate the machine. Be sure that cutter blades is mounted exactly as shown and check that all bolts are firmly tightened before plugging the machine in.

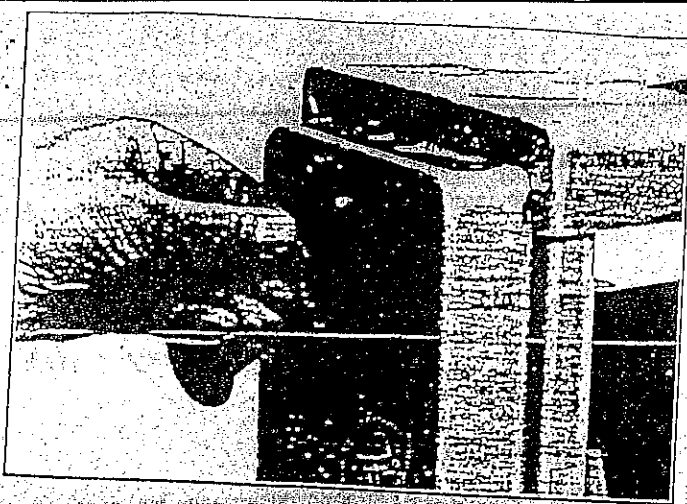


Figure 1

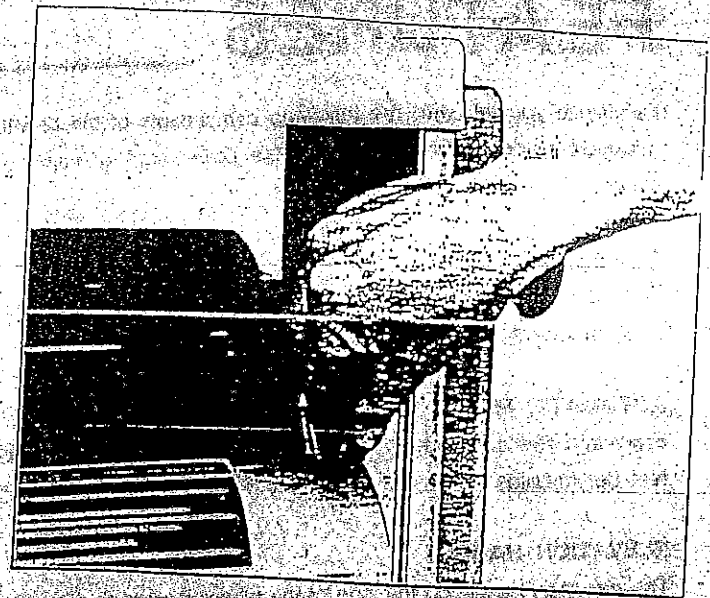


figure 2

ADJUSTMENTS

It is very important that the following adjustments be done as described.

WARNING: Never make any adjustments with the unit plugged in.

ROLLER HEIGHT ADJUSTMENT

The roller height is set at the factory before shipping. However, it can change in the course of use or shipping. It should be checked before initial use and periodically after that. The correct height should be between $1/125"$ and $1/64"$ above the planer table surface.

1. Loosen the securing nut on each side of the planer base with the open-end wrench supplied (Figure 3).

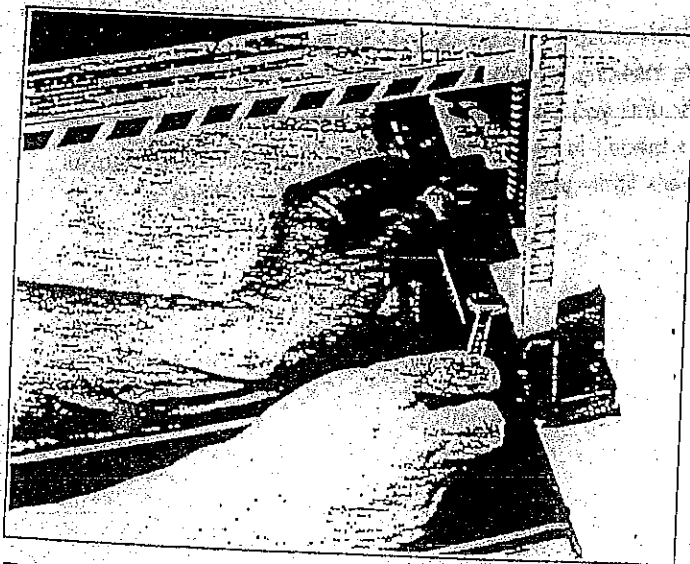


Figure 3

2. Insert the 3 mm hex key into the head of the adjustment screws. Turn clockwise to raise the roller, counterclockwise to lower.
3. Retighten the securing nuts after the correct roller height is achieved.

The correct height can be achieved by placing a standard size sheet of paper on the planer table and placing a straightedge (such as an accurate level) on top of the paper. The tops of the rollers should just touch the base of the straightedge when it is extended out to them (Figure 4).

The right and left sides of each roller must be checked.

Because the straightedge is the reference point for these measurements, it must be kept flat on the planer table while the roller heights are checked or adjusted.

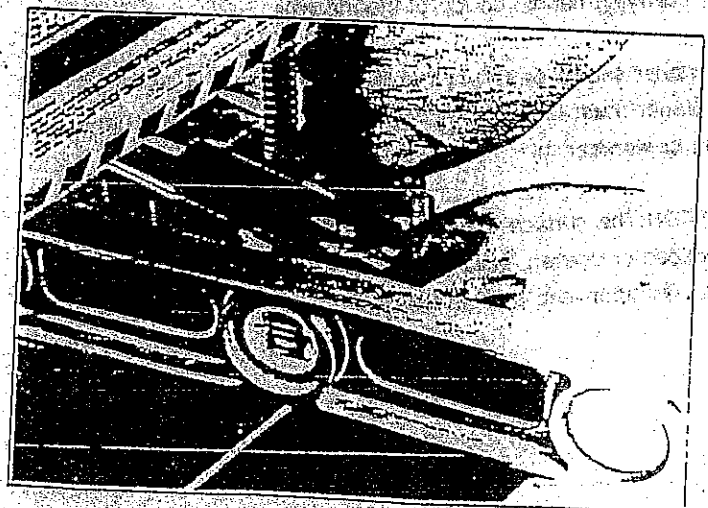


Figure 4

BLADE HEIGHT ADJUSTMENT

Blade height is adjusted by turning the elevation control handle. To raise the cutter head, turn the control handle counterclockwise. To lower, turn the control handle clockwise. Blade height is gauged by the depth-of-cut scale on the left side on the machine. Each complete revolution of the control handle moves the blade $5/64"$.

RAPID SET SYSTEM

Your new AP-12 Planer is equipped with Ryobi's exclusive RAPID SET blade changing system which is designed to reduce the time involved in changing the blades and also to help eliminate score marks produced by nicks or chips in blades. Please follow the instructions below.

CUTTER BLADE REPLACEMENT

WARNING: Never make cutter blade replacement or any other adjustments with the unit plugged in.

1. Lower the cutting head sufficiently on the machine to make the blade replacement easier.
2. Loosen the wing bolts attaching the dust cover to the back of the planer and remove the cover. When the cover is removed, the cutter block is ready to be locked.
3. Turn the belt cover located at the left side of the motor, and rotate the cutter block until it is locked automatically by rotating the belt behind the belt cover (Figure 5).

WARNING: Never rotate the cutter block directly by your hand in order to avoid injury.

4. Loosen the six hex head bolts attaching the blade and blade binder (Figure 6). Use the wrench supplied or a 10mm socket wrench.
5. Push the stopper located at the right of the cutter block and rotate the belt until the blade binder is at horizontal position (Figure 7).

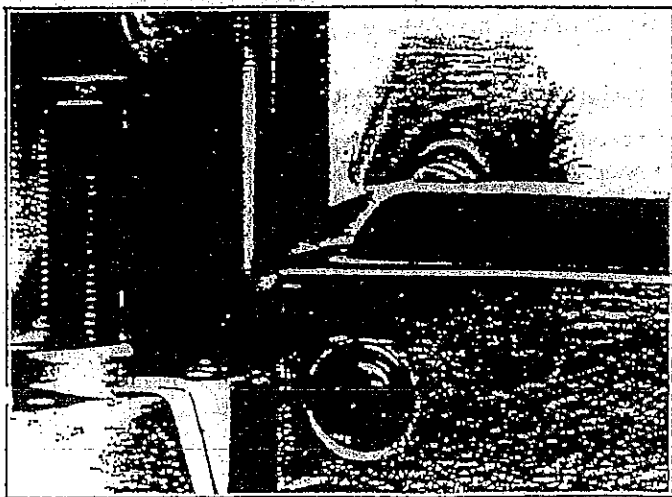


Figure 5

6. Remove the six hex head bolts.
7. Remove the blade binder.
8. Remove the cutter blade.
9. Set the blade binder and new cutter blade to the cutter block aligned to fit the 2 holes of the new cutter blade and 2 bosses of the blade binder.

Note: Make sure that the cutter blade and blade binder is not off the center of the cutter block.

10. Fasten the blade binder and the new cutter blade by the six hex head bolts temporarily by your fingers.
11. Rotate the cutter block toward you until it is locked.
12. Tighten six hex head bolts securely.

WARNING: Make sure that the cutter blade and blade binder are aligned and properly contacting the cutter block.

13. To replace the second cutter blade, push the stopper and rotate the cutter block 180° until it is locked again.
14. Repeat the above steps no. 3 to 12.
15. Replace the belt cover to the original position.
16. Attach the dust cover and fasten 2 wing bolts.

Note: The stopper is released when the dust cover is attached.

CUTTER BLADE SIDEWAYS ADJUSTMENT TO HELP ELIMINATE SCORE MARKS

WARNING : Never make cutter blade replacement or any other adjustments with the unit plugged in.

1. Lower the planer cutting head sufficiently to provide easier side movement adjustment.
2. Loosen the wing bolts attaching the dust cover to the back of the planer and remove the cover. When the cover is removed, the cutter block is ready to be locked.
3. Turn the belt cover located at the left side of the motor, and rotate the cutter block until it is locked automatically by the rotating the belt behind the belt cover.

WARNING : To avoid injury, never rotate the cutter block directly by your hand.

4. Loosen the six hex head bolts attaching the blade binder so that the blade and blade binder can be moved slightly. Use the wrench supplied or a 10 mm socket wrench.
5. Push the stopper located at the right of the cutter block and rotate the belt until the blade binder is at a horizontal position.
6. Move the blade to the right or left side up to $3/64"$ laterally by using a flat screwdriver.

NOTE: Make sure that the cutter blade and blade binder is not off the center of the cutter block.

7. Fasten the blade binder and the cutter blade with the six hex head bolts finger tight.
8. Rotate the cutter block toward you until it is locked.
9. Tighten the six head bolts securely.

WARNING: Make sure that the cutter blade and blade binder are aligned and properly contacting the cutter block.

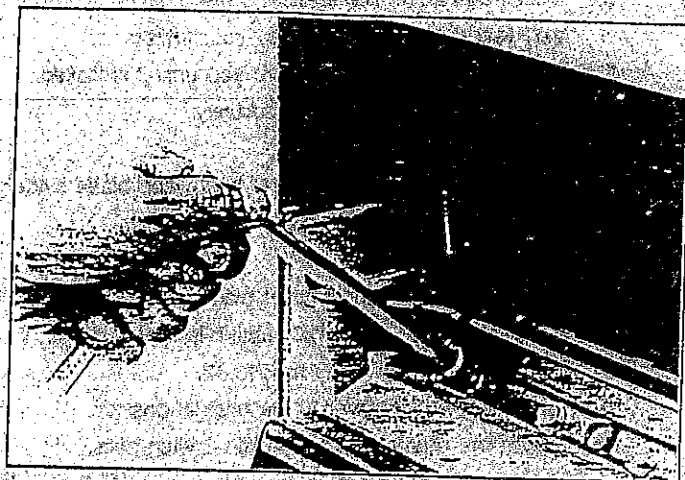


Figure 6

10. To move the second cutter blade, push the stopper and rotate the cutter block 180° until it is locked again.
11. Repeat the above steps no. 3 to 9.
12. Replace the belt cover to the original position.
13. Attach the dust cover and fasten 2 wing bolts.

NOTE: The stopper is released when the dust cover is attached.

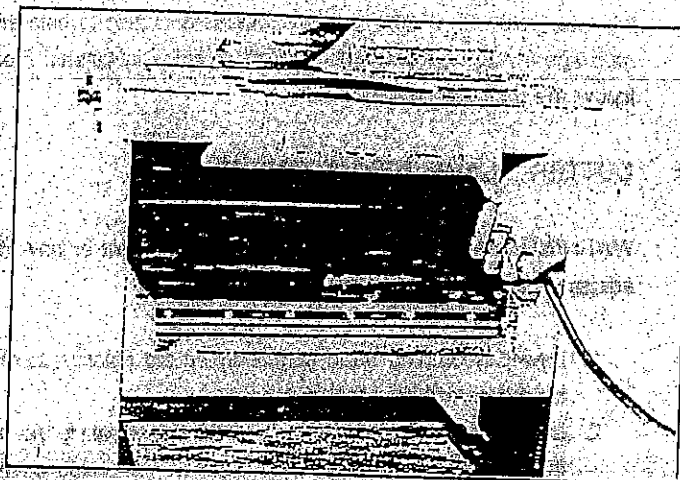


Figure 7

THICKNESS PLANER OPERATIONS

WARNING: Always use safety glasses when operating the planer. Use a dust mask if necessary.

THICKNESS PLANING

Thickness planing sizes material to a desired thickness while creating a smooth, level surface. It requires good judgment in determining the appropriate depth of a cut. Among the factors to be taken into account are the stock width and the hardness, dryness, straightness, and grain composition of the board. Their effects on the quality of the work can best be learned by experience. As a result, whenever you work with a new type of wood or a board with unusual problems, make test cuts on a piece of similar scrap material first.

BEFORE OPERATION

The AP-12 thickness planer is shipped factory adjusted and ready to operate. Before turning on the planer, check for loose fasteners, fittings, or hardware. Also make sure the dust cover is securely mounted and that the cutter rotates freely.

With the ON/OFF switch in the OFF position, lower the cutter head to about 1" above the table surface. Plug in the planer and test the motor and switch operation. Turn it on and allow it to reach full speed without putting any load on it. Watch for excessive vibration or noise. Turn it off and unplug it; then check for any loose hardware. Retighten any that you find.

Do not operate the planer if it is not working smoothly.

OVERLOAD PROTECTOR

Your AP-12 thickness planer provides an overload protector. When the overload protector is tripped:

1. Disconnect the tool from power source and turn the switch off.
2. Remove the material from the tool.
3. Push the reset button.
4. Start the tool again.

OPERATING SPECIFICATIONS

Lowest height adjustment	3/16"
One crank revolution	5/64"
Minimum stock thickness	3/16"
Minimum stock width	3/4"
Minimum stock length	14"
Maximum depth of cut	1/8"
Maximum width of cut	12-5/16"
Softwoods	12-5/16"
Hardwoods	6"
Maximum stock thickness	6"
Maximum stock length	Unlimited

PLANING

WARNING: Plane only wood that is clear of all foreign objects with no loose knots and as few tight knots as possible. Do not surface lumber that is severely bowed, twisted, or knotted. Cutter blades can dull, chip, or break and pose a risk of injury.

WARNING: Blade height should not be set lower than 3/16".

- Do not plane boards less than 3/16" thick.
- Do not plane width less than 3/4".
- Do not plane stock shorter than 14" long; this can cause kick-back.

Thickness planers work best on lumber with at least one flat surface. If both sides are rough, a surface planer or jointer should be used to define the initial flat surface. If the thickness planer is used, be sure to flip the wood as soon as one side is smooth.

The sides of the board should be alternately planed to reach the desired thickness. For example, if you need to remove 1/16" take 1/32" from each side. This leaves the board with a uniform moisture content so that it will not warp in the drying process.

Measure the thickest part of the board to be planed. If the difference between that and the desired finished thickness exceeds 1/

8", make several passes, starting with a light planing cut, until the desired thickness has been reached. The depth of cut can be increased up to 1/8" on subsequent passes. Light cuts create a finer finish than heavier cuts.

AVOIDING SNIPE

Snipes, or depressions made at either end of a board by cutter blades, can occur if boards are not properly supported. The board's weight will not allow the feed rollers to hold the board flat against the table.

Although a snipe is barely noticeable, care should be taken to feed boards parallel and flat with planer base. Keeping the board level throughout the entire travel will minimize snipe.

In addition to making sure that the infeed and cutfeed planer rollers are adjusted to the correct height (see Roller Height Adjustment in the Adjustments section), butting pieces of stock end to end as they are fed into the planer will help minimize the problem, especially for shorter pieces, because it provides a more stable feed (Figure 8).

For stock longer than 48", 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, and the shifting weight will work against keeping the stock flat.

WARP

Severely warped wood 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 disconnect the power immediately.

Little or no warpage is the ideal condition. Just turn the board through and plane it to the desired thickness. Otherwise, plane the top flat first (Figure 9), then turn the board over and plane the bottom. 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 eliminates much of the waste in

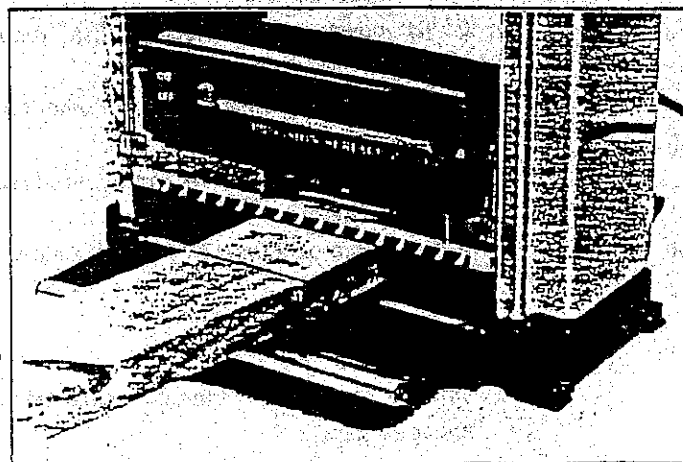


Figure 8

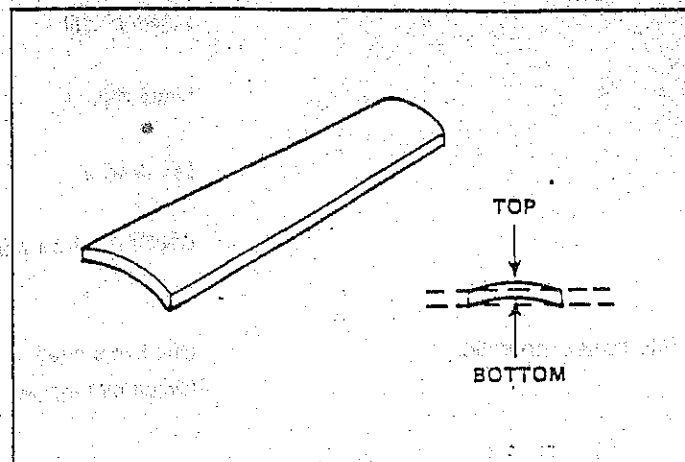


Figure 9

thickness planing cupped wood.

Bowed boards or boards warped lengthwise against the planer bed and thickened are flattened the same as if there was little or no warpage. The board will be planed to thickness but will keep its bow. The only way to remove the bow itself is to use a

jointer.

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

MAINTENANCE

Warning: To assure safety and reliability, all repairs - with the exception of externally accessible brushes - should be performed by Ryobi Authorized Service Centers.

LUBRICATION

Your new AP-12 Thickness Planer requires no initial lubrication. However, to keep the tool in top working order, it will be necessary to check all moving parts (elevation screws, roller surfaces, handles, etc.) periodically to make sure they are clean and well lubricated. In addition, a light film of oil wiped on the face of the cutter blades will keep them rust-free. Other parts are sealed and lubricated at the factory and require no added lubrication.

CAUTION: Do not overlubricate the tool. Excessive oil at any location will attract dust and other airborne particles.

CAUSES OF MOTOR FAILURE

The following are major causes of motor failure:

1. Using a dull or sticking blade.
2. Feeding the material through the blade too fast.
3. Starting the cut before the blade has achieved its full RPM.
4. Inadequate or inconsistent flow of current to the tool.
5. Buildup of dust in the motor housing, which prevents proper cooling.
6. Worn motor brushes.

MOTOR

The universal motor is easy to maintain. However, it must be kept clean. Do not allow water or oil to enter it, or allow sawdust to accumulate on or in it.

The sealed bearings are permanently lubricated and need no further attention.

Every 10 to 15 operating hours, the motor brushes should be examined for wear. When they are worn down to the indicator line they must be replaced (Figure 10). To inspect or replace them, unscrew the brush cap located at the right front and rear of the planer. Be sure to replace the brush cap securely after inspection or repairs.

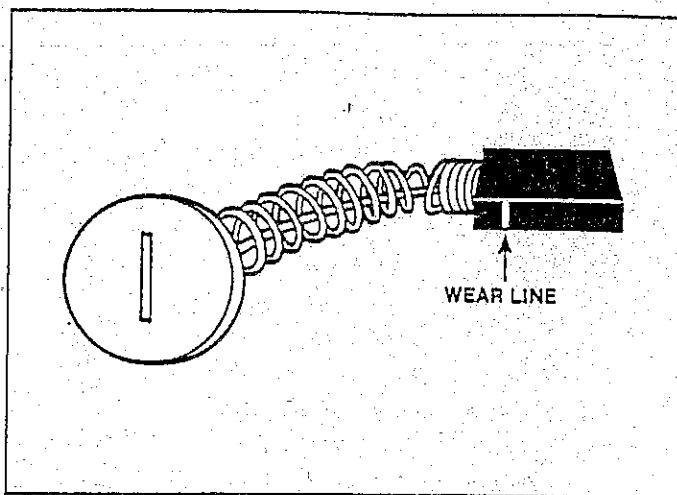


Figure 10

CLEANING

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

Do not allow sawdust to accumulate on the planer; clean the discharge chute after use. Moving parts and elevation screws 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 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. Clean painted parts with a dry rag or mild soap and water. 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 removal solvent.

WARNING: Disconnect the unit from the power source before attempting to service or remove components.

WARNING: If the power cord is worn, cut, or damaged in any way, replace it immediately.

TROUBLESHOOTING

Troubleshooting Guide for AP-12 Planer

Problem	Cause	Solution
Snipe(depressions at ends of board)	Dull cutter blades	Replace
	Uneven feed roll pressure	check feed roll operation
	Cutter head misaligned	Adjust elevation screws
	Misaligned support rollers	Adjust roller elevation screws
	Incorrect butted stock	Butt pieces end to end as they are fed into planer
	Unit not securely fastened down	Tighten lag bolts
Torn grain	Too deep a blade setting	Reduce depth of cut
	Board being fed against grain	Feed other end of board first
	Dull cutter blades	Replace or sharpen
Fuzzy/Rough grain	High wood moisture content	Dry wood before planing it
	Dull cutter blades	Replace
	Too deep a blade setting	Reduce depth of cut
	Incorrect feeding speed	Check for adequate power supply
		Check cord and plug for damage
		Check condition of motor brushes
Uneven depth of cut	Cutter head not level with planer surface	Adjust elevation screws
	Unstable roller spring pressure	Have service performed by Ryobi Authorized Service Center
	Feed roller worn unevenly	Have service performed by Ryobi Authorized Service Center
Board thickness does not match depth-of-cut scale	Scale incorrectly set	Adjust scale indicator and secure tighten
	Dirty table surface	Clean
Cutter head height difficult to adjust	Dirty elevation gears	Clean and lubricate
	Dirty elevation screws	Clean and lubricate
	Worn gears or screws	Have service performed by Ryobi Authorized Service Center
Will not start/restart	Not plugged on	Check power source
	Blown circuit	Check power source. Replace fuse; reset breaker or call electrician
	Motor failure	Have service performed by Ryobi Authorized Service Center
	Loose wire	Have service performed by Ryobi Authorized Service Center
	ON/OFF switch malfunction	Have service performed by Ryobi Authorized Service Center
Interrupted operation	Unit overloaded	Reduce load
	Circuit overloaded	Operate on circuit separate from other appliances or motors
		Connect to circuit with adequate amp rating
		Install proper size fuses/breakers for circuit