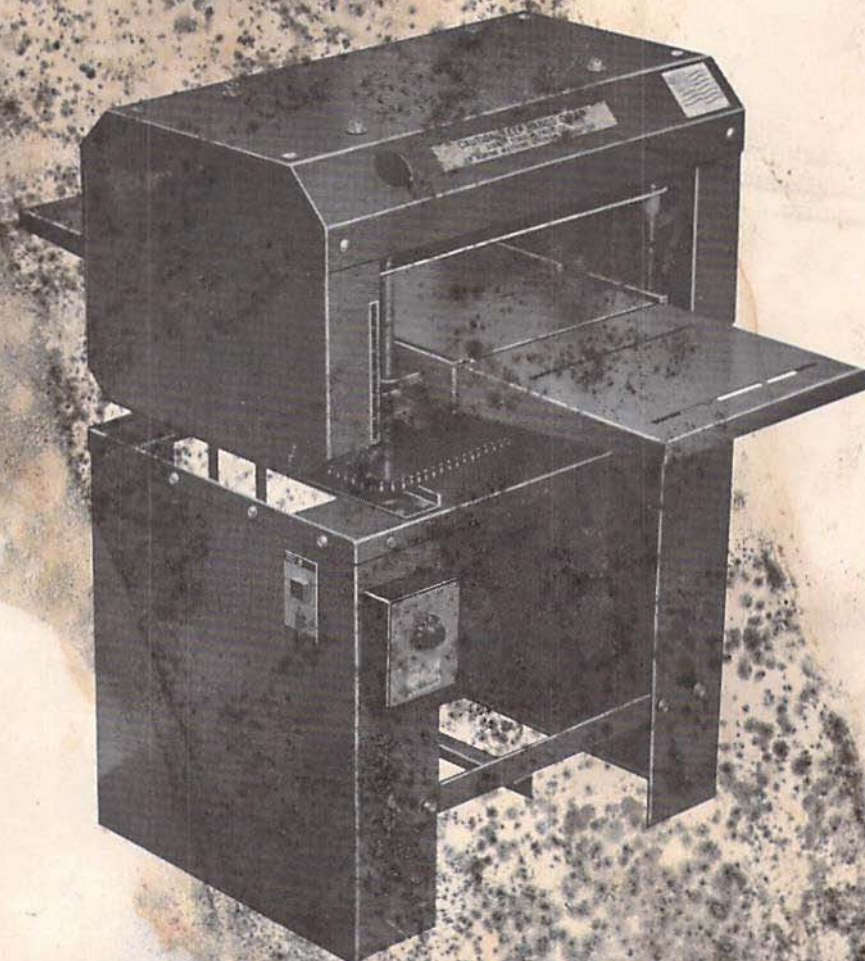


Woodmaster

TOOLS, INC.

MODEL 712 PLANER Operator's Manual



**READ THOROUGHLY BEFORE
OPERATING**





2908 OAK • KANSAS CITY, MISSOURI 64108
(816) 756-2195

Dear Woodmaster Owner,

Thank you for purchasing the Woodmaster Model 712 Planer. Your new planer is designed for years of service in your shop -- whether you are a commercial user or a serious hobbyist. I know you're anxious to get your planer hooked up and running, but please take a few minutes to read this manual completely before you start assembling your planer. It will help you get to know your machine and will point out the areas that need special attention.

Throughout the manual you'll see the following four symbols. Here's a description of what each means.

WARNING Failure to follow the directions could result in injury, loss of limb or life.

CAUTION Failure to follow the directions could result in temporary or permanent damage to the machinery.

NOTE This symbol highlights important procedures -- either in set-up or operation.

SHOP-TIP We have included some of the hints, tips, and suggestions that we have learned in our shop, and from other Woodmaster owners.

We've included these symbols to draw your attention to points that deserve special attention, either for your safety, the continued performance of the machine, or to enhance the usefulness of your machine.

If you have problems that the manual does not cover, you can reach us during regular business hours at 1-800-821-6651.

Again, thank you for your business, and best wishes in all your woodworking projects.

Sincerely,

John E. Miller
President

GENERAL SAFETY INSTRUCTIONS

Know your power tool—Read the owner's manual carefully. Learn the applications and limitations of your planer as well as the potential hazards this particular tool presents.

Ground all tools—Check the receptacles in your shop. They should all be approved 3-prong grounding type. If they are not, a qualified electrician should install grounded receptacles throughout your shop. Any tool that has a three-prong plug should be connected to a grounded receptacle. Double insulated tools do not require this type plug, however, only a small proportion of the tools manufactured today are double insulated.

Protect Yourself—Use full face shield or approved safety glasses with side shields. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses. Use dust mask if cutting operation is dusty. Wear safety approved hearing protectors. Extended exposure to noise from power tools can damage your hearing. Although you won't notice it, over a long period of time, you can begin to lose your hearing. Ear protectors screen out noise, but still allow you to carry on a conversation, since the human voice resonates at a much lower frequency.

Never operate power equipment if you're fatigued, taking medication, or drinking alcohol.

Keep the guards in place and in working order.

Remove adjusting keys and wrenches—Any time you attach accessories or make adjustments to any tool, make sure that all keys, adjusting wrenches, and other tools are removed from the machine before turning it on.

Keep your shop clean, well lit, and dry. Clutter invites accidents. You can make your shop time more comfortable with proper lighting—eye strain fatigues your entire body. Particular attention should be paid to moisture. Using power tools in damp or wet locations can result in electrocution.

Keep children away—All visitors should be kept at a safe distance from work area and should wear eye and ear protection.

Make workshop childproof—Use padlocks, master switches, or any system that prevents children or other unauthorized persons from starting machinery.

Use the right tool at the recommended rate—Don't force tools or attachments to do a job for which they were not designed. Learn the recommended feed rate of each tool.

Wear proper apparel—Don't wear loose clothing, gloves, neckties, rings, bracelets, wristwatch or other jewelry which can get caught in moving parts. Roll your sleeves above your elbows. Wear comfortable nonslip shoes. Tie back or net long hair.

Secure work—Use clamps or a vise to hold work when practical. You'll have more control if both hands are free to operate the tool.

Keep proper footing and balance at all times.

Maintain your tools—Safety and quality of work are enhanced when you keep your cutting tools sharp and clean. Follow lubrication schedules for all tools and accessories.

Disconnect tools—Never rely on the switch when changing cutters or making adjustments. Always unplug any machine before servicing or changing accessories.

Beware of unintentional start-ups—Check the switch before connecting any machine to the power source—be sure it is in the off position.

Don't use machines as step stools or ladders—Serious injury could result if the machine tips over or the cutting edge is contacted.

Check damaged parts—Repair or replace any part that becomes damaged before using the tool again. Any time a repair or adjustment is made, check alignment of moving parts, breakage of parts, mounting and all conditions that may affect its operation.

Direction of feed—Stock should always be fed against the direction of rotation of the blade or cutter.

Always turn tool off before leaving it. Don't walk away until tool comes to a complete stop.

SAFETY INSTRUCTIONS FOR YOUR WOODMASTER 712 PLANER

Always disconnect power supply before removing the cover from your planer or before making any adjustments.

Always replace cover before connecting planer with power supply.

Keep hands and fingers at least 12" from the front, rear, and sides of your planer while in operation. Never reach under the planer while in operation.

Exercise extreme caution when working on the cutterhead (changing knives, etc.)—the knives are extremely sharp. Form a habit of looking for tools, wrenches, gauges, etc., before replacing the cover and connecting power supply.

As you face the infeed table of your planer, **all controls are on your left. Stand to that side of the machine while operating—never directly behind the board being fed through the machine.** You'll have the best control of the workpiece from this side, and ready access to the switch should a problem develop.

Learn the capacities of your machine (outlined below) and never exceed these—particularly maximum depth of cut (3/16") and minimum thickness of stock (1/4" finished).

Before starting your planer, check its stability—is it resting firmly on the floor? Is there sufficient clearance on both infeed and outfeed sides of the planer for the stock to be surfaced?

Always feed with the direction of the grain—never cross-grain or end-grain.

Never feed two boards of different thickness at the same time.

Never feed boards of different thickness without adjusting the planer. The feed rollers will not properly hold the thinner board, and kick-backs leave the infeed table at 75 MPH.

Keep stock parallel with the sides of the planer as it is fed through the machine.

Never attempt to clear chips from the planer while it is running—turn the machine off, disconnect the power supply, and allow the cutterhead to come to a

complete stop before reaching under the infeed or outfeed sides of the cover.

Support long and/or heavy boards with roller stands or a helper.

Carefully check all stock for nails, screws, imbedded bullets, loose knots, or any other foreign object which will contact the knives. **Failure to do this will result in damage to the knives, and possible injury from the object being thrown by the cutterhead.**

Never plane painted or finished lumber, plywood, or particle board. These materials will damage your knives, and finishes can hide foreign objects from your inspection.

Plane only properly seasoned stock. Green lumber splinters easily and the sap will coat the feed rollers and knives causing slippage and knife dulling.

After installing knives, re-tighten gibs following the first ten minutes of operation. The knives will seat slightly, and re-tightening will insure proper alignment.

PLANER SPECIFICATIONS

Maximum Width of Stock	12¼"	Sanding Head Speed	1200 RPM
Maximum Thickness of Stock	6¾"	Horsepower Recommendation	3-HP to 5-HP
Maximum Depth of Cut	3/16"	Shaft Diameter	1½"
Minimum Finished Thickness (Thinner stock can be achieved with carrier board)	5/16"	Cutterhead Diameter	3¼"
Maximum Molding Depth	1¼"	Cutterhead Drive Belt	½"x56"
Maximum Molding Width—Custom Knife Holder (Wider moldings must be run in planer head)	3¼"	Feed Roller Drive Belt	½"x54"
Feed Rate	Infinitely Variable from 0 to 16 FPM	Drum Sanding Attachment Belt	½"x59"
Cuts per Inch	65 to over 1000 dependent on Feed Rate	Jackpost Screws 16-TPI—raise bed 1/16" per revolution	
Cutterhead Speed	4200 RPM	Overall Dimension	24" W x 18½" D x 37" H
		Table Size (without extensions)	12¼"x18½"
		Table Size (with extensions)	12¼"x42¾"
		Blade Size	1/8"x11/16"x12¼"

SAFE OPERATION PROCEDURES

THE DANGER ZONE

While your planer is plugged in—even when it is switched off—the planer is surrounded by a Danger Zone. This zone extends away from the infeed and outfeed openings as shown in diagram 1-2.

Exposure of your hands, fingers, and body to the Danger Zone should be kept to an absolute minimum.

WARNING

Never stand directly behind the infeed table while feeding stock. Always stand to the left of the machine, out of the Danger Zone, while feeding stock into the machine, holding the stock by the edges as illustrated in figure 1-3.

The cover of the machine is designed to reduce the hazard of flying chips and to prevent hands from being drawn into the cutterhead by the feed rollers. Please follow three absolute rules about the cover.

WARNING

1. Never reach under the cover while the planer is plugged in—even if the switch is off.
2. Never remove the cover while the planer is plugged in.
3. Always replace the cover before plugging the planer in after adjustment.

POWER SUPPLY

Your Model 712 planer has two motors. The large motor drives the cutterhead, the small, factory installed gearmotor drives the feed rollers. The cutterhead drive motor requires a 230 volt, 30 amp circuit.

The gearmotor requires a grounded 115 volt, 15 amp circuit (a normal household circuit). All wiring should be done by a

licensed, qualified electrician. See figure 1-1 for recommended receptacle.

Do not use extension cords for

either motor. Line loss from extension cords could cause damage to the solid-state controls in the feed roll drive.

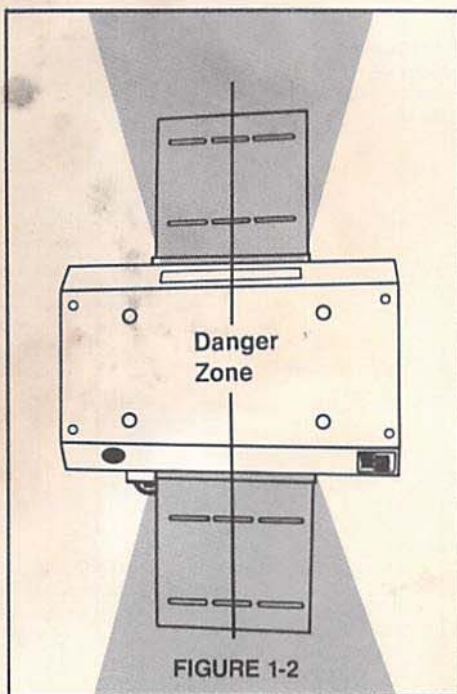


FIGURE 1-2



FIGURE 1-3

PLANER SHAVINGS AND CHIPS

Woodmaster recommends the use of some form of dust collection while operating your planer. Shavings and chips pose both a fire hazard and a safety hazard. Piles of shavings can hide power cords,

lumber, tools, etc. that might cause you to trip. Also, the fine dust produced while planing may cause breathing discomfort, allergic reactions, and other respiratory problems.

A dust collection hood is available that will adapt to a heavy duty shop vacuum. Woodmaster also offers a dust collector, capable of handling most normal shop requirements.

You'll also find that your planer will operate more efficiently when the shavings are not interfering with the feed rollers and the bed raising mechanism.

Even when using a dust collection system, you should provide ventilation in your shop while operating your planer and wear a dust mask around your nose and mouth.

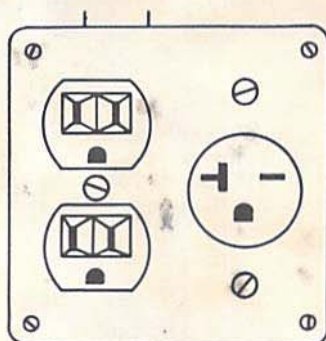


FIGURE 1-1

GET TO KNOW YOUR 712 PLANER

The 2 views of your 712 shown at right point out various parts of the planer which we will refer to throughout this manual. An exploded view and parts list appear on pages 20 and 21.

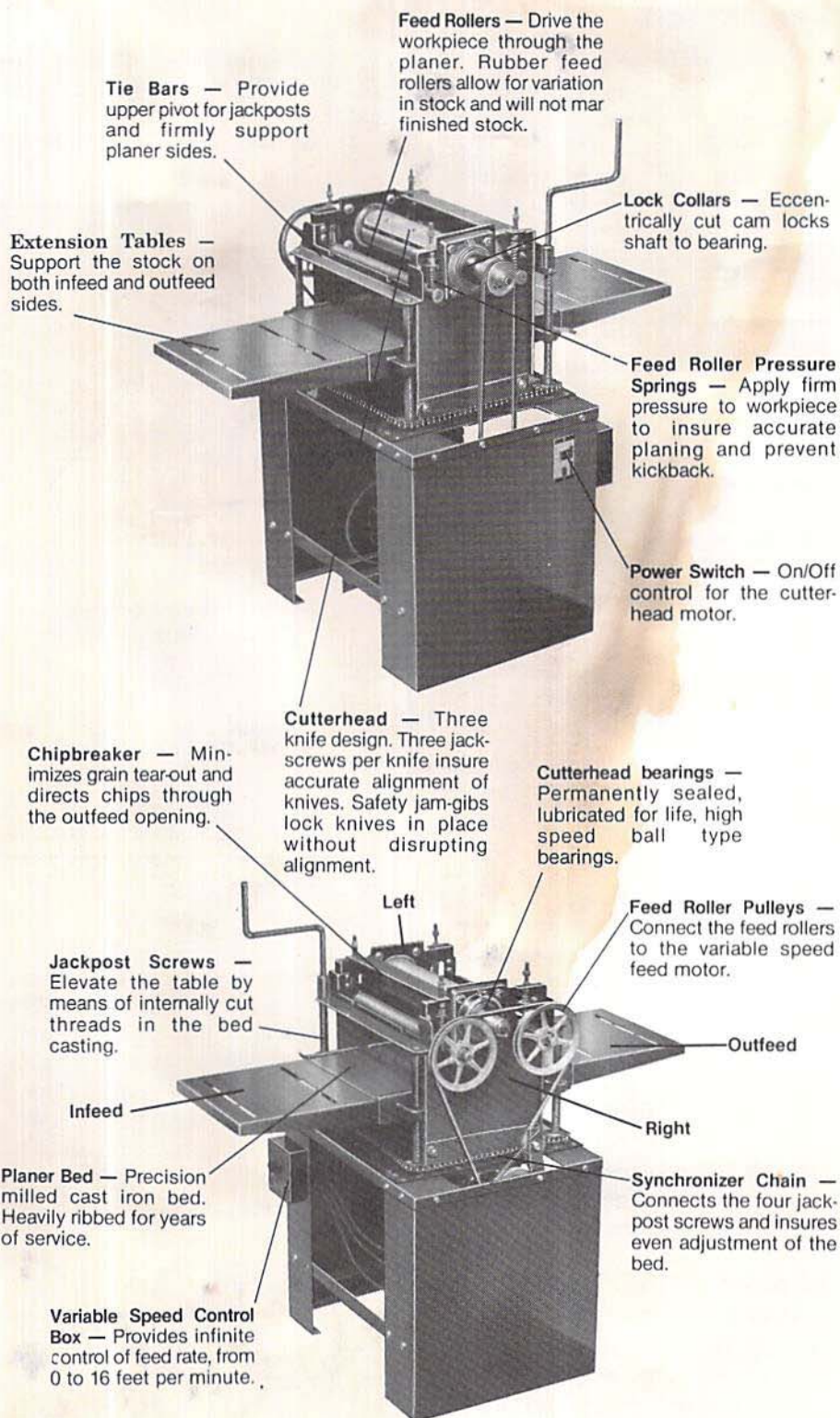
Your planer was shipped in two cartons—one containing the cutterhead motor, this manual, and your motor mounting hardware. The large carton contains your planer. If you ordered accessories with your planer you will have 1 or 2 additional cartons.

Make sure you have all the following items:

QTY	ITEM
1	Planer Assembly
2	Extension Tables
1	Feed Rate Controller
1	3 or 5 HP Motor (if purchased)
4	3/8" Hex Head Bolts
4	5/16" Carriage Bolts
4	3/8" Flat Washers
4	3/8" Lock Washers
4	5/16" Flat Washers
4	5/16" Lock Washers
4	5/16" Nuts
1	Knife Setting Gauge
2	1/4" x 1" Pan Head Bolts
2	1/4" Washers
2	1/4-20 Nuts

To assemble and maintain your planer, you will need the following tools:

QTY	ITEM
1	7/16" Combination Wrench
1	1/2" Combination Wrench
2	9/16" Combination Wrench
1	3/4" Combination Wrench
1	5/8" Combination Wrench
1	5/32" Allen Wrench
1	1/8" Allen Wrench
1	3/16" Allen Wrench
1	5/8" Socket & Ratchet
1	Straight Screwdriver
1	24" Straight Edge



ASSEMBLING YOUR PLANER

ATTACH THE GEARMOTOR CONTROL BOX

Remove the 4 small screws from the control box and carefully take the back off. You'll find that the control box has holes pre-drilled in it. Two to bolt the box to the planer base and one for the wires to pass through. Bolt the control box back to the planer base with the 1/4" carriage head bolts provided. Feed the wires from the control box through the large hole. Set the panel into the back of the control box and replace the 4 screws.

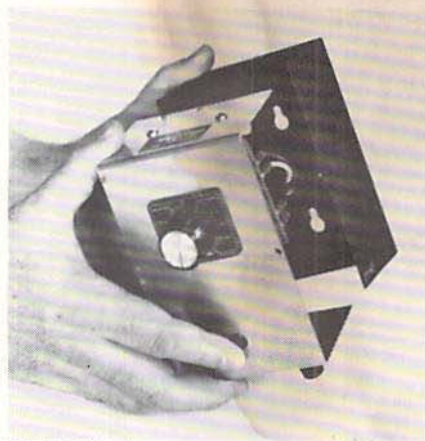


FIGURE 2-1

Check to see that all tools are removed from the planer bed, and that nothing is contacting the feed roller pulleys or belt.

WARNING

Do not plug the cutterhead motor in ... just plug in the gear motor.

Turn the control box switch and watch the feed rollers. If they are turning in the right direction (from the infeed table to the knives) proceed to the next step. If the feed rollers turn the wrong way, switch the wires on gear-motor and try it again. Then tape the connectors.

INSTALL THE CUTTERHEAD MOTOR

The motor mount on your 718 is designed to maintain optimum alignment and belt tension once it is installed. Care should be taken in the following procedure to obtain proper alignment – this will increase belt life and deliver maximum power to the cutterhead.

Loosen the bolts that attach the motor mount rails (the motor mount rails run from the front to the back of the planer) to the cross-bars.

Set the motor on the rails, insert a 5/16" carriage head bolt in each hole on the motor mount, and place a flat washer, lock washer and nut on the bolt (see fig. 2-2). Tighten the nut finger tight.

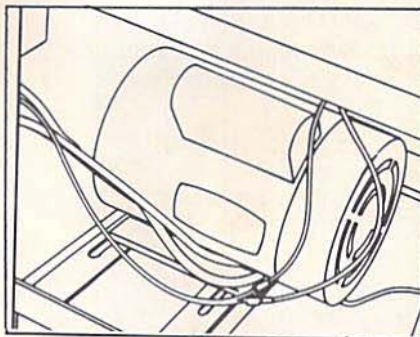


FIGURE 2-2

WARNING

Be certain all electric wires are clipped or tied safely away from belts and pulleys.

Slide the unit into place and attach the belt to the cutterhead. Be sure the motor is square to the base and that the motor pulley is directly under the cutterhead pulley.

Once the motor mount rails are positioned so that the pulleys are aligned, square them to the cross bars using a combination square (see fig. 2-3). Tighten the bolts that attach the motor mount rails to the crossbars.

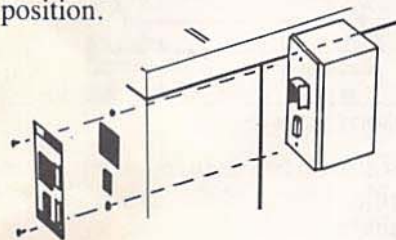


FIGURE 2-3

Now, slide the motor toward the outfeed side of the planer until the belt will deflect about 1/2" under moderate finger pressure. Tighten the bolts that attach the motor to the rails.

ATTACH THE CUTTERHEAD MOTOR SWITCH

After the cutterhead motor is installed and aligned, and the belts are attached, etc., make sure cutterhead is unplugged and switch is in the OFF position.



Remove the two screws that hold the FACE PLATE on to the cover of box.

CAUTION

Hold cover of the box itself as buttons are spring loaded.

After removing the two screws that hold the plate, remove it from the cover. The printed aluminum plate is 2 1/8" x 3 7/8". Insert the box, with cover and button guards, from inside the base. Place the face plate over button guard, from the outside of base and install the two screws back into place from where you removed them. See illustration.

ATTACH THE EXTENSION TABLES

Place a lock washer and a flat washer on two of the 3/8" hex head bolts. Thread the bolts into the tapped holes on the front edge of the planer bed about three turns (see fig. 2-4).

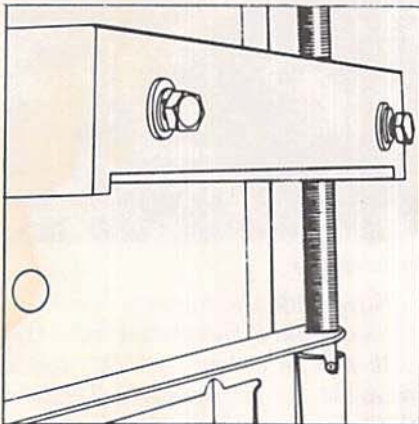


FIGURE 2-4

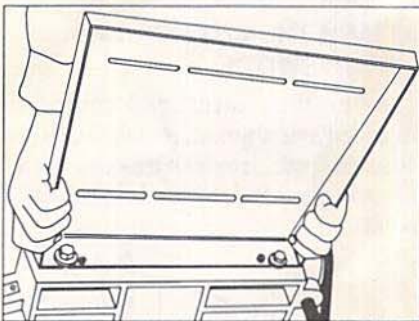


FIGURE 2-5

Line up the slots in an extension table with the bolts and slide the table behind both washers (see fig. 2-5).

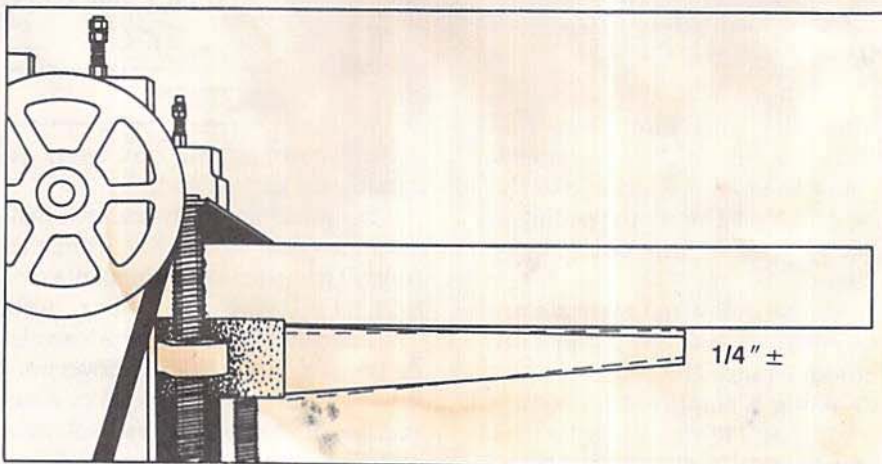


FIGURE 2-6

Tighten the bolts until the extension table will hold its position when you slide it up or down.

Align the meeting edges of the planer bed and the extension table.

Place a 24" straight-edge across the planer bed and the extension table. The end of the extension table will probably be 1/4" to 1/2" low. (see fig. 2-6). Turn the table leveling screws clockwise with a 1/8" allen wrench until the straight-edge is lifted approximately 1/4" above the meeting edges. Now tighten the hex head bolts. As the bolts get tighter, the end of the table should start to move down toward proper alignment. If the end of the table is still too high when the bolts are tight, loosen the hex head bolt, turn the table leveling screw counterclockwise 1/2 turn, and retighten the hex head bolt. Check and adjust both sides of the extension table. Repeat this procedure for the other extension table.

[SHOP-TIP] Take a little extra time in lining up the extension tables. It is better for the ends of the extension tables to be slightly high than for them to be low.

CHECKING THE SET-UP AND ALIGNMENT OF YOUR PLANER

WARNING

Your planer was aligned and tested at the factory. However, during truck shipment settling and loosening may occur. Go through the following set-up procedure—**COMPLETELY**—before connecting your cutter-head motor to a power supply.

DEPTH OF CUT ADJUSTMENT

Crank the table up and down a few times. There should be some resistance, but excessive force should not be required. If excessive force is required, check the chain tension. If the chain is too tight, loosen the chain tensioner. If excessive force is still required to raise and lower the bed, refer to the Maintenance chapter, page 11 for the procedure to realign the jack post screws.

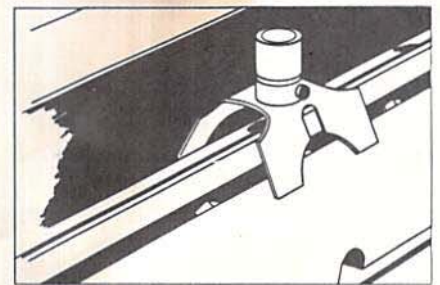


FIGURE 2-8

KNIFE ALIGNMENT

Now is a good time to become familiar with your knife setting gauge. Refer to fig. 2-8. With the knife setting gauge straddling the

WARNING

Your Planer Knives are extremely sharp. Whenever you are working with the cutter-head use extreme caution to avoid cutting yourself on the planer knives.

left end of one knife and your finger resting gently on top, move the gauge until you feel the rod reach the top of its arc (Top Dead Center or TDC). Release the setscrew on the knife setting gauge with a 1/8" allen wrench and adjust the outer barrel until the rod and barrel are exactly even. Move the gauge to the right end of the same knife.

Again, move the gauge until the rod is sitting on TDC. The rod and barrel should be exactly even. Without resetting the barrel, repeat the procedure for both ends and the middle of all three knives. All nine points should feel exactly the same. If any points are out, refer to the maintenance chapter, page 10, for the procedure to adjust the knives.

WARNING

In addition to checking the alignment of your knives, inspect the jackscrews (are all three supporting the bottom of each knife?) and the tightness of the gib bolts. **DO NOT** start your planer without checking the knives. Check the knives after ten minutes of operation and again after 1 hour of operation. Any time you replace or realign your knives check them at the 10 minute and 1 hour points.

BED ALIGNMENT

Make a feeler gauge by gluing a 2-3/4" piece of 1/4" dowel into a 2-3/4" square piece of 3/4" thick stock (see fig. 2-9). Lower the bed and place the feeler gauge under the left side of the cutterhead. Rotate the cutterhead until one knife is at approximately Bottom Dead Center (BDC). Raise the bed

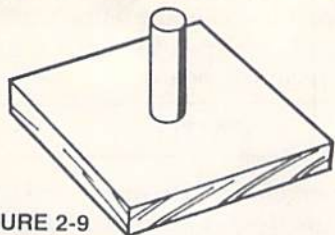


FIGURE 2-9

until the knife just touches the feeler gauge. Rock the cutterhead and adjust the bed up or down until the knife just touches the feeler gauge when it reaches BDC. Move the feeler gauge to the right side of the bed and examine whether the feeler gauge again just touches the knife at BDC. If it is either too low or too high, refer to the maintenance chapter, page 12, for the procedure to align the table.

OPERATING INSTRUCTIONS

Now that you have your planer assembled, take a moment to review the safety instructions and procedures outlined on page 3.

This section of the manual discusses the operation of your planer. You should use a piece of straight grained stock, four to six inches wide, and about three feet long as a practice piece to familiarize yourself with the machine.

INDEXING YOUR PLANER

With both motors off, rest the stock on the planer bed and turn the depth adjustment crank until the feed rollers just touch the stock (see fig. 3-1). Remove the stock from the machine, turn the depth adjustment crank 2-1/2 turns clockwise (this procedure sets the depth of the machine at a point where the stock will feed without kickback, but is still below the cutterhead). Start the machine.

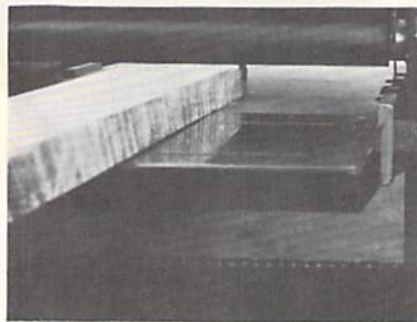


FIGURE 3-1

CLEAN BED AND WAX

The last step before you begin to use your planer should be to clean the protective coating off your planer bed and wax the bed with a furniture paste wax (such as Minwax). Use either denatured alcohol or mineral spirits to clean the bed. Apply a light coat of wax, wait a few minutes, and buff out. Automotive wax is not recommended for this procedure. Rewaxing the bed weekly for 6 weeks is recommended for protection of the bed and for reduction of friction.

WARNING

Failure to follow the above described procedure for indexing your planer may result in kickback of the workpiece.

Feed the stock into the machine, keeping it parallel with the sides of the planer. Turn the depth adjustment crank clockwise until the knives just contact the stock (about 4 revolutions). Feed the stock through the machine again without adjustment. Determine the depth of cut you want to take—up to 3/16"—and turn the crank clockwise the appropriate number of revolutions (see table below).

REVOLUTIONS	DEPTH OF CUT
1/8	1/128
1/4	1/64
1/2	1/32
1	1/16
2	1/8
3	3/16

SHOP-TIP—Use the procedure described above for every cut you make on the planer. If you're working with stock of varying thickness, work the thicker boards down to the thinner ones before running all boards at a single setting.

FEED RATE

Your planer is one of very few planers manufactured today that has a variable feed rate. This feature allows you to adjust the feed rate to obtain the best cut possible under a variety of conditions.

NOTE: The conditions that affect the quality of cut are the depth of cut, feed rate, the type of stock you are planing, and the condition of the knives.

Experiment with the feed rate to adjust it to the level best suited to the work you are doing. You'll find that rough dimensioning of softwoods can be done at full speed with a heavy depth of cut. You can obtain a finer finish by taking a very shallow cut at a slow feed rate.

Highly figured hardwoods, such as walnut, bird's eye maple, etc. should be planed with repeated shallow passes at slow speed.

WARNING

Never start the planer with a workpiece under the cutterhead. Always allow the cutterhead to come to full speed before feeding the workpiece into the planer.

SURFACING ROUGH LUMBER

You can save money on your projects by buying rough lumber and surfacing it with your planer. Here are some tips on buying and dimensioning rough lumber.

Lumber for furniture projects or other indoor use should have a moisture content no higher than 12%. Air drying requires one year for each inch of thickness. Lumber dealers should be willing to test moisture content in your presence on the stock you are about to buy.

If possible, you should keep your shop and lumber storage areas at the same temperature as the room that the finished project will be in. If your shop is in a basement, you should consider investing in a dehumidifier. It will keep your stock from drawing moisture, and

will help prevent your tools and equipment from rusting.

It is almost impossible to find rough lumber without a "crown". By using a jointer and/or planer you want to cut away both the convex and concave sides of the crown and obtain the part of the board that is most likely to stay flat (see fig. 3-2).

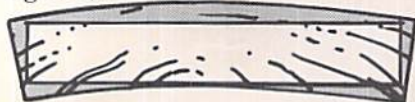


FIGURE 3-2

The first step in dimensioning rough lumber is to joint one edge so that you can determine the direction of the grain. Always feed stock into the planer so that the lines of the grain point upward toward the infeed opening (see fig. 3-3).

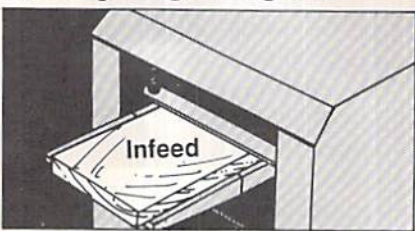


FIGURE 3-3

After you have determined the direction of the grain, the next step depends on the equipment you have. If you have a jointer wider than the stock you are working with, joint the concave face of the stock. Then, plane the board with the convex side up.

If you do not have a jointer wide enough to accommodate the stock, or if the board is extremely wide and long, you may obtain equal results with the following procedure. Index your planer to the stock as described in the previous section. Take repeated very shal-

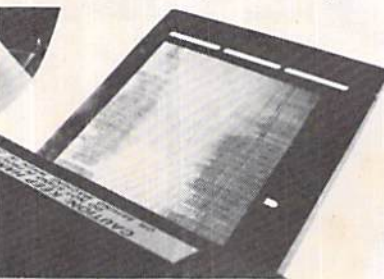


FIGURE 3-4

low cuts on the convex side of the board (see fig. 3-4) until you have a flat surface on approximately 70% of the width. Turn the board over and make the next few passes (again, very shallow) on the concave side. Work and turn the board in this manner until the desired dimension is reached.

SURFACING GLUED-UP STOCK

Almost any furniture project involves edge gluing stock to form a wide panel. Panels up to 12-1/4" can be surfaced after glue-up with the Woodmaster planer. Here are a few hints to help you get the best results.

Whenever possible, the grain of all pieces should run in the same direction. Also, the growth ring orientation should alternate from board to board. Prior to glue-up, all stock should be planed to equal thickness—however, be sure to leave enough thickness for final dimensioning after glue-up.

Carefully joint the mating edges of the pieces. Splines, dowels, tongue and groove cuts, etc. do not add to the strength of a joint, but do improve the accuracy of the glue-up by improving alignment of the pieces. Woodmaster's C-3 cutterbit set provides a simple interlocking profile that will aid in alignment and is well suited for work involving several strips of equal width.

Apply glue to both edges of the stock in a thin film. Tiny beads of glue emerging from the joint when clamped indicate a good joint and the proper amount of glue. Excessive "squeeze-out" indicates too much glue was applied.

After the glue has dried to full cure (see the directions on the particular glue you are using), use a scraper or chisel to remove any glue from the board.

CAUTION

Dried glue is extremely hard and will dull or knick your planer

blades if it is not scraped off.

You're now ready to plane your glued-up stock. Always start with the side with the least variation down. Work and turn the stock as described earlier in the section on rough lumber thicknessing.

SNIPE

Snipe occurs within the first and last four inches of a board being fed into the planer. The board will come out of the planer with a slightly deeper cut in these two areas — ranging from 1/32" down to just a few thousandths.

Snipe will be most noticeable on long, thick stock.

Snipe is the result of the board being held by only one feed roller.

This allows the board to be lifted by the cutterhead, and the weight of the remaining stock to pivot the leading or trailing edge into the cutterhead further.

Therefore, one of the first things to check if you are getting excessive snipe, is the feed roller pressure. Feed roller pressure should be

adjusted to the point that snipe is at a minimum, but no further.

Other ways to minimize snipe:

- Supporting the workpiece on both the infeed and out-feed sides (either with roller stands or by hand).
- Butt workpieces end-to-end.
- Check and adjust any vertical play in the planer bed.

MAINTENANCE

With proper care and maintenance, your Woodmaster 712 Planer should last for years. This chapter of your manual will cover preventative maintenance as well as repair of common problems that you may encounter with your machine.

LUBRICATION

The table jackpost screws should be cleaned and lubricated after every 8 machine hours. A light aerosol lubricant (such as WD-40) is recommended for this application (see fig. 4-1).

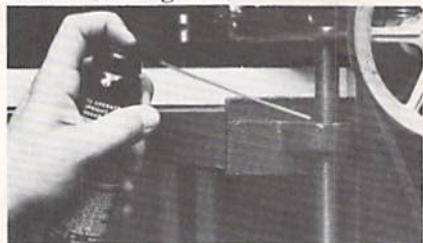


FIGURE 4-1

The bushings which support the feed rollers are impregnated with a light machine oil (commonly referred to as "Oilite" bushings). Under daily use, you may want to apply a few drops of machine oil to the junction between the feed roll and the bushing on a weekly basis (see figure 4-2). Under infrequent use, this may be reduced to a monthly application.

The cutterhead bearings are permanently lubricated and sealed for life, as are the motor bearings.



FIGURE 4-2

CLEANING

When you receive your planer, clean the bed with mineral spirits or solvent alcohol and wax it with furniture paste wax. Repeat the waxing every week for about 6 weeks. This will form a good protective coating, and reduce friction. Do not use automotive wax. Clean the chips from the machine each time it is used, either with a shop vacuum or an air compressor.

The base and hood can be protected with automotive wax, if desired. Avoid the use of water in cleaning your planer.

CAUTION

The feed rollers lose their effectiveness when they become coated (from either resinous woods or green hardwoods) with sap and resin. The feed rollers can be cleaned with solvent alcohol.

Avoid the use of petroleum products (mineral spirits, kerosene, gasoline, or diesel fuel), they will impregnate the rollers and leave residue on your stock.

KNIFE SETTING, REPLACEMENT, AND SHARPENING

WARNING

Your Planer Knives are extremely sharp. Whenever you are working with the cutterhead use extreme caution to avoid cutting yourself on the planer knives.

The knives in your planer are truly the heart of the system. Properly aligned, sharp knives will insure the optimum finish your planer can produce. If the knives are either dull or misaligned, your workpiece will show it. Misalignment will show up as ridges running across the board (referred to as "mill-marks"). Dull knives will cause the planer to bog down and are more likely to tear the grain if fed against the grain or if the workpiece has a "switch-back" in the grain.

The knife setting gauge supplied with your planer is your key to proper alignment. As mentioned in the chapter on initial set-up, you should check the alignment of your knives before you first start your planer, after 10 minutes of operation, and about every 10 hours of machine operation. The procedure to use the knife setting gauge is detailed on page 6. Briefly, you should index the gauge to the center of one knife, then check that setting against the ends and middle of each knife.

KNIFE SETTING

When a knife is out of alignment, or when installing new or resharpened knives the following procedure should be used to align the knife.

First, disconnect the power supply, remove the hood, and block the cutterhead from moving by placing a 6" long scrap 2 x 4 under the planer head. Make sure the block is placed so that it will not contact the feed rollers when the planer bed is raised. Raise the planer bed until the block contacts the body of the cutterhead (see fig. 4-3).



FIGURE 4-3

CAUTION

Raise the bed only enough to prevent the cutterhead from turning. Do not exert excessive pressure which may damage the cutterhead bearings.

Loosen the gib until the knife will move easily in the slot. With the gauge setting as close as possible to the jack screw, raise or lower the knife with the jackscrew until the inner rod is flush with the outer barrel (turning the jackscrew counter-clockwise will raise the blade, clockwise will lower the blade—see fig. 4-4). If you need to lower the blade, make sure the blade follows the jackscrew.

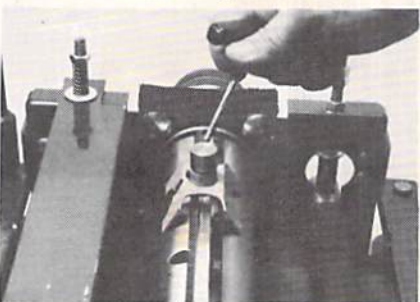


FIGURE 4-4

WARNING

Occasionally, the blade will hang in the slot, in which case you should push down on the blade with a small block of wood—NOT your finger (see fig. 4-5).

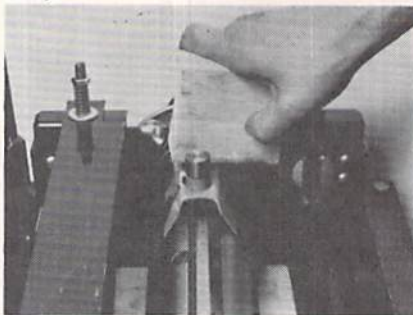
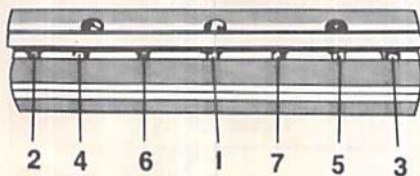


FIGURE 4-5

Follow the same procedure for the other two jackscrew points on the same knife.

After leveling a knife, tighten the gib bolts. Remember, you are tightening the gib by forcing the head of the gib bolts against the back wall of the knife slot (working from the infeed side of the planer you will be turning the bolts clockwise). Tighten the center gib bolt first, then the two outside bolts, then the next two inside bolts, then the last two closest to the center (see fig. 4-6). The best method is to follow the tightening pattern 3 times (the first time, snug the bolts up, then go through the pattern again applying moderate pressure, finally, torque the bolts down securely).



Tightening Sequence

FIGURE 4-6

WARNING

Whenever you are working on the gib cross bolts, cover the knife with a piece of stiff cardboard. If your wrench slips off

the head of the bolt, the cardboard will keep you from receiving a cut.

KNIFE REPLACEMENT

Knife edge life is dependent on many factors, species of wood, depth of cut, moisture content of the wood, whether the wood is clean and free of debris, feed rate, and other factors.

For this reason, it is impossible to schedule knife replacement on a "machine hours" or "lineal feet" basis.

Knives should be replaced whenever one or more of the following factors are noticed: excessive grain tear-out, machine bogs down under load, shavings are small and dusty, finished board has ridges running the length of the board from knicks in the knives, or noise level of the planer is noticeably higher.

CAUTION

Failure to replace dull knives may result in bearing wear and will put a strain on the cutterhead motor. Do not use off-brand knives. Use only Woodmaster replacement knives in your planer.

To remove your planer knives, block the planer head as described above, loosen the gib bolts (working from the infeed side of the planer you'll turn the gib bolts clockwise), and remove the knife and gib.

WARNING

Notice that the side of the gib that goes next to the knife has a bevel profile cut in it. It is important that the gib be reinstalled this way (see Fig. 4-7).

You should remove and replace the blades one at a time (rather than removing all blades and installing the knives while the other two slots are empty). The force of tightening a gib while the other slots are empty can cause minor distortions in the head that will make alignment of the remaining blades more difficult and could cause imbalance.

While the gib is out, clean the knife slot, jack screws, and gib with solvent (lacquer thinner is great for this) and lubricate with a spray lubricant (such as WD-40). Wipe all excess lubricant from the slot and gib before installing the new knife.

NOTE: The jackscrews may need to be adjusted downward if your old knives had been sharpened, or upward if the knives you are installing are resharpened. The installed knife should project 1/8" from the planer head.

WARNING

Use extreme caution whenever working with planer knives. Even dull knives that you remove from your planer can cut you. New or resharpened knives are very sharp.

Install the new knife and align as described above. Repeat the procedure for the remaining two knives.

Knife alignment should be checked after ten minutes of operation, one hour of operation, and every 10 hours thereafter.

Your old knives can be reground. If you do not have a good sharpening shop locally, you can return your knives to Woodmaster on our exchange program (the cost of this program is \$12.95 and turnaround time is about 2 weeks).

BEARING ALIGNMENT

The bearings in your planer are permanently lubricated and sealed. However, they swivel in the cast bearing housings for self-alignment. To facilitate this swivel

action, each housing is fitted with a grease zerk.

In the unlikely event that a bearing becomes "bound," it can cause excess vibration and wear on the shaft. To check the alignment of your bearings, disconnect the power supply, remove the hood and turn the cutterhead by hand. If the sides of the planer flex from side to side at the top part of the bearing housing, first add grease to each bearing housing.

Next, release the lock collars. To do this, block the cutterhead as described in section on knife alignment. Loosen the setscrew and turn the lock collar against the direction of the rotation of the cutterhead. Usually, the lock collar will release if you just push against the allen wrench. If the lock collar will not release, place the end of a center punch in the dimple on the lock collar at an angle. Tap the center punch with a mallet until the lock collar releases. (For further explanation of the lock collars, see the Accessory chapter, page 13, fig. 5-3.)

After both lock collars are released, position them about 1 inch away from the bearings and tighten the setscrew.

Replace the hood and connect the power supply. Turn the machine on and let it run for about 30 seconds. Disconnect the power supply and remove the hood. Loosen the lock collar set-screw, and install the lock collar by turning it in the same direction as the rotation of the cutterhead. Turn the cutterhead by hand—the side-to-side flex should now be gone.

JACKPOST AND TIEBAR ADJUSTMENT

The tiebars (refer to page 4) perform three functions on your planer. First, they hold the sides in position; second, they serve as the upper pivot for the jackposts; third, they provide support for the planer bed by holding the jackposts firmly against the base of the planer.

You should check the tiebar adjustment periodically by grabbing the front edge of the planer bed and trying to raise it. If there is up and down play in the bed, the following procedure will remedy this symptom, and increase the accuracy of your planer.

Loosen the four carriage head bolts that hold the tiebars in place (see fig. 4-10). In the center of the tiebar, push straight down while re-tightening the bolts (an extra pair of hands is welcome in the shop for this procedure). Repeat the procedure for the other tiebar.

BED ALIGNMENT

The bed to cutterhead relationship is one of the most critical adjustments on your planer. If the bed and cutterhead are not perfectly parallel, your finished stock will be thinner on one side than the other. This adjustment should not be necessary very often, however, the check to see if it is necessary is very simple and should be conducted periodically, particularly before starting a critical planing job.

NOTE: before checking bed alignment, the procedure described above to check the tiebar adjustment should be carried out.

To check the bed alignment, plane a piece of scrap 2×4 (on edge) on the extreme left side of the planer. Then, without adjustment, run the same board through on the extreme right side of the planer. On the second cut you should just barely hear the knives contacting the wood and should see a few light shavings.

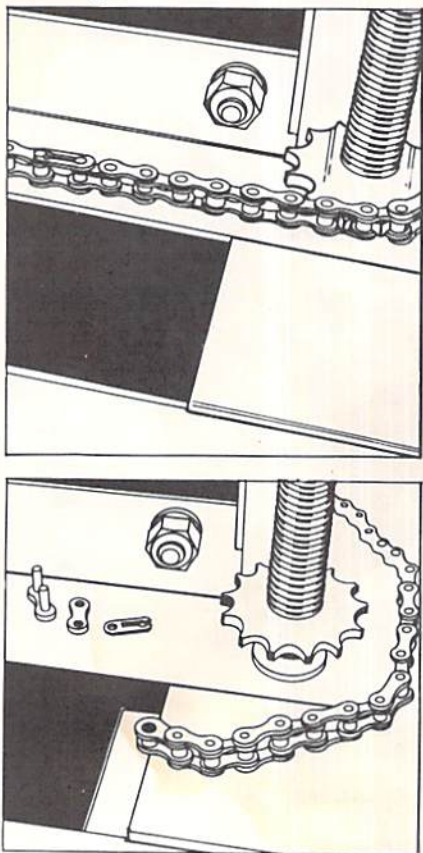


FIGURE 4-11

If you have a vernier caliper, you might want to check the measurement between cuts. If the second cut produces more than just a few very small shavings, the right side is higher than the left. If there is no evidence of contact at all (you can't hear the knives cut or see any shavings), then the right side is lower than the left.

Once you have determined that the bed is out of alignment, remove the master link from the bed elevation chain and carefully take the chain off each sprocket (see fig. 4-11). Because of access, it is easier to make adjustments on the left side of the machine.

If the right side of the bed is higher than the left, turn both sprockets on the left side clockwise.

If the right side of the bed is lower than the left, turn both sprockets on the left side counter-clockwise.

NOTE: It is rare for the bed to be out of alignment by any more than $1/32$ nd of an inch. Therefore, you will probably never have to turn the sprockets more than one half a turn (a quarter turn or less is most likely).

Be sure you turn both sprockets the same amount. Without attaching the chain, replace the hood, connect the power supply and run another scrap of 2×4 through the left and right sides of the machine as described above. Careful measurement will result in a true parallel between the knives and the bed. Once you have the bed aligned, carefully replace the chain on the sprockets and install the master-link.

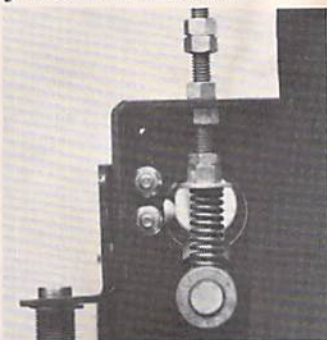
FEED ROLL PRESSURE ADJUSTMENT

The feed rollers drive the workpiece through the planer under the cutterhead. They are held in place by two springs each (see fig. 4-12). The downward pressure of the springs holds the board against the planer bed as it travels through the planer. If the feed roll pressure is too light, the board will chatter and snipe, and the danger of kickback

is present.

WARNING

Worn, torn or damaged feed rollers must be replaced for the continued safe performance of your planer. Worn feed rollers may allow kickbacks.



Measure between bottom of washer and top of bushing

FIGURE 4-12

The following chart gives the height for each feed roller pressure spring (see fig. 4-12). These measurements are in the middle of the available range. Increases in feed roller pressure (by compressing the spring further) should not exceed $1/16$ th inch. Decreases in feed roll pressure (by reducing spring compression) should not exceed $1/8$ th inch.

	CUTTERHEAD DRIVE (LEFT) SIDE	FEED ROLLER DRIVE (RIGHT) SIDE
INFEED	$1-9/16$ "	$1-5/8$ "
OUTFEED	$1-1/2$ "	$1-9/16$ "

ACCESSORY INSTALLATION AND OPERATION

The first step in attaching either the molding or drum sanding attachments is to remove the planer head. The Morse taper shafts which hold the planer head in place must be withdrawn and the planer head removed. Since this is an operation you may be performing frequently, the following step-by-step instructions have been included. The instructions for installing the accessories will be discussed separately later in the chapter.

BEARING LOCK COLLARS

The two black lock collars located just outside the bearings on both sides of the machine prevent the shaft from moving from side to side. These collars lock onto the bearings (by means of an internally cut cam) and the setscrew locks the collar to the shaft (see fig. 5-1).

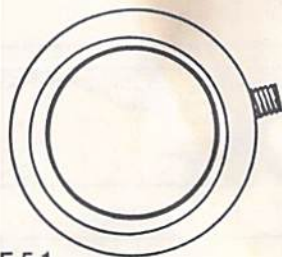


FIGURE 5-1

CAUTION

Lock collars must be installed on either the planer head or the molding shaft before running the planer.

The cam will lock onto the bearing when turned in either direction. However, you should always **tighten the collar by turning it in the same direction as the cutterhead rotation**. If tightened against cutterhead rotation, the collar will further tighten itself as the planer runs. This makes the lock collar very difficult to remove when you next change accessories.

REMOVING THE PLANER HEAD

Place a piece of scrap 2×4 about 6 inches long on the planer bed making sure it will clear both feed rollers (see fig. 5-2). Raise the bed until the 2×4 contacts the cutterhead. This should prevent the cutterhead from rotating.

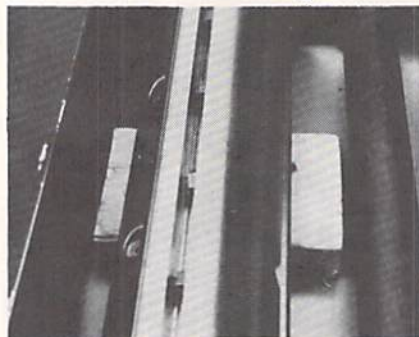


FIGURE 5-2

CAUTION

Raise the bed only enough to prevent the cutterhead from turning. Do not exert excessive pressure which may damage the cutterhead bearings.

Loosen the lock collar setscrew with a $5/32$ allen wrench. With the allen wrench still in the screw head, pull the wrench against the direction of cutterhead rotation. The lock collar should pop loose and slide away from the bearing. If the lock collar does not release by just pulling against the allen wrench, first try pushing the allen wrench in the opposite direction (remember, the lock collar will lock in

either direction, and the last person who worked on the machine may not have read this section of the manual!). As a last resort (rarely necessary) place a centerpunch in the dimple on the lock collar at an angle and strike with a mallet.

Withdraw the Morse taper shafts from the cutterhead. The taper shaft on the cutterhead drive side of the machine has a left hand thread. The taper shaft on the feed roller drive side of the machine has a right hand thread. In both cases, turn the bolt heads against the rotation of the cutterhead to loosen the taper shafts. Loosen the cutterhead drive side taper about 3 turns, then go around and loosen the feed roller drive side and withdraw the shaft. Finally, withdraw the shaft from the cutterhead drive side.

WARNING

Your Planer Knives are extremely sharp. Whenever you are working with the cutterhead use extreme caution to avoid cutting yourself on the planer knives.

Carefully remove the cutterhead from the planer and place it on a soft cloth. Take the lock collars and drive pulley off the taper shafts and loosely thread the taper shafts back into the planer head.

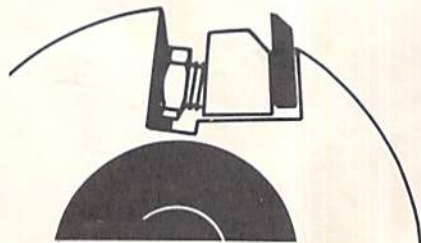


FIGURE 5-4

CAUTION

While storing the cutterhead, protect it and the taper shafts from dust, and falls.

NOTE: Before we discuss the installation of accessories, here are some things to watch for when

installing the cutterhead back into the machine.

The longer of the two taper shafts goes into the cutterhead drive side. Make sure the cutterhead goes into the machine so that bevels face as shown in fig. 5-4 when viewed from the left (cutterhead drive) side of the machine. Tighten the taper shafts securely before installing the lock collars.

ACCESSORY SHAFT

The accessory shaft shown in fig. 5-5 is used for both molding operations and drum sanding. Slide the uncut end of the shaft through the cutterhead drive side bearing, slide



FIGURE 5-5

on the appropriate accessory, and feed through the feed roller drive side bearing. Position the shaft so that the end is about an inch from the feed roller pulleys. Install the lock collars.

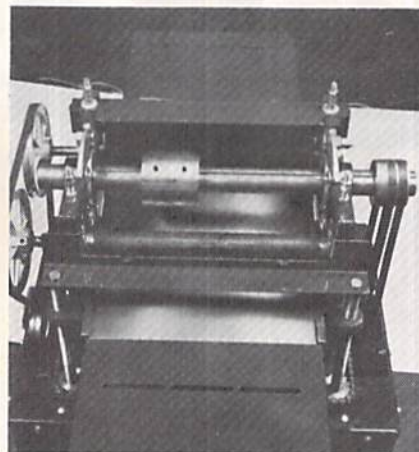


FIGURE 5-6

MOLDING WITH YOUR 712

Every molding operation involves 5 steps: stock preparation, knife installation, guide board

installation, test run, and production run.

STOCK PREPARATION

Successful molding operations begin with careful stock preparation. The stock should be planed to within 1/32" of the thickest portion of the finished molding (see fig. 5-7). Patterns which involve a cut on both sides (crown moldings, bed moldings, picture moldings, etc.) should be planed to within 1/16" of the thickest portion of the finished molding (allowing 1/32 for each pass, see fig. 5-8).

If the molding involves parting legs, the stock should be ripped to within 1/8" of the finished width (this allows each parting leg 1/16", see fig. 5-7).

Your stock preparation should include 4 or 5 pieces of stock between 18" and 24" long to be used as test pieces prior to your production run. The test pieces should be exactly the same width and thickness as the prepared stock. At least one or two should be the same species of wood.

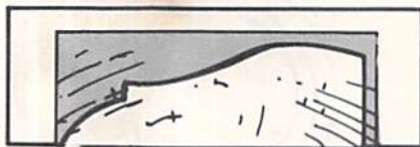


FIGURE 5-7

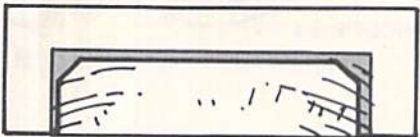


FIGURE 5-8

PATTERN KNIFE INSTALLATION

Knives may be installed in either the custom knife holder or in the planer head. When buying pattern knives, be sure to specify how you will be running them. The knives and gibs purchased from Woodmaster are carefully balanced to each other.

CAUTION

Running a pattern knife with a gib other than the one supplied for it may result in shaft and bearing damage to your planer. Be careful to keep each knife with its gib (and counter-balances if supplied).

If you decide to run a knife other than the way you originally ordered it, call Woodmaster and order 7 ounce counter-balances (if originally ordered for the custom knife holder and you wish to run the knife in the planer head) or give us the knife part number and the weight of the knife—we will cut a gib to balance for the custom knife holder (if originally ordered for the planer head).

Should your knives and gibs become intermingled, you can sort them out using the following rules.

For custom knife holder applications, the combined weight of the knife and the gib must be 7 ounces. For planer head applications, the counter-balance slugs and gibs must be equal to the combined weight of the gib and pattern knife.

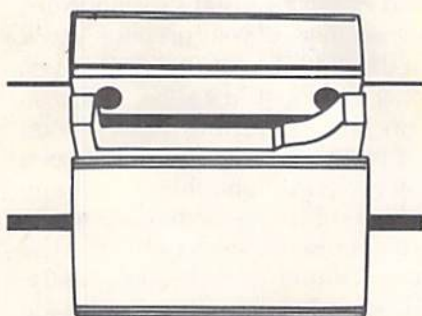


FIGURE 5-10

WARNING

One more note on the knives before we discuss installing them. **The custom knife holder must not be used for knives wider than 3-1/4" (see fig. 5-10). Knives 3-1/4" and larger must be run in the planer head.**

CUSTOM KNIFE HOLDER INSTALLATION

Remove the planer head as discussed previously in this chapter.

Install the molding shaft.

Slide the custom knife holder on the molding shaft before fitting the shaft through the feed roller drive side bearing. The custom knife holder must be installed so that the narrow groove in the bottom of the knife slot is toward the outfeed table when the knife slot is at 12 o'clock position (see fig. 5-12).

Position the shaft and install the lock collars and shaft pulley.

Align the keyway in the custom knife holder with one of the keyways in the shaft. Slide a key under each setscrew on the custom knife holder and tighten the setscrews securely (see fig. 5-11).

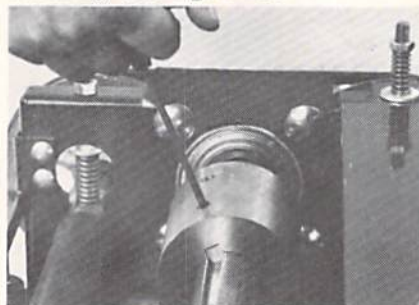


FIGURE 5-11

Place the knife and gib into the custom knife holder as illustrated in fig. 5-12, **being sure the knife bottoms out in the slot, the flat side of the knife is next to the gib, and that both the knife and gib are centered on the width of the custom knife holder.**

Secure the knife and gib in the slot by turning the setscrews in the gib clockwise. Handling the knife by the edges only, hold down on the

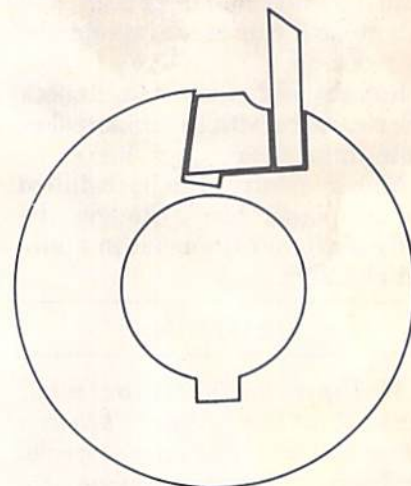


FIGURE 5-12

knife while tightening the gib (to prevent the knife from creeping up with the gib). Rotate the molding shaft by hand.

WARNING

Make sure there is a minimum clearance of 1/8" between the knife edge and the chipbreaker.

Multiple Custom Knife Holders can be used at the same time on the molding shaft. Alternate the holders so that they are locked into opposite keyways.

CAUTION

Multiple pattern setups must account for any variance in the depth of cut between knives. This will involve custom bedboard arrangements if the variance is greater than 1/8".

INSTALLING PATTERN KNIVES IN PLANER HEAD

Block the planer head with a 6 inch 2 x 4 as described earlier.

Remove one planer knife and install the pattern knife as described above in the section on custom knife holder installation.

Release the cutterhead, rotate to position a second knife at 12 o'clock, remove the knife and in-

stall a counter-balance weight and gib. Repeat this procedure for the last slot.

Rotate the planer head and check the clearance with the chipbreaker (minimum clearance = $1/8"$).

Multiple knives can be installed in the planer head. Stagger the knives around the head to maintain balance.

CAUTION

Multiple knife setups must account for any variance between the knives. This will involve special bedboard arrangements if the variance is greater than $1/8"$.

CUTTERBIT HOLDER INSTALLATION

An attachment for your 712, called the Cutterbit Holder, utilizes sets of three 1" cutters for simple molding cuts, rabbets, etc. Fig. 5-13 shows the patterns available from Woodmaster.

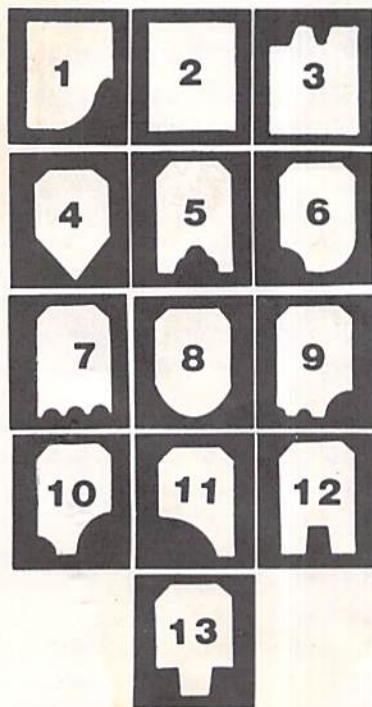


FIGURE 5-13

To install the cutterbit holder, remove the planer head as described earlier in this chapter.

Install the molding shaft.

Slide the cutterbit holder onto the shaft before feeding the shaft through the feed roller drive side bearing. Make sure the alignment tongues on the cutterbit holder face as shown in fig. 5-14. Align the keyway in the cutterbit holder with one of the keyways in the molding shaft. Slide a key under the cutterbit holder and tighten the setscrew securely.



FIGURE 5-14

The cutterbits are aligned and held in place with cone-point setscrews. Slide a cutterbit into one of the slots. Tighten the setscrew securely. Repeat the procedure for the remaining two slots.

Multiple cutterbit holders can be used on the molding shaft at the same time. You can line them up to create moldings, or set up for production processing of various patterns.

GUIDE BOARD INSTALLATION

Most molding operations involve "parting legs". This term refers to the extreme right and left edges of the knives which surface the edges of the stock. The parting legs are designed to cut below the surface of the stock by approximately $1/8"$.

WARNING

Without a guide board the parting legs of the pattern knife will strike the planer bed. The pattern knife will shatter and may cause severe injury to persons present in the shop.

Guide boards can be built for each application, or an adjustable guide board can be either built or

purchased from Woodmaster.

A very simple guide board can be built from a piece of particle board or plywood ($1/2"$ minimum thickness, $3/4"$ recommended) $12-1/4"$ wide and $42-1/2"$ long. Next, cut 4 strips of hardwood $3/4" \times 1" \times 16-1/4"$ (for edge molding, as in tongue and groove, make these strips $3/4"$ wide, $1/2"$ narrower than the stock you will be molding, and $16-1/4"$ long).

Bevel the ends of two of the strips

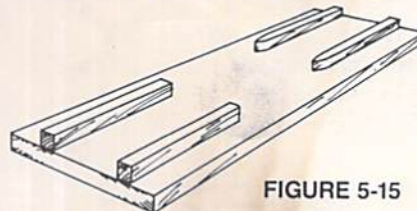


FIGURE 5-15

(to prevent the stock from hanging up on the outfeed side, see fig. 5-15).

With a chalk line or straight-edge, strike a line running the length of the guide board, parallel with the guide board sides, and positioned to be $1/16"$ less than the distance from the left planer side to the inside edge of the left parting leg of the knife (see fig. 5-16). Glue

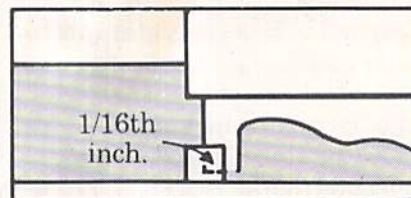


FIGURE 5-16

and screw one of the unbeveled strips on the infeed end of the guide board, with its right edge aligned to the chalk line. Glue and screw one of the beveled strips to the outfeed end in a similar fashion. Now, place a piece of your prepared stock on the guide board, against the two fences you just installed, and position the remaining fences snug against the stock. The fit between the two fences should prevent any side to side movement of the stock, but should not be so tight that the stock cannot feed through easily. Glue and screw the right side fences in place.

Wax the guide board and fences with furniture paste wax.

With either bolts or C clamps, secure the guide board to the planer extension tables. Make sure the guide board is parallel with the planer bed.

With the hood of the planer off and the power disconnected, place a piece of the prepared stock between the fences and raise the bed until the knife will touch the stock. Check the alignment of the knife with the edges of the stock. The parting legs of the stock should be taking an equal amount off each edge of the stock. Make adjustments by either moving the knife or the guide board.

Lower the bed, remove the stock, replace the hood and plug in the planer.

Start the planer and raise the bed until you hear contact between the parting legs of the knife and the guide board. Raise the bed another 1/8" (two revolutions of the crank).

WARNING

This is a critical procedure. The relief must be cut into the bedboard with the planer running, but you must also make absolutely certain that the parting legs do not cut all the way through the guideboard and strike the planer bed. If the knife strikes the bed, it will shatter causing severe damage to the machine and possible injury to the operator and others present in the shop.

Lower the bed slightly (half a turn), turn the planer off, disconnect the power, and remove the hood.

TEST RUN

Rotate the head until the knife is at the low point of its arc. Slide a piece of stock up to the knife and examine the highest portion of the molding. It should be touching the stock by 1/32" (see fig. 5-17). If you can see that the knife will not cut its full pattern, further relief must

be cut into the guide board. If the highest portion of the knife is removing more than 1/32", lower the planer bed to the proper depth.

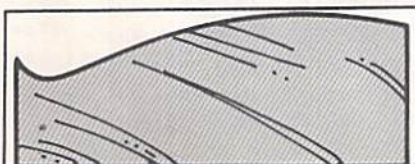


FIGURE 5-17

Install the hood and plug in the planer.

Start the planer and feed one of the test pieces of stock into the planer. When the molding comes out of the planer, check to see that the pattern is cutting its full depth, that the parting edges are leaving a clean edge, and that the alignment of the bed and knife is producing a proper profile. Make any adjustments that are necessary and run another test piece.

The last step is to run a test piece of the same species as the production stock. This allows you to adjust the feed rate to give you the optimum finish.

Once the feed rate is adjusted, you are ready for the production run.

PRODUCTION RUN

Carefully watch the first few pieces of stock that you mold. Make sure the finished thickness is running true and that the full profile is being cut.

CAUTION

After the first 4 or 5 pieces, shut down the planer, disconnect the power, remove the hood and examine the knife. If the knife has slipped in the gib slot, loosen the gib, realign the knife and retighten the gib. If the knife has not slipped, simply tighten the gib.

Repeat the above procedure every 5 machine hours.

MORE ON MOLDING

ADJUSTABLE GUIDEBOARD

An adjustable guideboard is available from Woodmaster (see fig. 5-18). This guideboard gives you the flexibility to make one guide board work for various molding patterns. Rather than being screwed to the guide board, the guide fences ride in slots and are bolted in place. (Order Part # 712-MB)

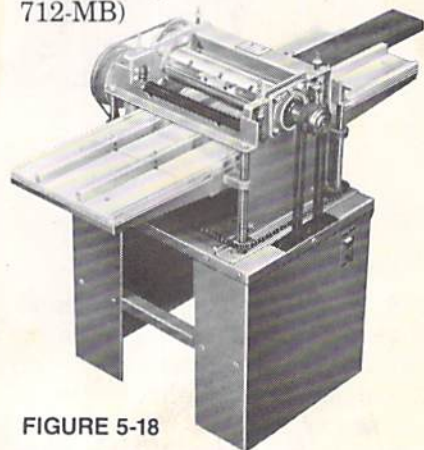


FIGURE 5-18

PATTERN KNIVES

Pages 22 through 25 show the stock pattern knives and picture frame knives available from Woodmaster. We can also custom grind knives to your pattern (from either a drawing or a sample of the molding). Call our toll free customer service line for current pricing of pattern knives and picture frame knives.

DRUM SANDING ATTACHMENT INSTALLATION

Remove the planer head as discussed earlier in this chapter.

Install the molding shaft.

Slide the Drum Sanding Attachment onto the mold shaft before feeding the shaft through the feed roller drive side bearing.

Align the shaft and install the lock collars.

The drum sanding attachment package includes a 5" diameter pulley for the molding shaft. This pulley reduces the speed of the

head, for improved sanding performance.

Fig. 5-19 shows the proper installation of the pulley. The bell of the pulley faces away from the bearing. Line the keyway in the molding shaft, and insert the key provided.

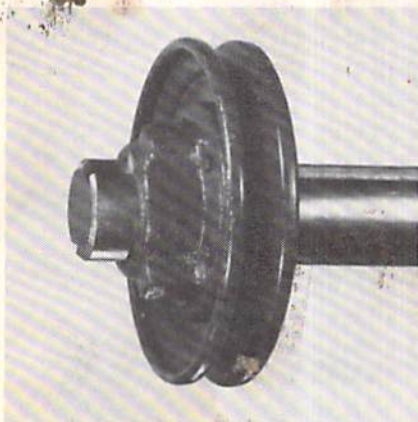


FIGURE 5-19

After installing the pulley, center the sanding drum on the molding shaft, align the setscrews over the keyways and tighten the setscrews (no key necessary).

Install the belt provided with your drum sanding kit.

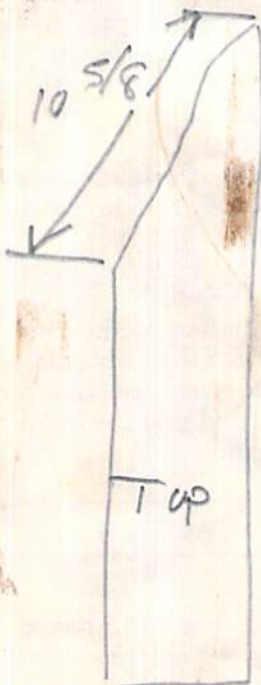
SANDPAPER INSTALLATION (Size = 3" x 55")

Your Woodmaster sander uses an exclusive "Velcro-Mount" system. This revolutionary system eliminates need for adhesives, take-up springs or wedge locks. This same system also prevents stretching, creasing and buckling, so common with other sanders.

To install the paper, make a diagonal cut 10 5/8" in length from one side of the strip to the other. Start the sandpaper at the left side of the drum (facing infeed) with the freshly cut diagonal edge to the left. Spiral the paper onto the drum and butt the edges flush with each other. Do not overlap. Do not worry if a small space appears (1/16" or less) between the edges. This will not affect sanding performance.

At the opposite end, trim paper to the edge of the head.

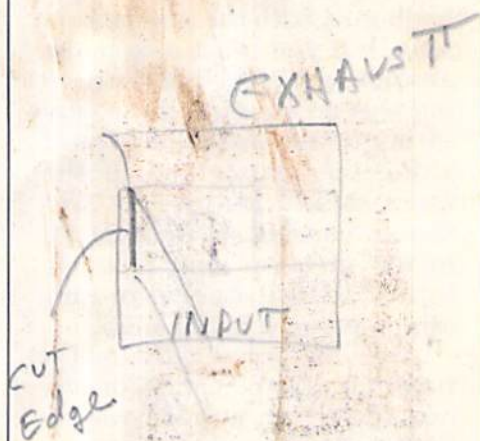
Wrap 1 1/2 turns of narrow (1/2" or 1/4") filament tape at each end.



VELCRO PAD REPLACEMENT

In the unlikely event that the Velcro pad affixed to the sanding drum should become worn or torn, follow this procedure for replacement.

1. Remove the old pad and clean the head.
2. Wrap the sheet of self-adhesive Velcro around the head to form a tube with the longer ends overlapping.
3. Cut through the overlapped portion from left to right across the drum and peel off the portion which was overlapped.



CUSTOMER INFORMATION

Your Woodmaster Model 712 will last you a lifetime if you follow the instructions and maintenance suggestions in this manual. If you have problems, you are covered by a 30 day money-back guarantee of satisfaction, and by a full one-year

warranty against defects in parts or workmanship.

The enclosed warranty card will aid us in filling your service requirements in the future. Please take a few moments to fill it out and return it to us.

If you have technical problems not covered in the manual, or if there are knives or accessories you would like to order, you can reach us from 8:30 until 5:00 (Central Time Zone) Monday through Friday at 1-800-821-6651 (toll-free).

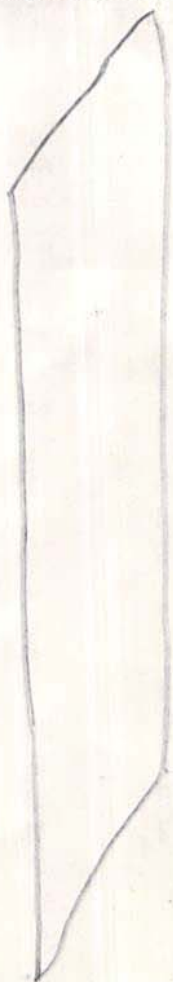
HOW TO ORDER PARTS

The next two pages show the exploded view and parts list for your 712 planer. When ordering replacement parts, refer the part number indicated. All numbers

containing a "Z" may be found in a hardware store. All other parts may be purchased from Woodmaster.

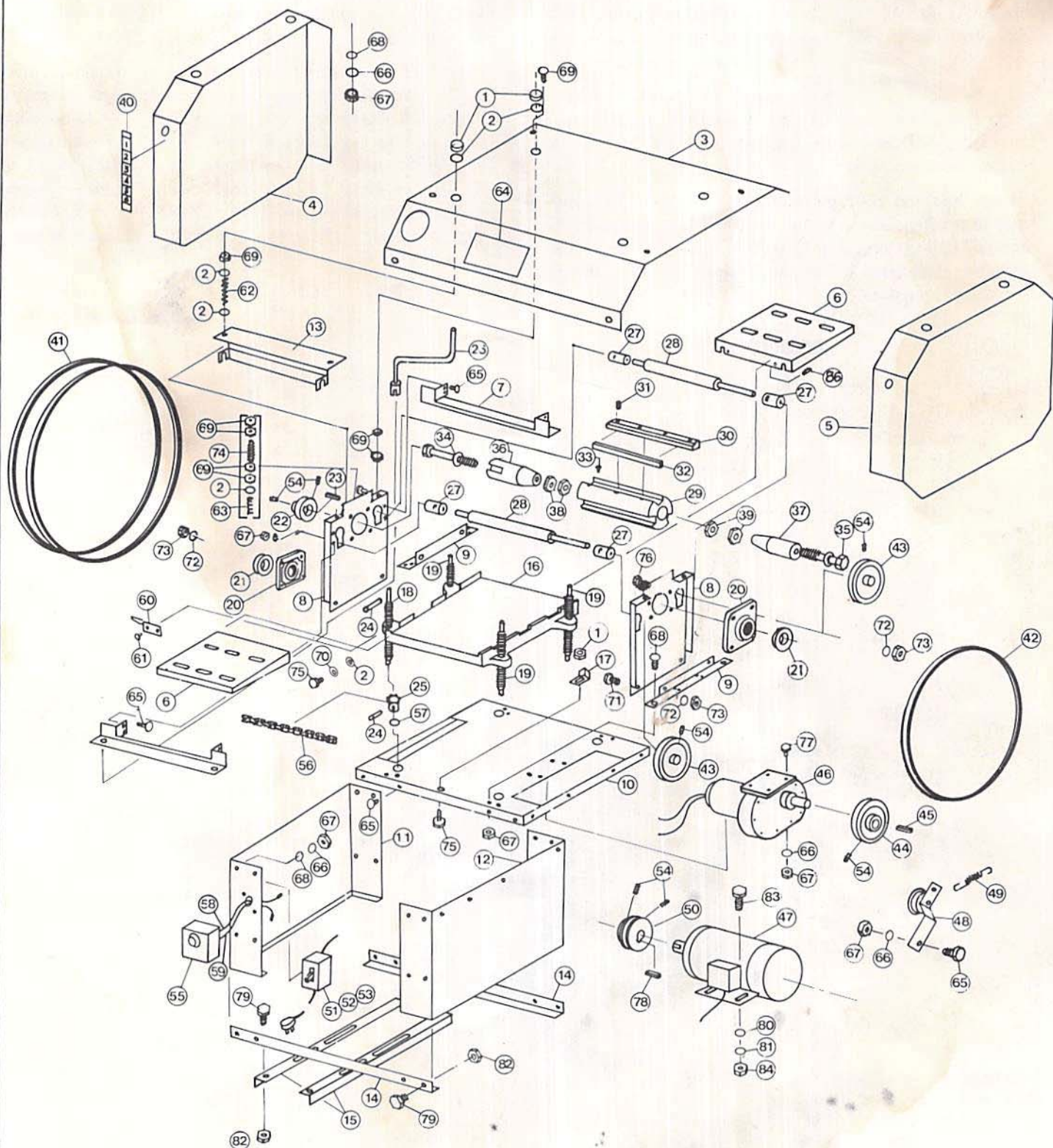
Parts pricing and ordering can be

phoned in on our toll-free customer service line listed above. We will need the part number, quantity, Planer Model (712) and your name, address, and phone number.



Key No.	Part No.	Description	Qty.
1	Z-58	3/8"-16 Hex Head Nut.....	5
2	Z-50	3/8" Flat Washer.....	20
3	W-48	Hood - Top.....	1
4	W-09	Hood - Left Side.....	1
5	W-08	Hood - Right Side.....	1
6	WR-EXT	Extension Tables.....	2
7	WR-130	Tie Bars.....	2
8	W-122	Planer Sides.....	2
9	W-135	Side Mounting Bracket.....	2
10	W-142	Base - Top.....	1
11	W-136	Base - Left Side.....	1
12	W-137	Base - Right Side.....	1
13	WR-32	Chipbreaker.....	1
14	W-101	Motor Mount Crossbars.....	2
15	W-102	Motor Mount Rails.....	2
16	W-103	Planer Bed.....	2
17	WR-45	Chain Tensioner.....	1
18	W-34	Cranked Jackpost Screw.....	1
19	W-35	Jackpost screws.....	3
20	WR-10	Bearing Housing.....	2
21	WR-28	Ball Bearing w/ Eccentric Collar.....	2
22	WR-115	2 groove Pulley - Cutterhead..	1
23	Z-89	3/8" Square Keystock - 1"....	1
24	Z-59	1/4" x 1 1/8" Roll Pin.....	5
25	W-4	Jackpost Sprockets.....	4
26	WR-84	Crank.....	1
27	WR-57	Feed Roll Bushings - Oilite...	4
28	WR-352A	Feed Rollers.....	2
29	W-370	Cutterhead - without tapers...	1
30	W-132	12 1/2" Gib.....	3
31	W-104	Gib Jam Bolts - 5/16"-18.....	15
32	712-B	Planer Blades.....	3
33	WR-182	1/4"-28 Knife Jackscrews.....	9
34	W-105	Taper Bolt - Left Hand Thread.....	1
35	W-106	Taper Bolt - Right Hand Thread.....	1
36	W-107	Taper Shaft - Driven Side.....	1
37	W-108	Taper Shaft - Right Side.....	1
38	W-109	Jam Nuts - Left Hand Thread..	2
39	W-110	Jam Nuts - Right Hand Thread..	2
	W-370A	Cutterhead Assembly-Complete.....	1
40	WR-50	6" Scale.....	1
41	4L560	56" Drive Belt.....	2
42	4L540	54" Feed Roller Drive Belt...	1
43	W-91	6" Feed Roller Pulley.....	2
44	W-111	5" Gearmotor Pulley.....	1

Key No.	Part No.	Description	Qty.
45	W-112	3/16" Keystock.....	1
46	W-GMA	DC Current Gearmotor.....	1
47	WR-CM5	Cutterhead Motor - 5 HP.....	1
	WR-CM3	Cutterhead Motor - 3 HP.....	1
48	W-146	Idler Arm with Pulley.....	1
49	WR-63	Idler Spring.....	1
50	WR-116	Motor Sheave.....	1
51	WR-26	Wire with plug.....	1
52	WR-37	Starter Switch & Enclosure....	1
53	WR-25	Wire from Switch to Motor....	1
	WR-38	Assem. WR-26, WR-37 & WR-25.....	1
54	Z-85	5/16" - 18 Setscrews.....	7
55	W-CBD	Control Box - Dart Controls...	1
56	W-41	Jackpost Chain.....	1
57	WR-549	Machine Washer - 5/8" I.D.....	8
58	W-113	Wire with 110-VAC Plug.....	1
59	W-114	Wire from Control Box to Gearmotor.....	1
60	WR-74	Pointer.....	1
61	Z-53	3/16" Pop-Rivet.....	2
62	WR-545	Chipbreaker Spring.....	2
63	WR-19	Feed Roller Tension Spring...	4
64	WR117	WARNING Decal.....	2
65	ZZ-98	1/4"-20 x 1" Shoulder Bolt...	16
66	Z-177	1/4" Flat Washer.....	6
67	Z-209	1/4" Whiz Nuts.....	32
68	Z-99	1/4"-20 x 1/2" Carriage Head Bolt.....	16
69	Z-73	3/8"-16 Jam Nuts.....	22
70	Z-71	3/8" Lock Washers.....	4
71	Z-86	1/2"-13 x 1" Hex Head Bolt....	4
72	Z-11	1/2" Lock Washer.....	12
73	Z-69	1/2"-13 Nuts.....	12
74	WR-47	3/8"-16 x 4" Threaded Rod....	4
75	Z-01	3/8"-16 x 1" Hex Head Bolt....	1
76	Z-68	1/2"-13 x 1 1/2" Carriage Head Bolt.....	8
77	Z-02	1/4"-20 x 1" Hex Head Bolt....	4
78	WR-22	3/16" Square Keystock.....	1
79	Z-03	5/16"-18 x 1" Shoulder Bolts.....	12
80	Z-150	5/16" Flat Washer.....	4
81	Z-178	5/16" Lock Washer.....	4
82	Z-81A	5/16"-18 Whiz Nut.....	12
83	Z-181	5/16"-18 x 1" Carriage Bolts...	4
84	Z-81	5/16"-18 Hex Nuts.....	4
85	WR-62	2" Idler Pulley & Shaft.....	1
86	Z-04	1/4" - 20 Set Screw.....	4



Custom Pattern Knives

PRICING: Pattern knives are priced at \$16.80 per inch (\$1.05 per 1/16") measured on the widest dimension shown. Please note that illustrations are **one half actual size**. However, dimensions listed for each pattern are actual size.

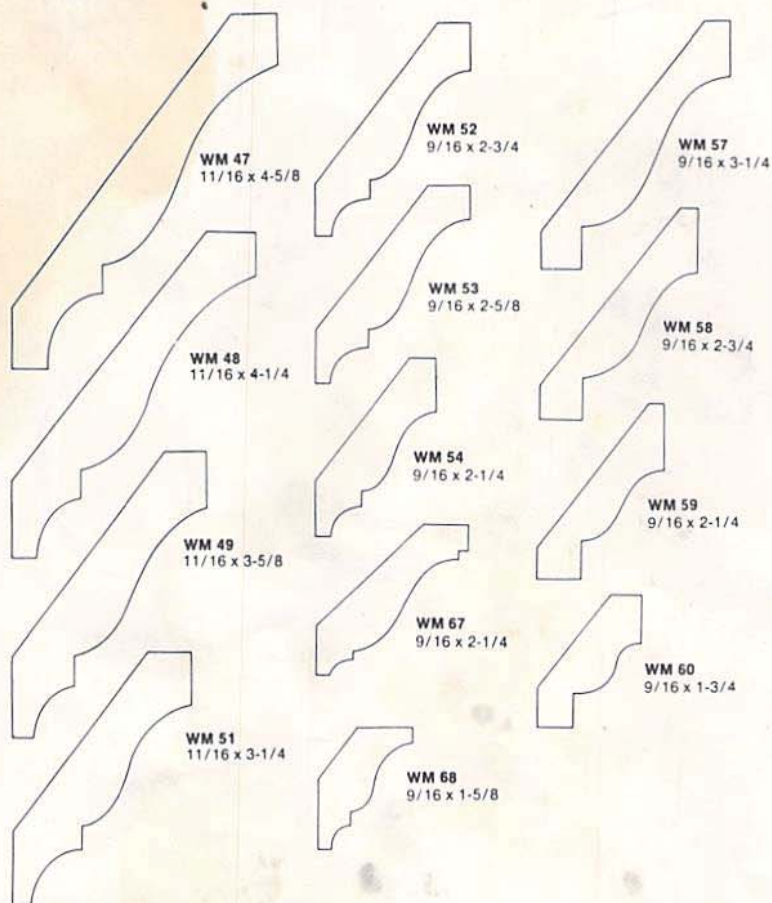
Patterns are to industry standards set by the Western Wood Products Association. Where size and shape permit, knives are designed with "parting edges" to produce a finished piece in one pass.

Crown, bed and cove patterns use a separate "bottom" knife to produce bevels on the back side. Please specify if "bottom" knife is required. It will be equal in price to the top knife. Half-round knives can be used to produce dowel by making two passes.

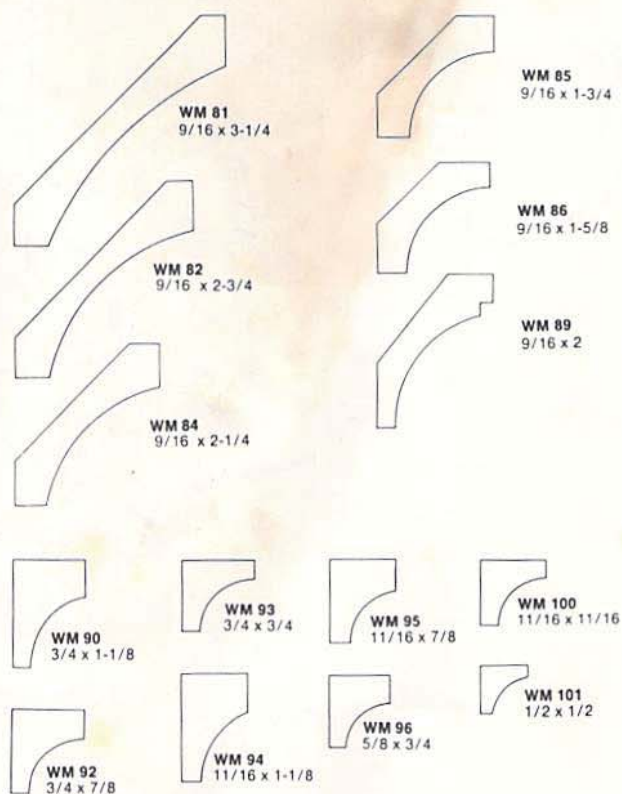
Power Requirements: As a general rule, pattern knives up to 8 inches in width may run on the 12" Planer (extremely wide and deep patterns may require a 5HP motor). Again, the wider and deeper the pattern, the more power required.

IMPORTANT: So that we can send you the proper balance weights for each knife you order, please specify which size planer you have and whether you will be using the knife in the Custom Knife Holder for the Quick Change Molding Head, or placing the knife directly into the Planing Head. Also, custom knives can be ground to order for you at approximately \$22.00 per inch. Simply send us a scale drawing or sample of the pattern you want.

CROWNS



COVES



Cove: A moulding with a concave profile used at corners, particularly as a ceiling cornice. Small coves may be used as inside corner guard.

Crowns/Beds: Most often used where walls and ceiling meet. Crown mouldings are used to cover larger angles. Crowns are always "sprung" while beds are either "sprung" or plain. A "sprung" moulding has the interior corner beveled off to better fit a right angle joint.

STOPS

WM 813 7/16 x 2-1/4	WM 853 3/8 x 2-1/4	WM 903 7/16 x 2-1/4	WM 943 3/8 x 2-1/4
WM 814 7/16 x 1-3/4	WM 854 3/8 x 1-3/4	WM 904 7/16 x 1-3/4	WM 944 3/8 x 1-3/4
WM 815 7/16 x 1-5/8	WM 855 3/8 x 1-5/8	WM 905 7/16 x 1-5/8	WM 945 3/8 x 1-5/8
WM 816 7/16 x 1-3/8 (illus.)	WM 856 3/8 x 1-3/8 (illus.)	WM 906 7/16 x 1-3/8 (illus.)	WM 946 3/8 x 1-3/8 (illus.)
WM 817 7/16 x 1-1/4	WM 857 3/8 x 1-1/4	WM 907 7/16 x 1-1/4	WM 947 3/8 x 1-1/4
WM 818 7/16 x 1-1/8	WM 858 3/8 x 1-1/8	WM 908 7/16 x 1-1/8	WM 948 3/8 x 1-1/8
WM 820 7/16 x 7/8	WM 860 3/8 x 7/8	WM 910 7/16 x 7/8	WM 950 3/8 x 7/8
	WM 861 3/8 x 3/4	WM 911 7/16 x 3/4	WM 951 3/8 x 3/4
WM 823 3/8 x 2-1/4	WM 873 7/16 x 2-1/4	WM 913 3/8 x 2-1/4	
WM 824 3/8 x 1-3/4	WM 874 7/16 x 1-3/4	WM 914 3/8 x 1-3/4	WM 953 7/16 x Width Specified
WM 825 3/8 x 1-5/8	WM 875 7/16 x 1-5/8	WM 915 3/8 x 1-5/8	
WM 826 3/8 x 1-3/8 (illus.)	WM 876 7/16 x 1-3/8 (illus.)	WM 916 3/8 x 1-3/8 (illus.)	
WM 827 3/8 x 1-1/4	WM 877 7/16 x 1-1/4	WM 917 3/8 x 1-1/4	
WM 828 3/8 x 1-1/8	WM 878 7/16 x 1-1/8	WM 918 3/8 x 1-1/8	
WM 830 3/8 x 7/8	WM 880 7/16 x 7/8	WM 920 3/8 x 7/8	
WM 831 3/8 x 3/4	WM 881 7/16 x 3/4	WM 921 3/8 x 3/4	
WM 843 7/16 x 2-1/4	WM 883 3/8 x 2-1/4	WM 933 7/16 x 2-1/4	WM 954 3/8 x Width Specified
WM 844 7/16 x 1-3/4	WM 884 3/8 x 1-3/4	WM 934 7/16 x 1-3/4	
WM 845 7/16 x 1-5/8	WM 885 3/8 x 1-5/8	WM 935 7/16 x 1-5/8	
WM 846 7/16 x 1-3/8 (illus.)	WM 886 3/8 x 1-3/8 (illus.)	WM 936 7/16 x 1-3/8 (illus.)	
WM 847 7/16 x 1-1/4	WM 887 3/8 x 1-1/4	WM 937 7/16 x 1-1/4	
WM 848 7/16 x 1-1/8	WM 888 3/8 x 1-1/8	WM 938 7/16 x 1-1/8	
WM 850 7/16 x 7/8	WM 890 3/8 x 7/8	WM 940 7/16 x 7/8	
WM 851 7/16 x 3/4	WM 891 3/8 x 3/4	WM 941 7/16 x 3/4	

Stop: In door trim, stop is nailed to the faces of the door frame to prevent the door from swinging

through. As window trim, stop holds the bottom sash of a double-hung window in place.

PANEL STRIPS/MULLION CASINGS

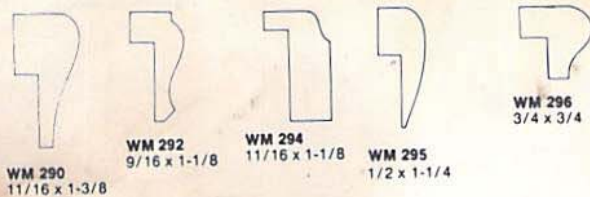
WM 955 3/8 x 2-1/4	WM 975 3/8 x 2-1/4
WM 956 3/8 x 2	WM 977 3/8 x 2
WM 957 3/8 x 1-3/4	WM 978 3/8 x 1-3/4
WM 960 3/8 x 2-1/4	WM 980 3/8 x 2-1/4
WM 962 3/8 x 2	WM 982 3/8 x 2
WM 963 3/8 x 1-3/4	WM 983 3/8 x 1-3/4
WM 965 3/8 x 2-1/4	WM 985 3/8 x 2-1/4
WM 967 3/8 x 2	WM 987 3/8 x 2
WM 968 3/8 x 1-3/4	WM 988 3/8 x 1-3/4
WM 970 3/8 x 2-1/4	
WM 972 3/8 x 2	
WM 973 3/8 x 1-3/4	

Mullion Casing: The strip which is applied over the window jambs in a multiple opening window. Sometimes called a panel strip, used for decorative wall treatments.

WOODMASTER PICTURE FRAME KNIVES

CAT. NO.	SIZE	EA.	CAT. NO.	SIZE	EA.
PF-1	3/4" x 1 1/4" ...	\$36.25	PF-19	1 1/16" x 1 1/16" ...	\$36.25
PF-2	7/8" x 2 1/16" ...	45.50	PF-20	7/8" x 2" ...	40.25
PF-3	3/4" x 1 1/8" ...	33.25	PF-21	1 1/16" x 1 1/16" ...	22.75
PF-4	1 1/16" x 1 1/2" ...	31.50	PF-22	7/8" x 1 1/16" ...	28.00
PF-5	1" x 1 1/16" ...	26.30	PF-23	7/8" x 1 1/8" ...	36.75
PF-6	7/8" x 5/8" ...	19.25	PF-24	7/8" x 1 1/8" ...	26.25
PF-7	1" x 2" ...	38.50	PF-25	7/8" x 1 3/8" ...	28.00
PF-8	1 1/16" x 2 1/16" ...	47.25	PF-26	1 1/4" x 2 1/16" ...	48.75
PF-9	1 1/16" x 1 11/16" ...	35.25	PF-27	1 1/16" x 1 1/16" ...	30.25
PF-10	1 1/16" x 1 3/8" ...	29.75	PF-28	1" x 1 1/8" ...	26.25
PF-11	1 1/16" x 1 1/4" ...	29.75	PF-29	1 13/16" x 1 1/16" ...	26.30
PF-12	7/8" x 1 3/16" ...	21.00	PF-30	1 1/16" x 1 1/8" ...	26.25
PF-13	7/8" x 1 1/2" ...	36.75	PF-31	3/4" x 1 3/8" ...	28.00
PF-14	1 1/8" x 2 1/16" ...	52.50	PF-32	7/8" x 1 3/8" ...	28.00
PF-15	1" x 2 1/16" ...	40.25	PF-33	1 1/16" x 1 3/4" ...	36.25
PF-16	3/4" x 1 1/16" ...	28.00	PF-34	1 1/16" x 1 13/16" ...	38.00
PF-17	1 1/16" x 1 1/16" ...	26.25	PF-35	7/8" x 1 1/2" ...	31.50
PF-18	5/8" x 1 3/16" ...	21.00	CK 387	3/8" Rabbit Knife ...	8.00

WAINSCOT/PLYCAP MOLDINGS



Wainscot Cap: Sometimes called a dado cap, this trims out the upper edge or top of a wainscot. Also called a wainscot moulding.

Plycap: Covers and beautifies plywood's rough sandwich edge in installations where it is exposed to view.

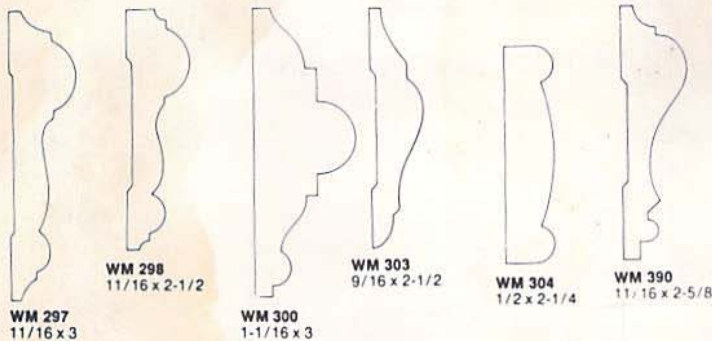
The following patterns are available in multiple patterns per knife:

WM 93	4-up	\$75.00
WM 103	2-up	33.00
	4-up	66.00
WM 105	4-up	59.00
WM 120	4-up	59.00
WM 327	2-up	68.00

Also, Woodmaster carries the following items not illustrated:

CK 370	Back Relief Knives	per inch	\$16.80
CK 384	1" Edging Knife		16.80
CK 385	1/4" Parting Bits		16.80
CK 387	1" Rabbit Knife		16.80
CK 388	3/4" "V" Tongue & Groove Set		29.60
CK 389	2" Tongue & Groove Set		59.20
CK 401	1/2" Dowel 2-up		33.00
CK 402	5/8" Dowel 2-up		39.00
CK 403	3/4" Dowel 2-up		44.40
CK 405	1 1/8" Dowel 2-up		52.00

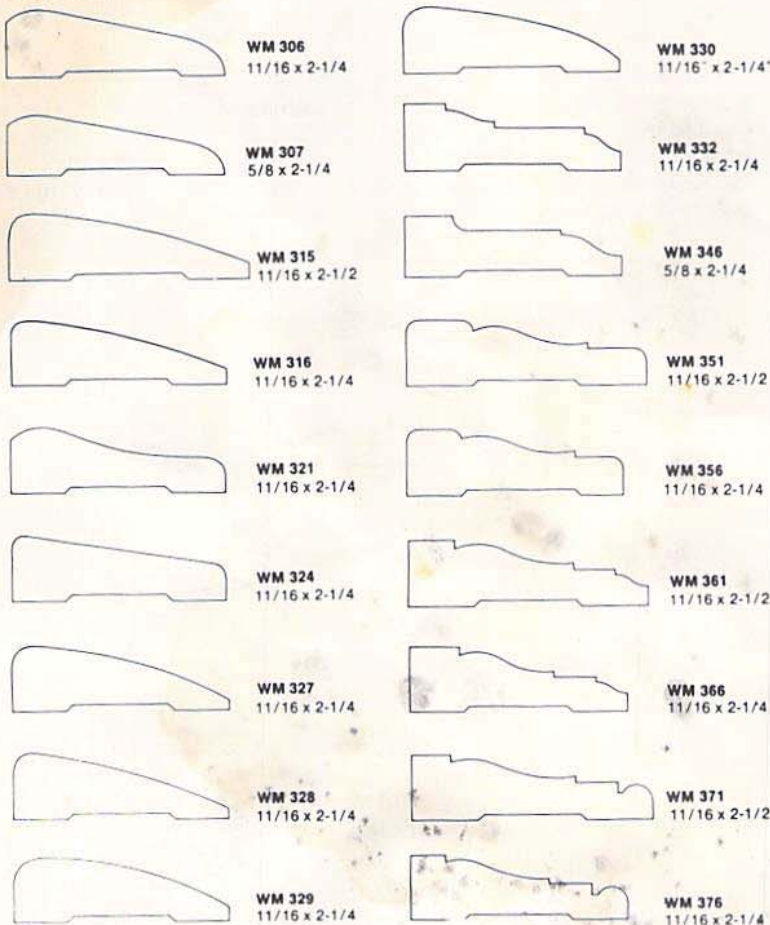
CHAIR RAILS



Chair Rail: An interior moulding usually applied about one third the distance from the floor, paralleling

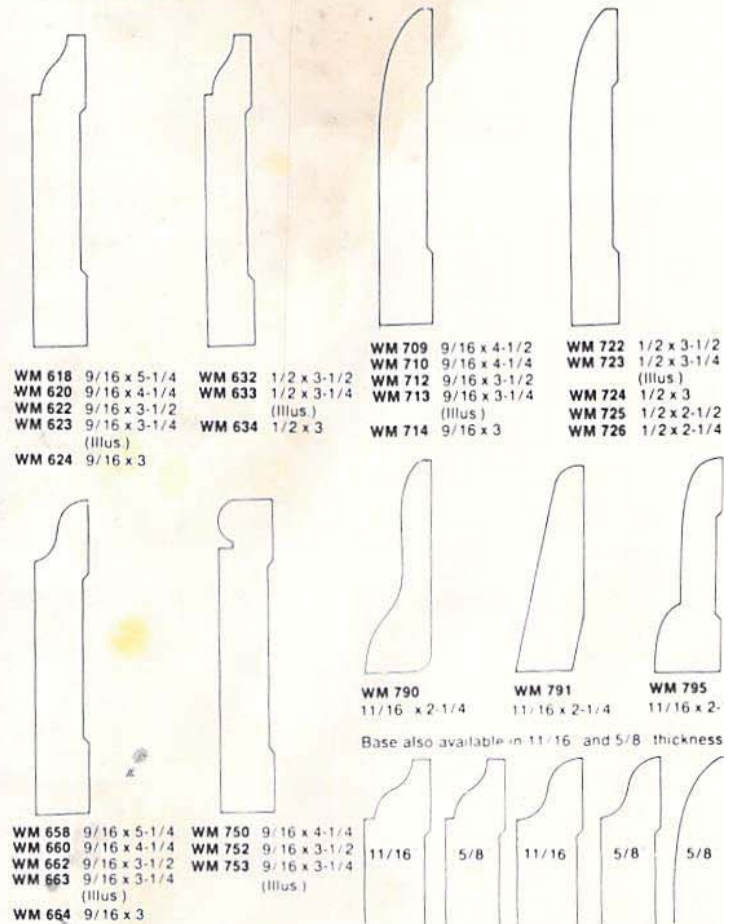
the base moulding and encircling the perimeter of a room.

CASING



Casing: Used to trim inside and outside door and window openings.

BASE MOLDINGS



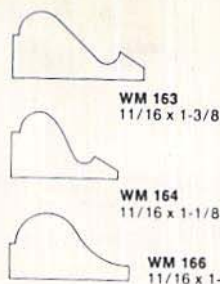
Base: Applied where floor and walls meet, forming a visual foundation. Protects walls from kicks and bumps, furniture and cleaning tools. Base may be

referred to as one, two or three member. The base shoe and base cap are used to conceal uneven floor and wall junctions. (Decorative use key: 1,2,3,4.)

BEDS



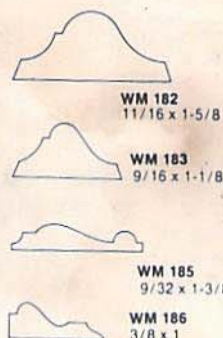
BASE CAPS



WM 167
11/16 x 1-1/8

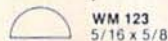
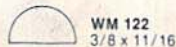
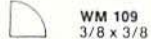
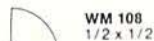
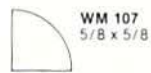
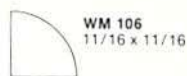
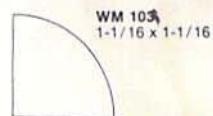
WM 172
5/8 x 3/4

PANEL MOLDINGS

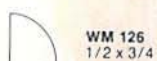


Base Cap: A decorative member installed flush against the wall and the top of an S4S baseboard. Also a versatile panel moulding.

QUARTER ROUNDS HALF ROUNDS



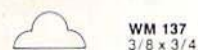
BASE SHOE



ASTRAGAL



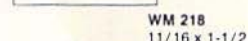
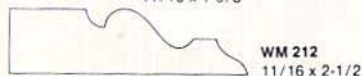
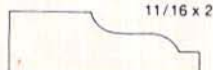
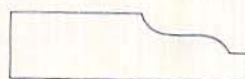
SHELF EDGE/SCREEN MOLD



GLASS BEAD



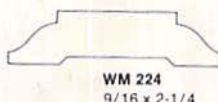
SHINGLE/PANEL MOLDINGS



Panel Mould: A panel moulding is a decorative pattern, originally used to trim out raised panel wall construction. It is most useful fabricated as a frame, surrounding attractive wall covering for a

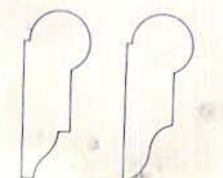
paneled effect on walls. **Shingle Moulding** may be used in similar ways but originally was used on the rake of a building or around exterior window frames.

BATTENS



Batten: A symmetrical pattern used to conceal the line where two parallel boards or panels meet.

PICTURE MOLDING



Picture Mould: Used to support hooks for picture hanging. Applied around a room's circumference near the ceiling line.

Quarter Round: Versatile quarter round may be used as a base shoe, inside corner moulding or to cover any 90° recessed junctures. Often used to cover the line where roof and siding meet in exteriors.

Half Round: A moulding whose profile is half a circle. May be used as a screen moulding or bead, shelf edge or panel mould.

Base Shoe: Applied where base moulding meets the floor. Protects base moulding from damage by cleaning tools. Conceals any uneven lines or cracks where base meets the floor.

Astragal: This moulding includes two different types, a T-Astragal and a Flat Astragal. The "T" is attached to one of a pair of doors to keep one door from swinging through the opening. The flat astragal, which in classic Greek architecture was a bead around a column below the cap, is used for decorative purposes. (Decorative **Screen Mould:** A small moulding which covers the seam where screening is fastened to the screen frame. Also used as a shelf edge. (Decorative use key:

Glass Bead: Also called glass, stop, cove and bead, putty bead, glazing bead and staff bead. Used to hold glass in place.

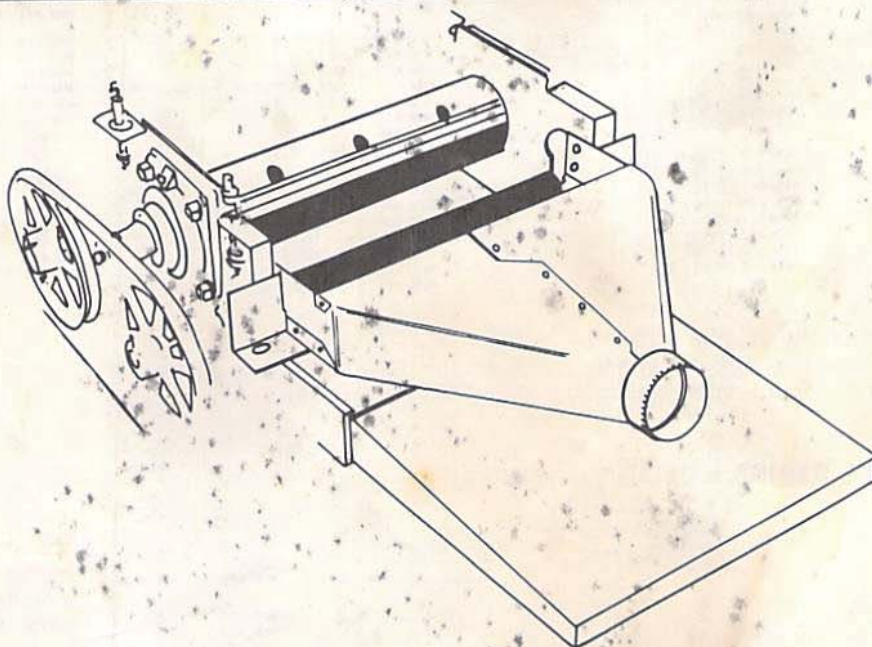
INSTALLATION OF CHIP COLLECTOR HOOD

Turn off machine and unplug motor. Remove the hood and locate the outfeed side of machine. Remove the 1/4" x 20 x 1" shoulder bolts that hold on the WR-130 tiebar in place.

Set the Collector Hood into place on the tiebar (the bottom will rest on the tiebar and the mounting holes will line up perfectly).

Replace the 1/2" x 20 x 1" bolts. Before tightening up the bolts be sure to adjust downward pressure on the tiebar. This is done by pushing straight down on the tiebar while tightening the bolts (an extra pair of hands is welcome for this).

Refer to page 11, JACKPOST AND TIEBAR ADJUSTMENT.



CASTER KIT MOUNTING INSTRUCTIONS

1. Carefully lay planer on infeed side (remove extension table).
2. While holding bracket vertical along the right side of planer, place caster on outfeed side (up) with holes lined up on caster, bracket and planer base. Insert bolts and attach lock washer and nut.

