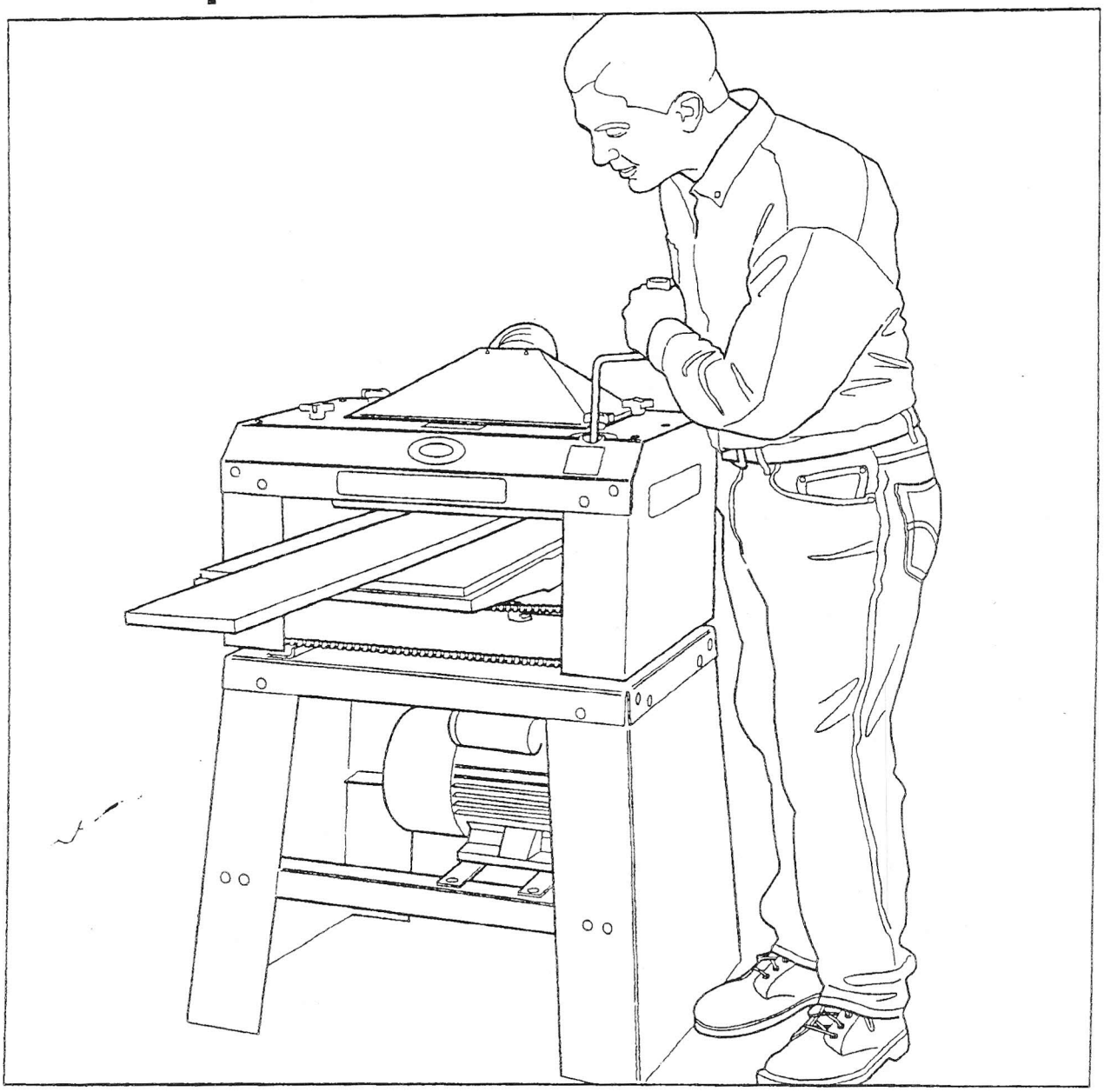
HAWK
Woodworking Tools

Hawk 3-in-1 Woodplaner

Operators Manual - Model 615i



READ THOROUGHLY BEFORE OPERATING MACHINE

Bushton Manufacturing

Maker Of

Hawk Woodworking Tools

For Factory Direct Pricing Call:
HAWK Woodworking Tools
Customer Service
1-620-562-3557

You Can Reach Us

By Phone 1-620-562-3557
By Fax 1-620-562-3557
By Web jnye@hawkwoodworkingtools.com

The Hawk 3-in-1 Woodplaner 615i Specifications

Footprint Dimensions:

Maximum Width.....29 3/4"
Maximum Depth.....22 1/4"
Height .....44"
Weight.....370 lbs.

Standard AC Motor:

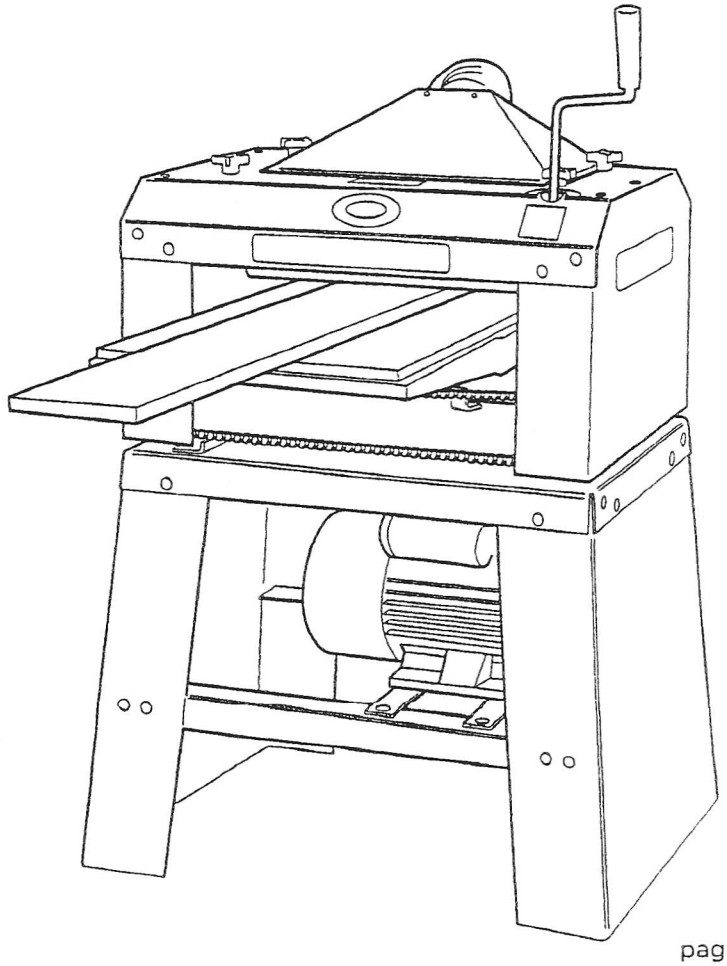
Horsepower.....5 HP
Amperage.....23 A
Voltage.....220V AC
Phase.....Single
Speed.....3450 RPM

DC Feed Motor:

Horsepower.....1/4 HP
Amperage.....1.6 A
Voltage.....180V DC

Operation Specs:

Planing/Aux Shaft Speed.....4900 RPM
Variable Feed.....0 - 25 FPM
Planer Head CPI (3 knives).....49 CPI - inf.
Molding Head CPI (2 knives).....32.6 CPI - inf.
Molding Head CPI (1 knife).....16.3 CPI - inf.
Maximum Width of Cut.....15 1/8"
Shortest Planable Stock.....8"
Maximum Cut Per Pass.....5/16"
Maximum Thickness of Stock.....6"
Minimum Thickness of Stock.....3/16"
Total Amperage Required.....25A
AC Female Plug Requirement, NEMA Std.....30A



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PLEASE NOTE: The specifications and drawings illustrated in this manual represent the Hawk 3-in-1 Woodplaner as supplied when the manual was prepared. However, owing to Hawk Woodworking Tools policy of continuous improvement, changes may be made at any time with no obligation on the part of Hawk Woodworking Tools. Whenever possible, though, we send manual updates to all owners of a particular tool or machine. Should you receive one, we urge you to insert the new information with the old and keep it for reference.

WARNING

Safety Instructions for the Hawk 3-in-1 Woodplaner

The Hawk 3-in-1 Woodplaner is designed for both the professional and hobby shop enthusiast. It is designed for ease of operation, maintenance, and adjustment by the operator with his safety in mind. As with any piece of equipment, the operator should become familiar with it. To do this, the operator's manual should be thoroughly read and understood.

CAUTION!

Safety doesn't just happen, it is planned!
Accidents don't just happen, they are caused!

Read the manual before assembly and operation. Become familiar with the machine and its operation before beginning any work. Serious personal injury may result if safety or operational information is not understood or followed.

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement, and other masonry products.**
- **Arsenic and chromium from chemically treated lumber.**

Your risk from these exposures varies, depending on how often you so this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to follow guidelines could result in serious personal injury, damage to equipment or poor work results.

Safety Procedures:

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DO NOT USE IN DANGEROUS ENVIRONMENT.** Do not use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
5. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.
6. **MAKE WORKSHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
7. **DO NOT FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** Do not force tool or attachment to do a job for which is was not designed.
9. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
10. **ALWAYS WEAR SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

Continued on Page 5

WARNING

Safety Instructions for the Hawk 3-in-1 Woodplaner

Safety Procedures Cont:

1. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

12. **DO NOT OVER-REACH.** Keep proper footing and balance at all times.

13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

14. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** On machines with magnetic contact starting switches, there is a risk of starting if the machine is bumped or jarred. Always disconnect from power source before adjusting or servicing. Make sure switch is in OFF position before re-connecting.

15. **MANY WOODWORKING TOOLS CAN "KICK BACK THE WORKPIECE.** Improper tension on the feed rollers may result in kickback. Kickback is the high speed discharge of stock from the planer out of the planer infeed. There is serious danger to the operator and others in the area being struck by flying stock. Please use the following precautions to minimize kickback:

1. Make sure all tension is adjusted correctly on the feed rollers before each use.

2. Make sure the urethane coating on your feed rollers is in good working order with no cuts or excessive wear.

3. Check all nuts, bolts, and fasteners on your machine regularly. Make sure they are properly tightened.

4. Never attempt to plane material shorter or thinner than the specifications for your machine.

16. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

17. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Do not leave tool until it comes to a complete stop.

18. **NEVER OPERATE A MACHINE WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Full mental alertness is required at all times when running a machine.

19. **NEVER ALLOW UNSUPERVISED OR INEXPERIENCED PERSONNEL TO OPERATE THE MACHINE.** Make sure any instructions you give in regards to machine operation are approved, correct, safe, and clearly understood.

20. **IF AT ANY TIME YOU ARE EXPERIENCING DIFFICULTIES** performing the intended operation, stop using the machine! Then contact our service department or ask a qualified expert how the operation should be performed.

Site Considerations:

FLOOR LOAD

Your Hawk 3-in-1 Woodplaner represents a medium load in a small footprint. Most commercial or home shop floors should be sufficient to carry the weight of the Hawk 3-in-1 Woodplaner. If you question the strength of your floor, you can opt to reinforce it.

WORKING CLEARANCES

Working clearances can be thought of as the distances between machines and obstacles that allow safe operation of every machine without limitation. Consider existing and anticipated machine needs, size of material to be processed through each machine, and space for auxiliary stands and/or work tables. Also, consider the relative position of each machine to one another for efficient material handling. Be sure to allow yourself sufficient room to safely run your machines in any foreseeable operation and keep dust collection hoses off the floor and out of the way.

LIGHTING AND OUTLETS

Lighting should be bright enough to eliminate shadows and prevent eye strain. Electrical circuits should be dedicated or large enough to handle combined motor amp loads. Outlets should be located near each machine so power or extension cords are not obstructing high traffic areas. Be sure to observe local electrical codes for proper installation of new lighting, outlets, or circuits.

WARNING

Safety Instructions for the Hawk 3-in-1 Woodplaner

Grounding:

In the event of an electrical short, grounding provides electric current a path of least resistance to reduce the risk of electrical shock. This tool is equipped with an electric cord having an equipment-grounding conductor which must be properly connected to 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.

Improper connections of the electrical-grounding conductor can result in risk of electric shock. The conductor with green or green and yellow striped insulation is the electrical-grounding conductor. If repair or replacement of the electrical cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.

WARNING

This equipment must be grounded. Verify that any existing electrical outlet and circuit you intend to plug into is actually grounded. Under no circumstances should the grounding pin from any three-pronged plug be removed. Serious injury may occur.

Extension Cords:

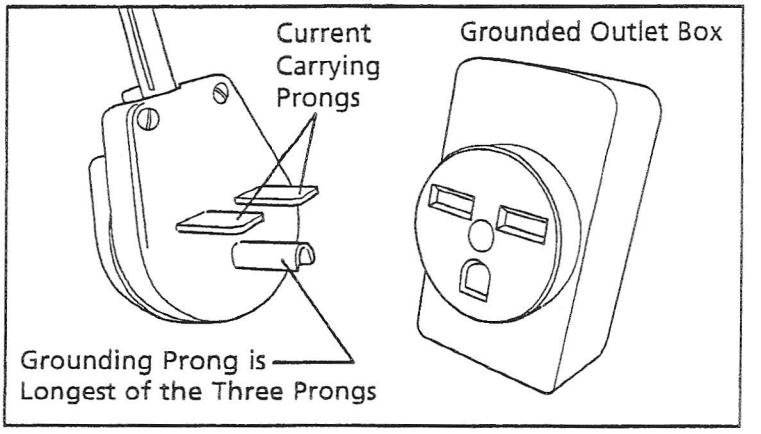
We do not recommend the use of extension cords with 220V equipment. It is much better to arrange the placement of your equipment and the installed wiring to eliminate the need for extension cords.

CAUTION

We have covered some basic electrical requirements for the safe operation of your machine. These requirements are not necessarily comprehensive. You must be sure that your particular electrical configuration complies with local and state codes. Ensure compliance by checking with your local municipality or a licensed electrician.

220V Operation:

The motor supplied with the Hawk 3-in-1 Woodplaner is prewired to operate at 220V.
When operating at 220V, we recommend using a NEMA-style 6-30 plug and outlet as shown in the illustration below. You may also "hard-wire" the machine directly to your panel, provided you place a disconnect switch near the machine. Check the electrical codes in your area for specifics on wiring requirements.



Under normal use the motor draws approximately 24 amps at 220V. We recommend a 30 amp circuit breaker for 220V operation. This should be satisfactory for normal use while providing enough protection against circuit damage caused by power surges. Always check to see if your current wires are capable of handling a 30 amp load. If you are unsure, consult the advice of a qualified electrician. Do not attempt to modify an existing circuit by replacing the circuit breaker with one rated for a higher amperage.

If you have any questions, please call and speak with one of our tool specialists:

1 800 487 2623

Inpacking Your Machine:

l 3-in-1 Woodplaners are test run, checked, and ljusted at the factory before shipment. Shipping may use some misalignment. Please ensure that you check machine thoroughly before operating.

lere is very little assembly required on your new Hawk in-1 Woodplaner. The extension tables must be installed. you purchased one less the motor, that will need to be stalled also.

OTE: The 3-in-1 Woodplaner should be set level, eferably set it on a level floor. If the floor is not level, ave the 3-in-1 Woodplaner bolted to the shipping pallet nd place shims under the pallet to level the planer.

emove the 3-in-1 Woodplaner from shipping carton and neck to see that all parts were received without damage. you discover the machine is damaged after you have gned for delivery, do not operate the machine and nmediately call Customer Service for advice.

Vhen you are completely satisfied with the condition of our shipment, you should inventory its parts.

WARNING

If moving this machine up or down stairs, the machine must be dismantled and moved in smaller pieces. Make sure floor and stair structures are capable of supporting the combined weight of the machine parts and people moving them.

CAUTION

The Hawk 3-in-1 Woodplaner represents a heavy load. Seek assistance before moving.

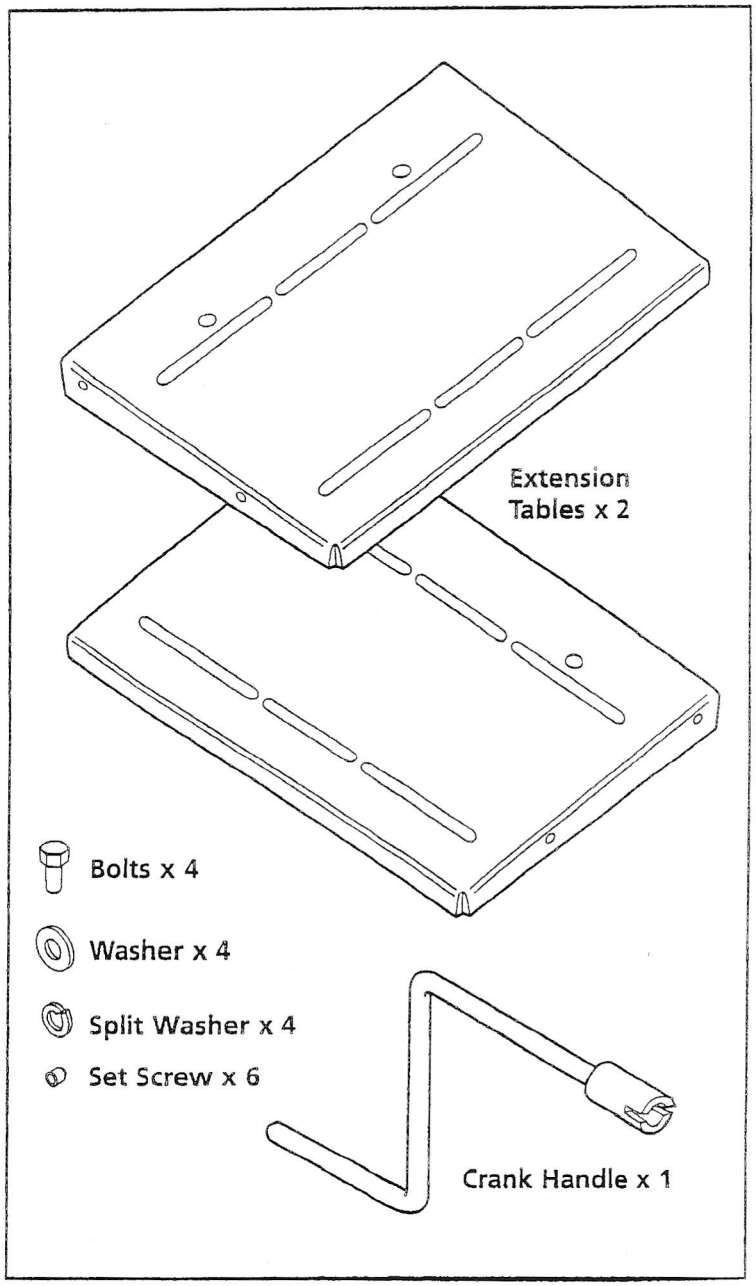
CAUTION

Some metal parts may have sharp edges on them after they are formed. Please examine the edges of all metal parts before handling them. Failure to do so could result in injury.

Accessory Inventory:

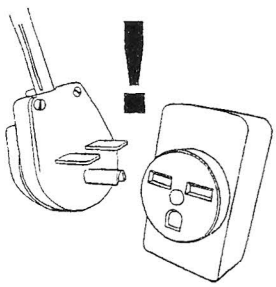
After all the parts have been removed from the accessory carton, you should have:

(2) Extension Tables
(1) Crank Handle
(4) Bolts
(4) Washers
(4) Split Washers
(6) Set Screws



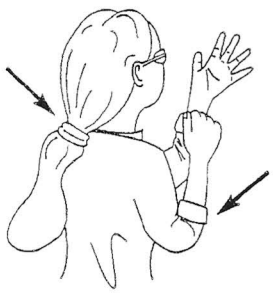
Please see pages 8-9 for instructions on how to install and adjust the extension tables.

Beginning Assembly:



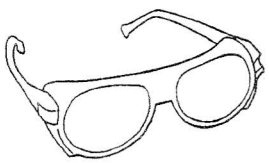
WARNING

Disconnect power to the machine when performing any maintenance, assembly or adjustments. Failure to do this may result in serious personal injury.



WARNING

Keep loose clothing rolled up and out of the way of machinery and keep hair pulled back.



WARNING

Wear safety glasses during the entire assembly process. Failure to comply may result in serious personal injury.

CAUTION

Some metal parts may have sharp edges on them after they are formed. Please examine the edges of all metal parts before handling them. Failure to do so could result in injury.

Most of your 3-in-1 Woodplaner has been assembled in the factory, but some parts must be assembled or installed after delivery. We have organized the assembly process into steps. Please follow along in the order presented here.

TOOLS REQUIRED:

Is required are: 9/16" wrench, 1/8" allen wrench and a straight edge.

Extension Table Installation and Adjustment:

1. To install the extension tables, first put (1) lock washer, then (1) flat washer on each of the (4) bolts. Start the bolts into the threaded holes in the infeed and outfeed ends of the planer bed, leaving at least 1/4" between the planer bed and flat washer. **(see fig. A-1 below).**

2. Slide the extension tables down over the bolts, between the flat washers and the planer bed.

3. Snug the bolts (just enough to hold the extension tables in place). Adjust the extension table even with the top of the planer bed by tapping it up or down. **(see fig. A-2 on page 9).** If it will not move, loosen the bolts until it will.

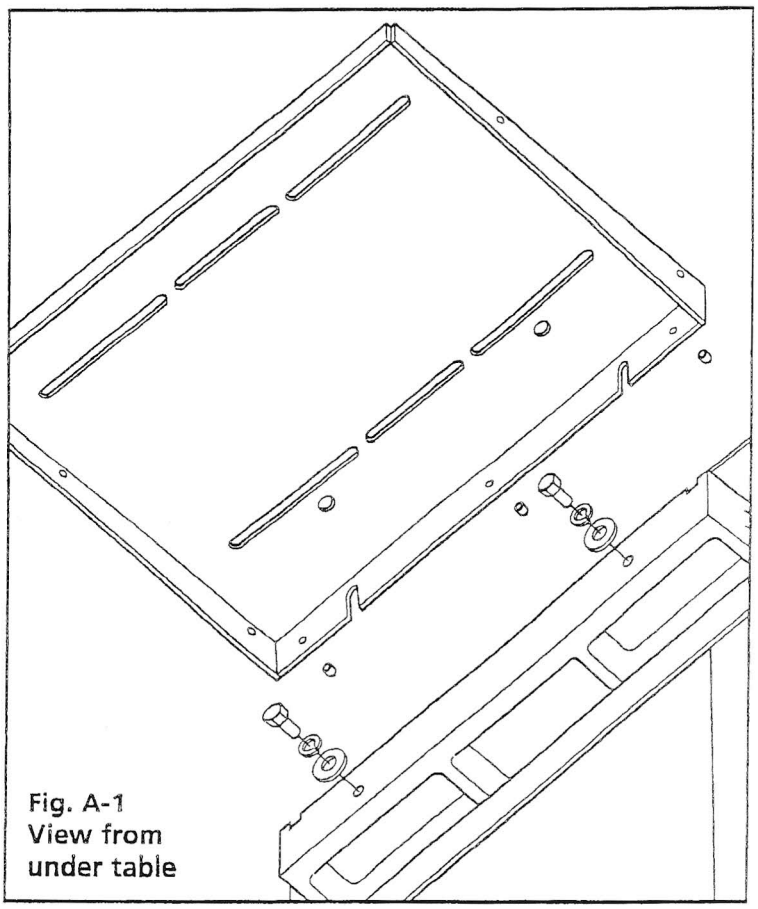


Fig. A-1
View from under table

WARNING

Where the extension tables meet the planer bed, the infeed table must not be lower than the bed, and the outfeed table must not be higher than the bed, or the boards will catch and not feed through the planer.

4. Install (1) allen set screw in each of the small holes near the extension table mounting bolts **(see fig. A-1 above).**

Continued on page 9

:xtension Table Installation ınd Adjustment Cont:

The outer ends of the extension tables should be ele-ˈted 1/8" to 3/16" to reduce snipe. Lay a straight edge oss the planer bed and extension table, then screw the ːt screws in to elevate the end of the extension tables. leasure the gap between the straight edge and the laner bed where the extension tables meet the planer ed **(see fig. A-2 below).**

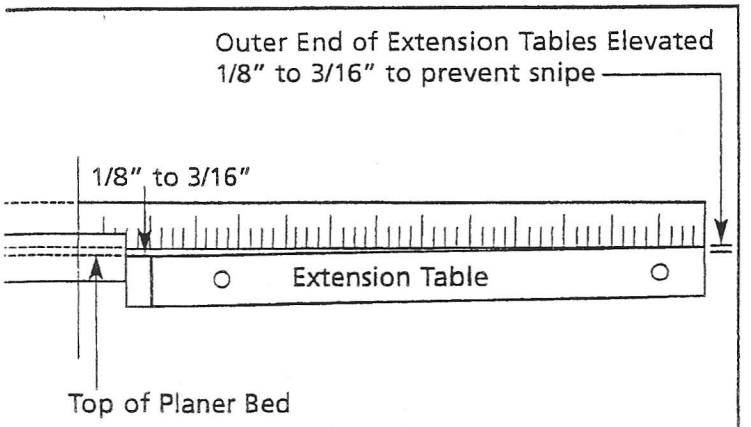


Fig. A-2

. Tighten the extension table mounting bolts. This may hange the adjustment of the elevation slightly. This step ınd the previous step may need to be done imultaneously to achieve the desired elevation.

. Check to see that all bolts and set screws are tight and ıll tools are removed from the machine before operating.

WARNING

Don't sit on the extension tables! It will bend them down and change the elevation of the table ends which will cause snipe.

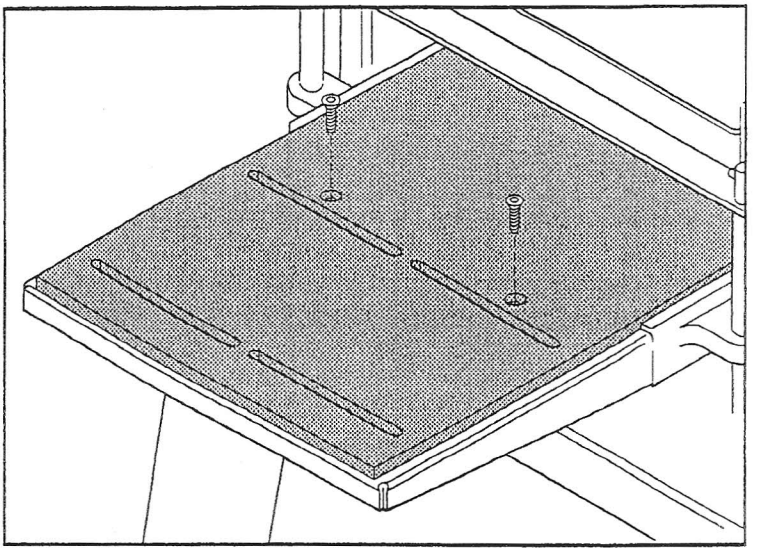
If you have any questions, please call and speak with one of our tool specialists on:

1 800 487 2623

Installing The Bed Board and Guides:

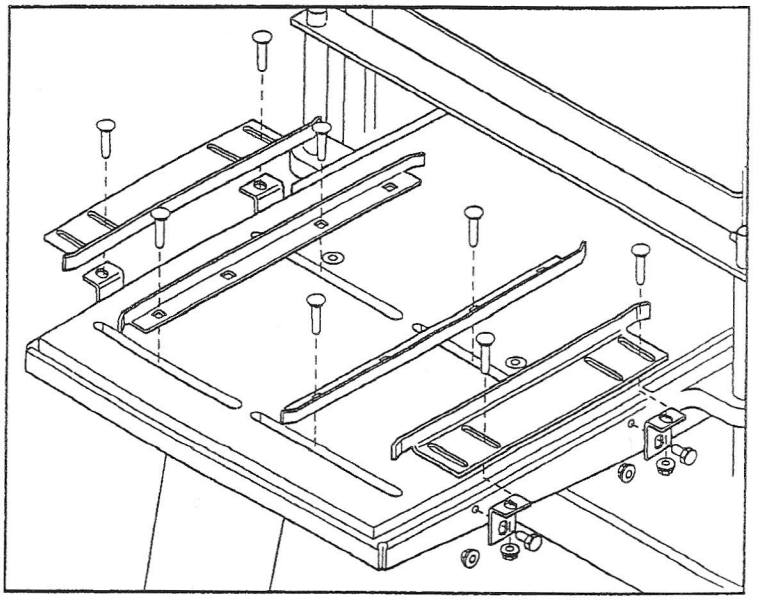
The bed board and guides must be used when using the Molder and Gang Saw function. You do not need the bed board and guides when using the Planer function.

1. Installing Bed Board:



Slide bed board through planer and match up the four holes in board with holes in extension tables. Drive in screws to keep guide board in place. See illustration above.

2. Installing Guides:



Guides are needed when using the Molder and Gang Saw function to properly guide your stock through the cutting head or blades. Install guides using nuts and bolts supplied. Install hand tight until you know the required spacing for the stock you are using. See illustration above.

See pages 16-18 for proper alignment and setting of guides when using the Molder or Gang Saw functions.

Hawk 3-in-1 Woodplaner Basic Operating Guide:

CAUTION

DO NOT STAND IN FRONT OR BEHIND MACHINE WHILE IN OPERATION

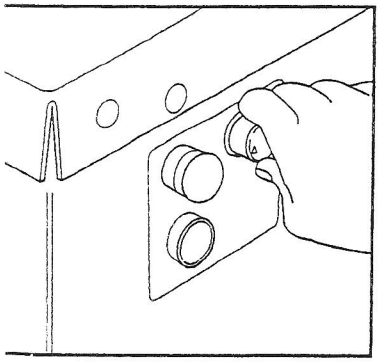
Operating Controls:

START/STOP:

The Hawk 3-in-1 Woodplaner is equipped with a magnetic starter for safety. This safety device will not allow the planer to continue running after a power outage or a blown breaker without physically depressing the start switch.

The magnetic start is also equipped with a thermal overload protection device with automatic reset. If the motor should be overloaded and the overload protector stops the motor, the motor will need to be left to cool before trying to start it again. Cooling of the motor should take no more than 15 minutes, depending on the situation.

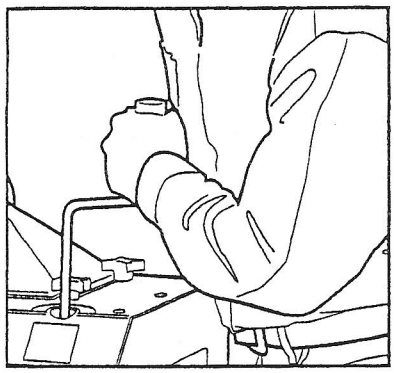
Never hold the start button for more than 2 seconds if the motor does not stay running. Allow to the motor to cool and try again.



VARIABLE SPEED CONTROL:

The Hawk 3-in-1 Woodplaner is equipped with a variable speed control. The speed of the feed may be adjusted from a full stop to 25 feet per minute simply by turning the speed adjustment knob. Turning he knob fully counter clockwise will stop the feed and ully clockwise will maximize the planer feed. Remember he slower the speed the more cuts per inch.

he feed motor will operate when the planer is started nd likewise the feed motor will stop when the planer is topped.



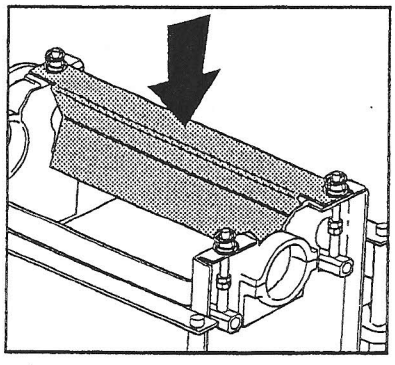
BED HEIGHT ADJUSTMENT:

The depth of cut is controlled by either raising or lowering the table. One full turn of the height adjustment crank will move the table exactly 1/16" according to the direction it is rotated. Turning the crank clockwise raises the table increasing the depth of cut. Turning the crank counter-clockwise will lower the table decreasing the depth of cut.

WARNING

MAXIMUM DEPTH OF CUT PER PASS IS 5/16"

Table movements are fully proportional with the height adjustment crank, in which one full revolution of the handle equals 1/16" of table movement. Thus, 1/2 turn of the crank equals 1/32" table movement; and 1/4 turn of the crank equal 1/64" of table movement; and so forth.



CHIP DEFLECTOR:

The Hawk 3-in-1 Woodplaner is equipped with a chip deflector which redirects the path of the wood chips to the exhaust shoot. The chip deflector also acts as an anti-kick back device in most applications. The deflector requires a total of one spring on each side that will be compressed between the hood and the deflector. Note - there is no retainer for these springs, they are simply held in place by compressing them between the hood and the deflector.

WARNING

When changing the cutter head, be sure the cutting head's cutters will clear the deflector. If the cutting knives will hit the deflector, the deflector must be removed. Note – Chip removal will not be as efficient with the deflector removed.

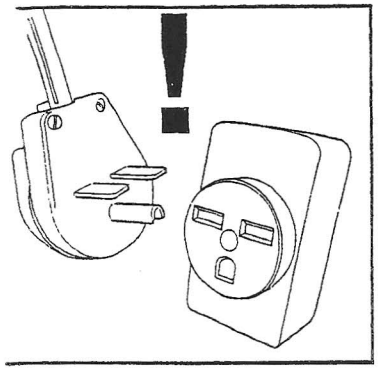
QUICK CHANGE BEARING BLOCKS:

The Hawk 3-in-1 Woodplaner is equipped with quick change bearing blocks that allow for cutting heads to be changed without any special adjustments. Instructions for using these bearing blocks are covered in the next segment. **Read and understand the next segment before attempting a cutter head install or change.**

Removing The Cutting Shaft:

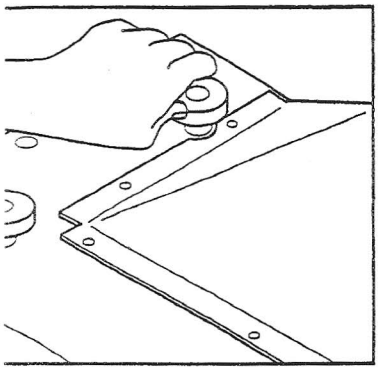
TOOLS REQUIRED:

Tools required are: 6mm hex wrench



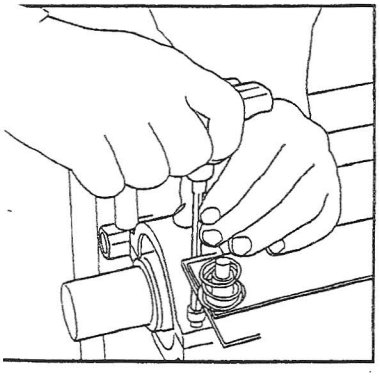
1. Disconnect power to the Hawk 3-in-1 Woodplaner.

Make sure the planer is unplugged from the power outlet.



2. Remove the hood.

Remove the crank handle and set aside. Unscrew the four knobs on top of the planer hood and then lift the hood off. Set the hood off to the side.

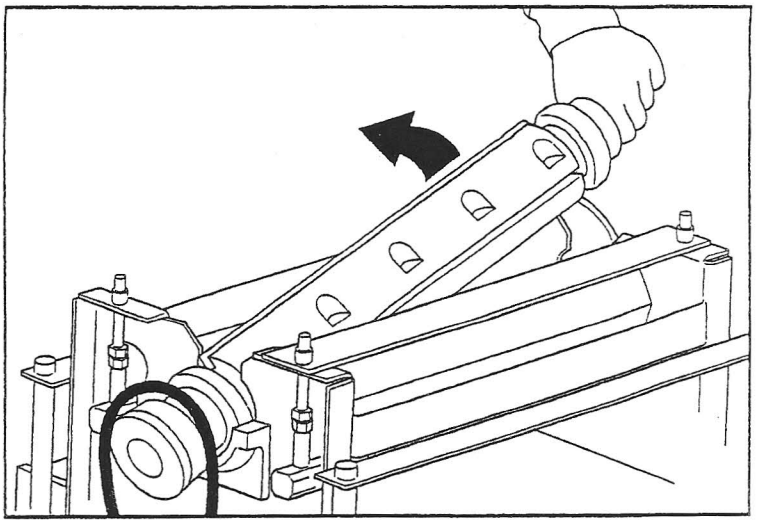


3. Unbolt the upper bearing retainer.

Remove two bolts from each side of the bearing retainer. Lift the upper retainer off and set aside. One side is marked with a 1 and the other is marked 2, these are matched pairs and must stay matched for the bearings to seat properly.

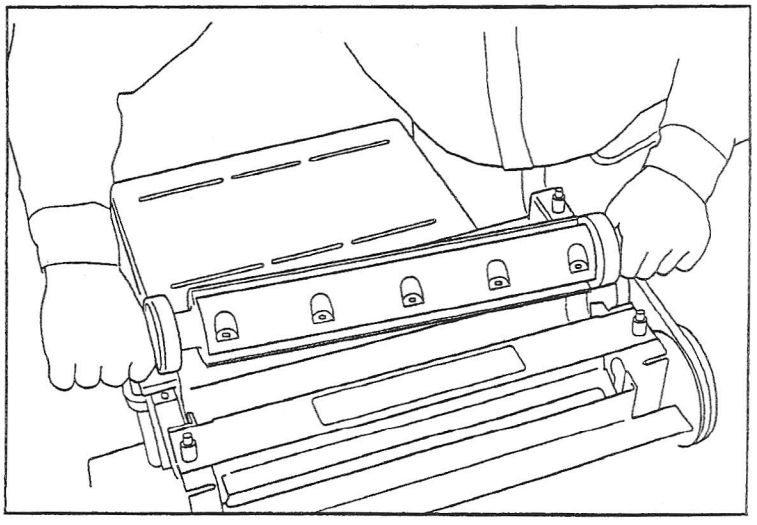
If you have any questions, please call and speak with one of our tool specialists:

1 800 487 2623



4. Remove the belt.

The belt can easily be removed by tilting the cutting shaft towards the side of the belt. This will loosen the tension of the belt allowing the belt to be removed from the upper pulley.



5. Remove cutting head

The cutting head may be lifted out of the bearing cradles. Lift the shaft from the planer by holding onto the end off the shaft.

CAUTION

The blades of the cutting heads are extremely sharp! Avoid lifting in this area.

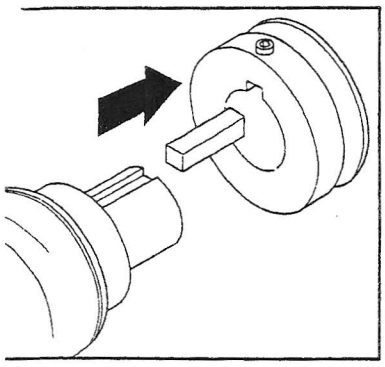
6. Set cutting head in a safe work area on a stand or work bench.

See Page 12-13 for details on removing/installing the Bearings and installation of Cutter Shaft.

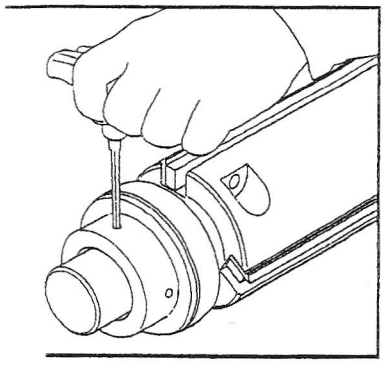
Bearing Removal: (If required)

TOOLS REQUIRED:

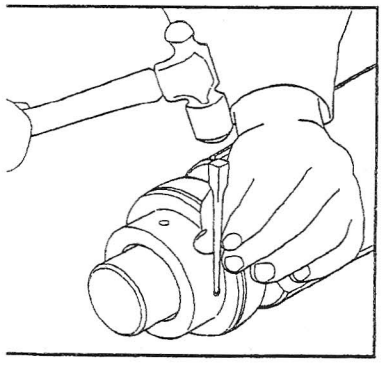
Tools required are: Hammer, Punch, Hex Wrench



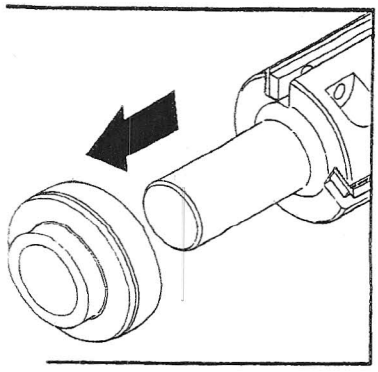
1. Remove the pulley.
With the cutting shaft removed from the planer and set in a work area, use a hex wrench to loosen the set screw. The set screw does not need to be removed from the pulley. Slide the pulley and the key off the shaft. Do not use excessive force such as a hammer to remove the pulley.



2. Loosen the set screws in the locking collars.
Use a hex wrench to loosen the set screws. Set screws do not need to be removed from the collars.



3. Unlock and remove the collars.
Using a punch and a hammer the collars must be forced to turn according to the illustration on the side of the woodplaner. Remove the collars from the shaft

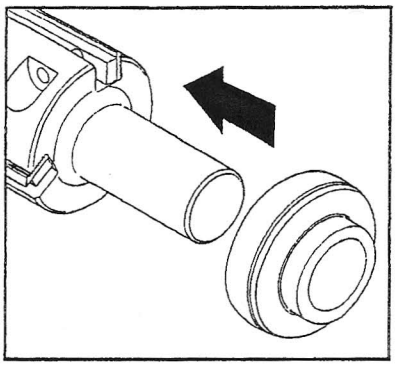


4. Remove Bearings.
The cutting shafts are machined to a precise tolerance for proper fit with it's mating parts. This makes the fit of the bearings to the shaft very tight. Be sure to check the sides of the shaft for any nicks or corrosion that should be removed before sliding the earings off. Slide the bearing off of each end of the utting shaft. Do not use excessive force such as a ammer to remove the bearings.

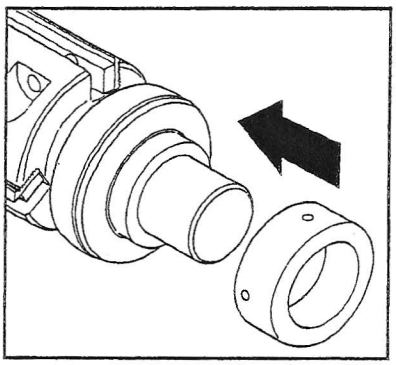
Bearing Installation:

TOOLS REQUIRED:

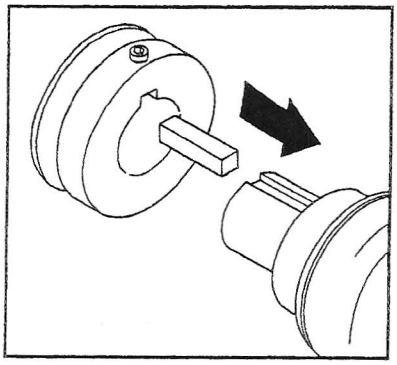
Tools required are: Hammer, Punch, Hex Wrench



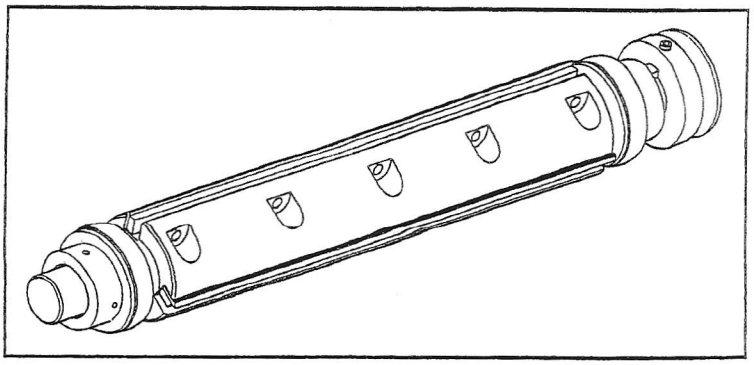
1. Install bearings.
With the cutting shaft out of the machine and in a work area, check the shaft ends for any nicks or corrosion that should be removed before installation. Slide one bearing onto each end of the cutting shaft with the eccentric lock facing towards the outside of the shaft. Do not use excessive force to start the bearings onto the shaft. Do not worry about bearing positioning yet.



2. Add locking collars.
Slide one lock collar onto each side cutting shaft. Do not lock the collars yet.



3. Install pulley.
Slide the pulley onto the cutting shaft on the end of the shaft that is keyed. Align the pulley face with the end face of the shaft. Add the key, and then tighten the set screw. Make sure the set screw is making contact onto the key.



4. Cutting head is ready for installation.
Please continue on with the next segment "Cutter Head Installation."

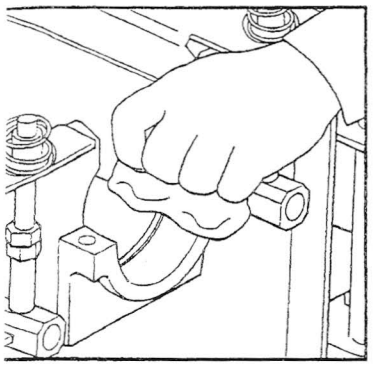
:utter Shaft Installation:

)OLS REQUIRED:

)ols required are: 6mm hex wrench

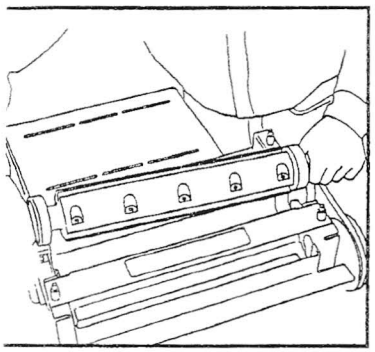
Position bearings

r bearings are not locked). Space the bearings)proximately to the same spacing between the bearing locks.



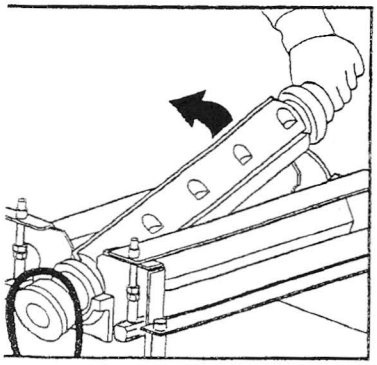
2. Clean the bearing cradles.

Be sure the bearing cradles are free of debris. A light-weight grease is recommended to be wiped onto the surface of the cradle and onto the upper bearing retainer.



3. Insert the bearings into bearing cradles.

Lift the cutting head into the wood planer and lay one bearing into each of the bearing cradles. The shaft should be oriented so the pulley is on the left hand side of the planer. The bearing cradles have not moved and are ıligned at the factory, so no special adjustments should ıeed to be made.

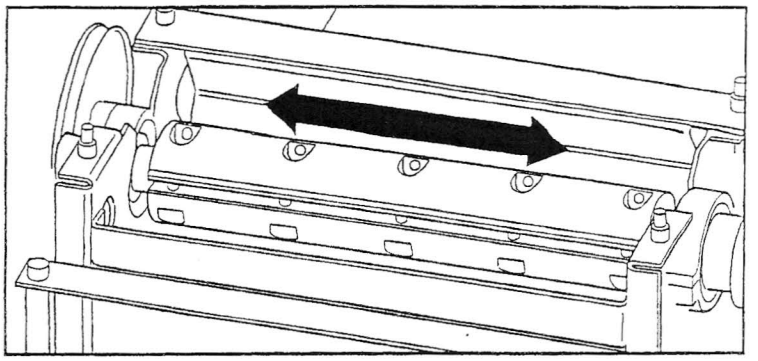


4. Install the belt.

Tilt the shaft towards the pulley. Install the v-belt onto the cutting shaft's pulley. Make sure the v-belt is also routed around the motor pulley. Lower the shaft back to the bearing cradles.

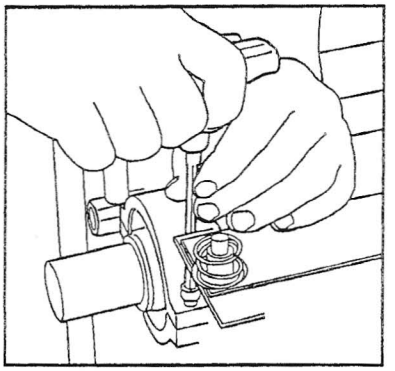
If you have any questions, please call and speak with one of our tool specialists:

1 800 487 2623



5. Position the shaft horizontally

(if bearings are not locked). Align the cutting head pulley with the motor head pulley by pushing the shaft in or out accordingly.

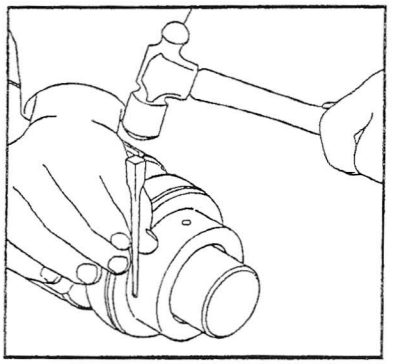


6. Install the upper bearing retainers.

Match the correct upper retainer with the lower. Insert the upper retainer over the bearing with the grease fitting facing the outside of the machine. Add the two bolts and lightly tighten. Repeat for the remaining side.

7. Tighten the four bolts of the retaining blocks.

The four bolts should be tightened firmly.

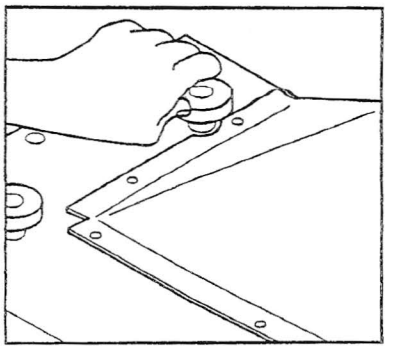


8. Lock the bearing collars

(if bearings are not locked). Using a hammer and a punch force the locking collars to twist on the shaft according to the diagram. Tighten the set screws in the lock collars.

9. Reinstall guards.

Be sure to reinstall any guards or protective items that were removed when un-installing the cutting head.

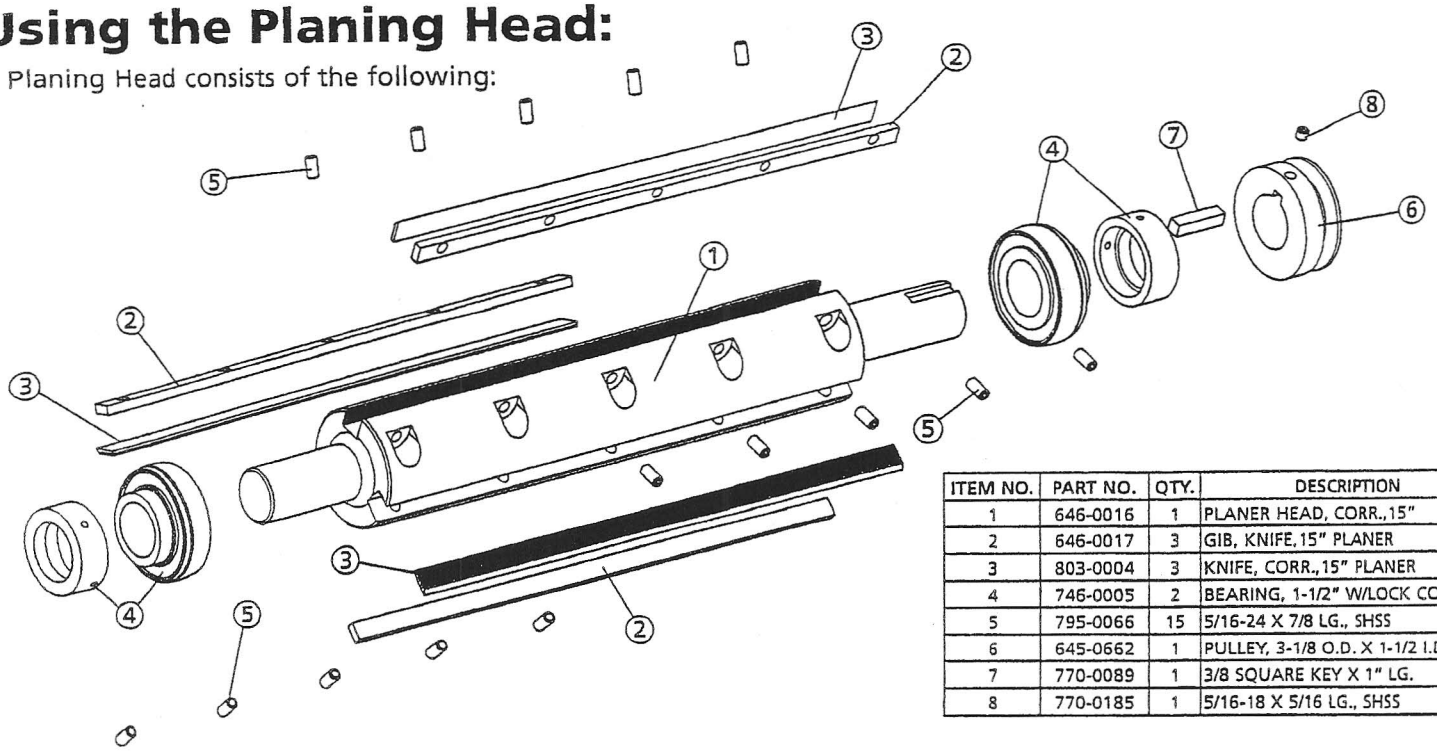


10. Install the hood cover.

Lift the hood cover back onto the planer. Tighten the four knobs.

Using the Planing Head:

A Planing Head consists of the following:

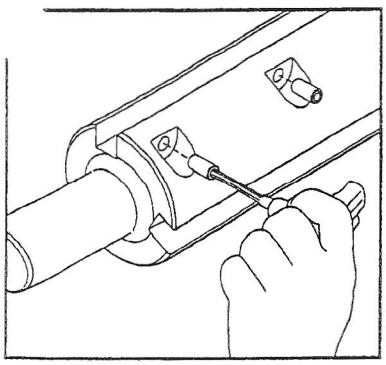


ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	646-0016	1	PLANER HEAD, CORR.,15"
2	646-0017	3	GIB, KNIFE,15" PLANER
3	803-0004	3	KNIFE, CORR.,15" PLANER
4	746-0005	2	BEARING, 1-1/2" W/LOCK COLLAR
5	795-0066	15	5/16-24 X 7/8 LG., SHSS
6	645-0662	1	PULLEY, 3-1/8 O.D. X 1-1/2 I.D., AX
7	770-0089	1	3/8 SQUARE KEY X 1" LG.
8	770-0185	1	5/16-18 X 5/16 LG., SHSS

Setup:

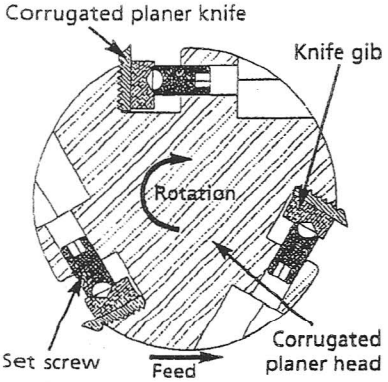
1. Install the Planing Head.

See pages 12-13 for instructions on installing the cutting head and bearings.



2. Install set screws.

With the planning head installed into the Woodplaner, start 15 set screws into the cutting head that will later be used to secure the cutting knives and gibs.



3. Add the corrugated knives and gibs.

Align the corrugation of both the head and the knife so all of the corrugation on the head is lined with the mating knife. The edge of the knife should be flush with the edge of the slot for the knife. The knife gib should be laid on the back of the corrugated knife with alignment holes facing the set screws. Notice the gibs alignment holes are slightly off center. The extra material should go towards the center of the shaft. Tighten the set screws to secure the knife and gib.

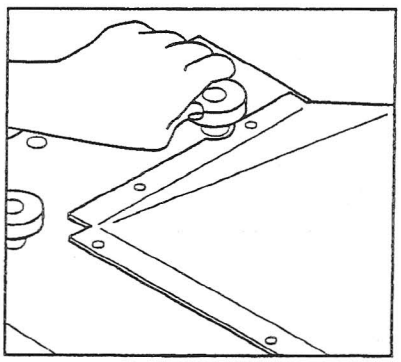
4. Tighten set screws.

Be sure to check all set screws have been tightened.

CAUTION

PERFORM A FINAL CHECK

For safety practice it is a good idea to turn the head 360 degrees to check for any problems that may has occurred. Also, be sure all knives are set to the bottom of the corrugation.



5. Install guards and hood.

Lift hood onto the Woodplaner and tighten the four knobs securing the hood.

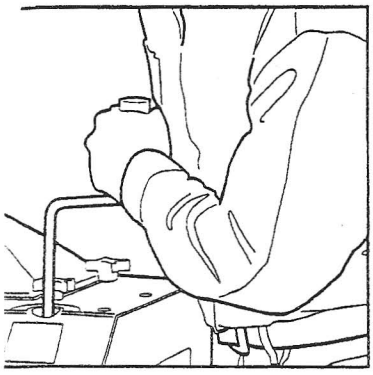
CAUTION

The blades of the cutting heads are extremely sharp! Avoid lifting in this area.

'laning:

. Inspect wood to be planed.

ıeck the wood to be planed to be sure it is free of nails, aples, ect.

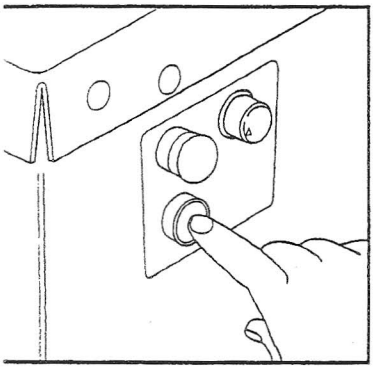


2. Find a starting point.

With the Woodplaner still off, turn the height adjustment crank raising or lowering the table accordingly so the board to be planed just touches the bottom of the infeed feed roller.

. Raise table.

urn the height adjustment crank 5 full turns clockwise. his will raise the board to the bottom of the knives.

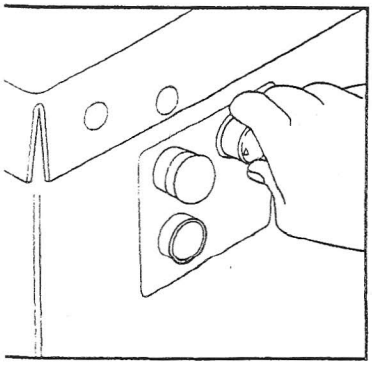


4. Turn on Woodplaner.

Standing to the side of the planer, start the planer by depressing the start switch. If using a dust collector, start the dust collector now as well.

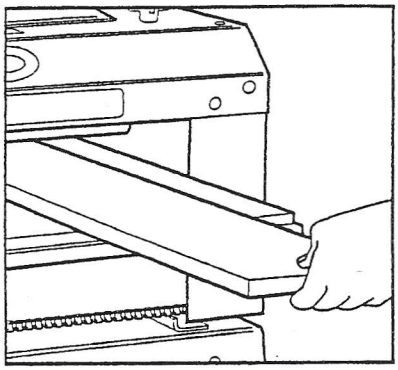
CAUTION

STAND TO THE SIDE OF THE MACHINE WHEN STARTING AND OPERATING



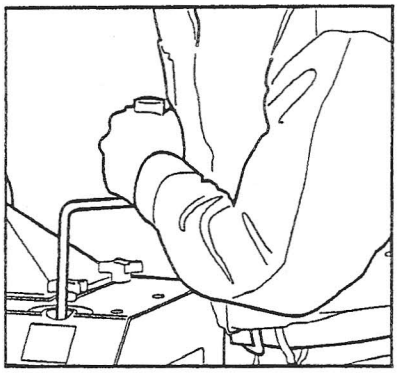
5. Set variable speed control.

Adjust the feed accordingly for the species of wood being planed and the cuts per inch desired. We suggest starting mid range and then adjusting accordingly.



6. Send board through the planer.

Start the board into the planer by wedging it under the infeed roller. The feed rollers will take over the feed of the board through the planing head providing a constant speed that can be increased or decreased to a complete stop by adjusting the variable speed control.

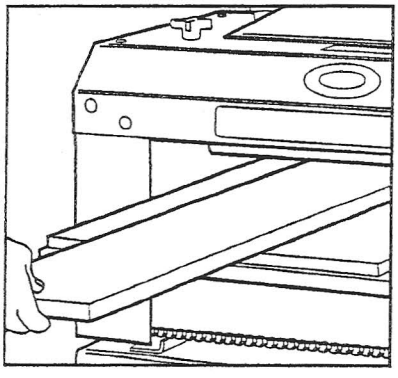


7. Raise the table increasing the depth of cut.

Turn the height adjustment crank according to the amount of wood wished to be removed. A maximum cut of 5/16" may be obtained.

WARNING

MAXIMUM DEPTH OF CUT PER PASS IS 5/16"



8. Start board in the infeed.

Again, start the board into the infeed sending it through the planer.

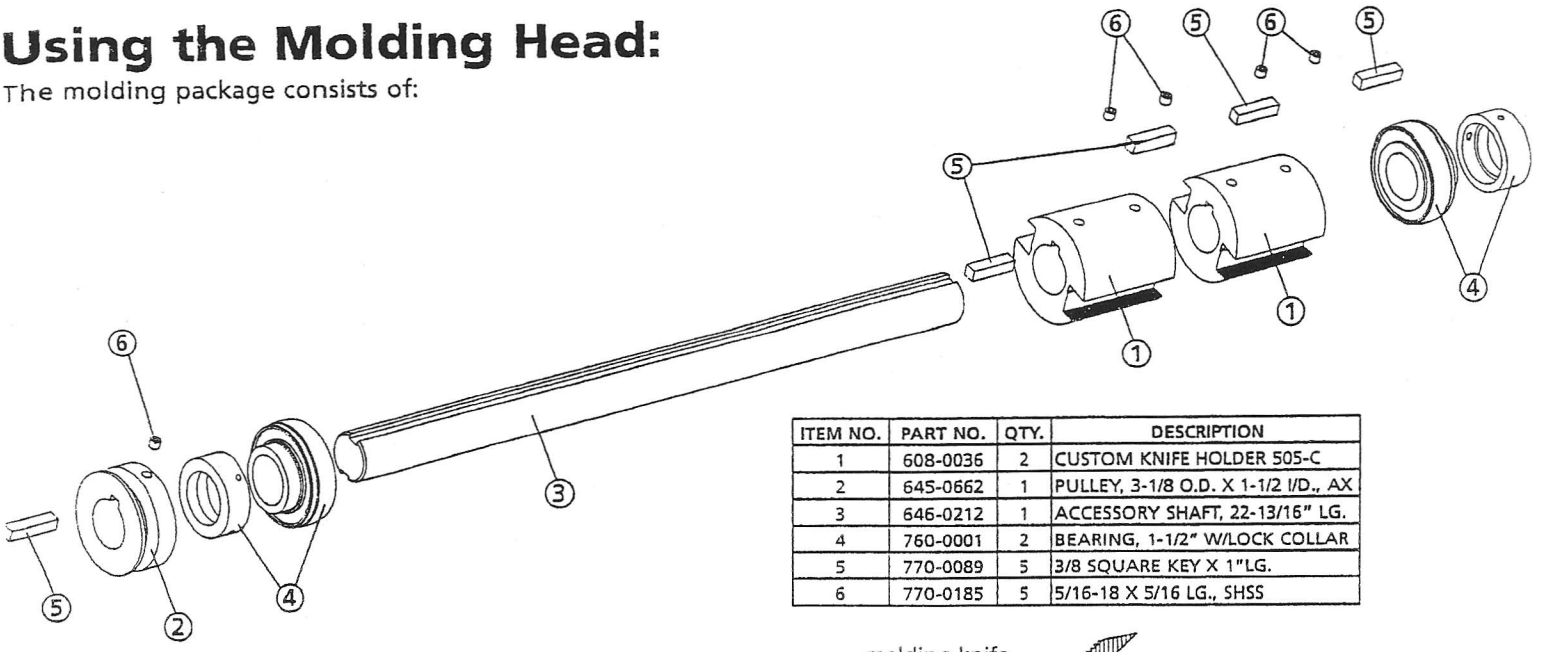
9. Repeat these steps as necessary.

WARNING

If problem occurs during planing, immediately stop the planer! The Woodplaner can be stopped by depressing the stop button. Do not start the planer again until lowering the table and removing the wood in the planer. Never attempt to start the planer with wood under the planing head.

Using the Molding Head:

The molding package consists of:



ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	608-0036	2	CUSTOM KNIFE HOLDER 505-C
2	645-0662	1	PULLEY, 3-1/8 O.D. X 1-1/2 I/D., AX
3	646-0212	1	ACCESSORY SHAFT, 22-13/16" LG.
4	760-0001	2	BEARING, 1-1/2" W/LOCK COLLAR
5	770-0089	5	3/8 SQUARE KEY X 1"LG.
6	770-0185	5	5/16-18 X 5/16 LG., SHSS

Important Knife Information

Single Knife Holders

Knife holders are 3-1/4" long, if a knife profile exceeds this width we recommend using two knife holders butted together end to end and placing the knife at the edge of one slot. For each slot of 1 knife holder we recommend using a knife, gib, and spacer combination weighing a total of 8 ounces. This weight will balance the cutting shaft allowing for a truer cut. If two knife holders are butted together for use of a wide profile knife, a total combination weight of 16 ounces must be used. We recommend gib length to cover a minimum of 75% of the length of the knife. Typically Hawk Wood Tools weighs the knives and determines the best combination of gib length and spacers to run in the knife holders. These sets should be kept together when not in use.

Double Knife Holders

Double knife holders are not as critical as keeping an 8 ounce per slot weight; rather the two knives need to be balanced to maintain a balanced shaft. We recommend the gib length to cover the entire back of the knife.

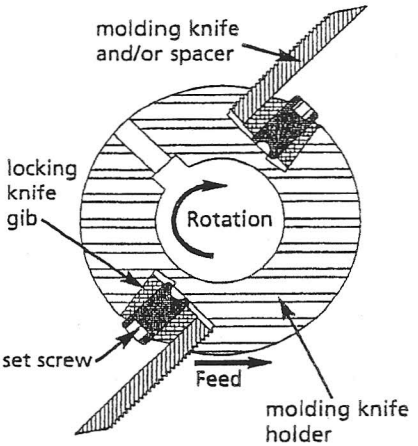
WARNING
USE A BED BOARD!

You MUST use a bed board when using the molding head. See Page 9 for instructions on mounting the bed board if you have not already done so.

Setup:

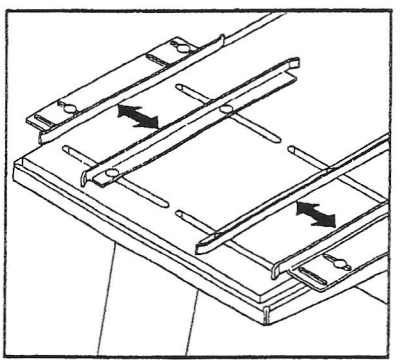
1. Install auxiliary shaft into planer.

page 12 -13 for proper cutter head and bearing installation.



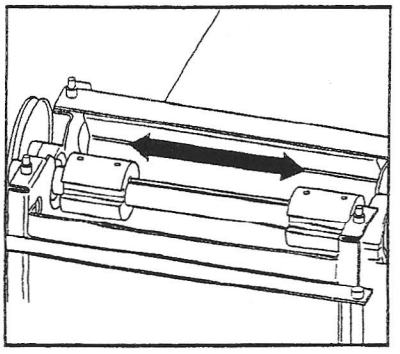
2. Add molding knives.

Insert the molding knives, spacers, and gibs into the knife holders. Tighten the gibs. Inspect the knives to check they are tight and correctly aligned if using multiple knives.



3. Position the in feed guide rails.

Attach the guide rails and secure them to the infeed extension table according to the raw stock that will be cut with the molding head. At least one guide will need to be square with the cutting knife.



4. Position knife holders on the auxiliary shaft.

Line the knife holders with the path of the in feed guides and secure the knife holders by inserting the two 3/8" keys and tightening the two set screws per one knife holder.

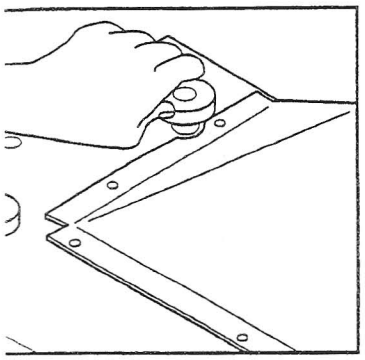
5. Estimate the position of the out feed guide rails.

Actual position cannot be determined without having an actual piece of the molding. See step 11 on page 17. Snug the retaining bolts.

CAUTION

PERFORM A FINAL CHECK

For a safety practice it is a good idea to turn the head 360 degrees to check for any problems that may have occurred. If the chip deflector will be used, be sure the knives clear the deflector. Check that the table is not set too high and the knives will collide with the table. Check to make sure the knives are secure and set to the same height.

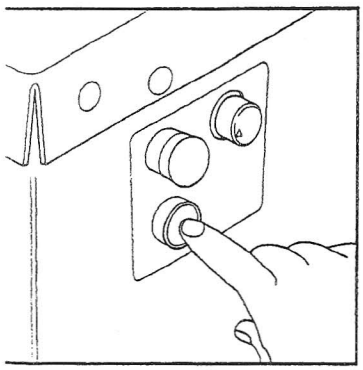


6. Install guards and hood.

Lift hood onto the Woodplaner and tighten the four knobs securing the hood.

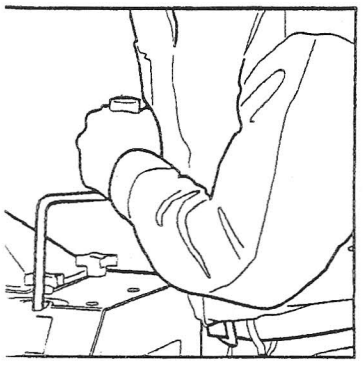
WARNING

INSPECT WOOD! CHECK ALL WOOD TO BE MOLDED TO BE SURE IT IS FREE OF NAILS, STAPLES, ETC.



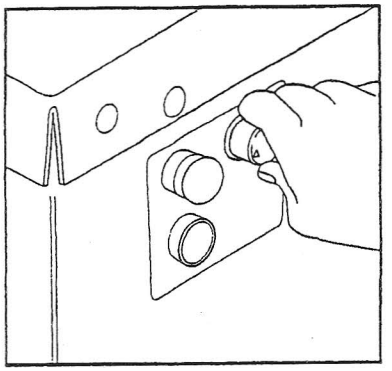
7. Turn on Woodplaner.

Standing to the side of the planer, start the planer by depressing the start switch. If using a dust collector, start the dust collector now as well.



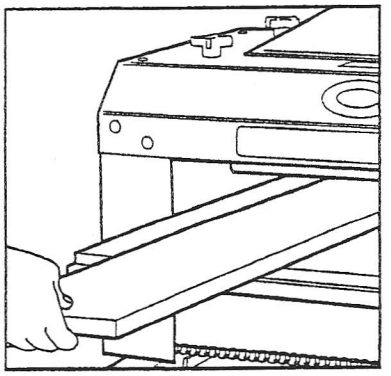
8. Raise the table.

The molding knives should cut into the bed board approximately 1/8" to obtain a clean cut on the sides of the molding. Turn the height adjustment crank slowly clockwise until you here the knives begin to cut into the bed board. From that point turn the crank in two full revolutions clockwise, this will set the bottom of the knives 1/8" into the bedboard.



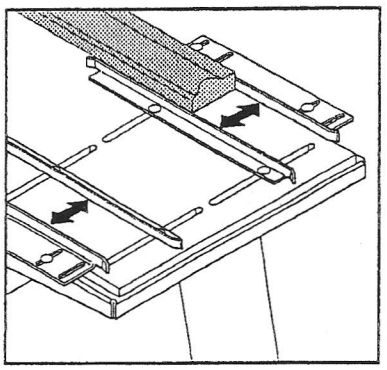
9. Set variable speed control.

Adjust the feed accordingly for the species of wood being molded and the cuts per inch desired. We suggest starting mid range and then adjusting accordingly.



10. Send board through the planer.

Start the board into the planer by wedging it under the in feed roller. The feed rollers will take over the feed of the board into the molding head providing a constant speed that can be increased or decreased to a complete stop by adjusting the variable speed control.



11. Stop the feed & set the out feed guides.

Once enough molded board has exited to the out feed table, stop the feed by turning the variable speed control completely counter clockwise. Do not stop the main switch! Adjust the out feed guides and tighten.

12. Restart feed.

Adjust the variable speed to your desired setting.

Continue sending raw stock through the molder to be cut into molding.

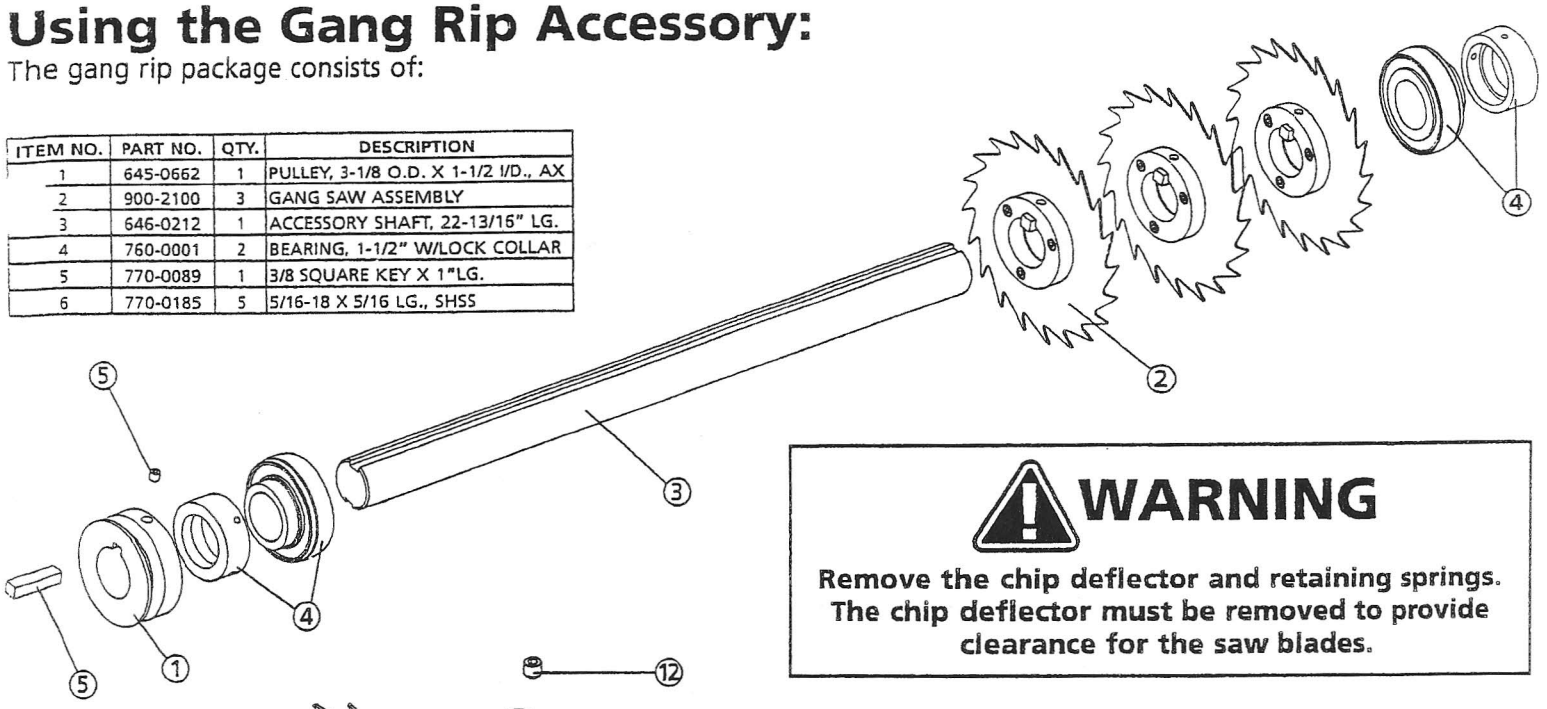
WARNING

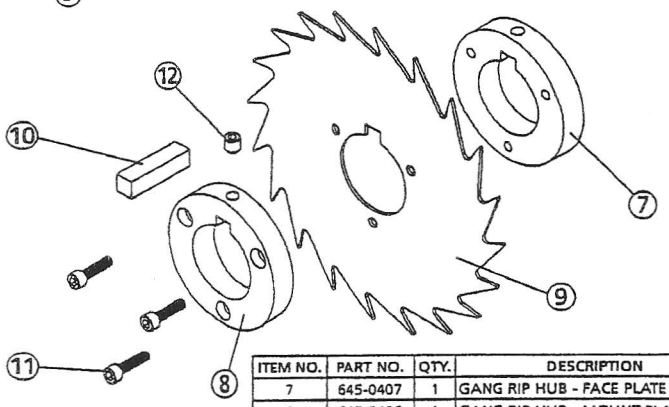
If problem occurs during molding, immediately stop the molder! The Woodplaner can be stopped by depressing the stop button. Do not start the planer again until lowering the table and removing the wood in the planer.
Never attempt to start the planer with wood under the molding head.

Using the Gang Rip Accessory:

The gang rip package consists of:

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	645-0662	1	PULLEY, 3-1/8 O.D. X 1-1/2 I/D., AX
2	900-2100	3	GANG SAW ASSEMBLY
3	646-0212	1	ACCESSORY SHAFT, 22-13/16" LG.
4	760-0001	2	BEARING, 1-1/2" W/LOCK COLLAR
5	770-0089	1	3/8 SQUARE KEY X 1"LG.
6	770-0185	5	5/16-18 X 5/16 LG., SHSS





ITEM NO.	PART NO.	QTY.	DESCRIPTION
7	645-0407	1	GANG RIP HUB - FACE PLATE
8	645-0408	1	GANG RIP HUB - MOUNT PLATE
9	745-0707	1	SAW BLADE, CARBIDE, 20T, 1-5/8" ID.
10	770-0089	1	3/8 SQUARE KEY X 1"LG.
11	770-0091	3	#10-32 X 3/4" LG., SHCS
12	770-0185	2	5/16-18 X 5/16 LG., SHSS

Gang Rip Saw Information

When using the Woodplaner as a Gang rip saw, one edge of the lumber must be trued to act as a guide.

We recommend using no more than 1 blade per horsepower of the motor. With the stock motor on the Woodplaner this would be a total of 5 blades. More blades may be added depending on the species and thickness of lumber being cut. Due to the inconsistencies in wood there is no mathematical formula to calculate the amount of horsepower required to correspond with the number of blades being used and the variations in wood hardness.

WARNING
USE A BED BOARD!

ou MUST use a bed board when using the gang rip saw head. See Page 9 for instructions on mounting the bed board if you have not already done so.

WARNING

Remove the chip deflector and retaining springs. The chip deflector must be removed to provide clearance for the saw blades.

Setup:

1. Mount the saw blades to the arbors.

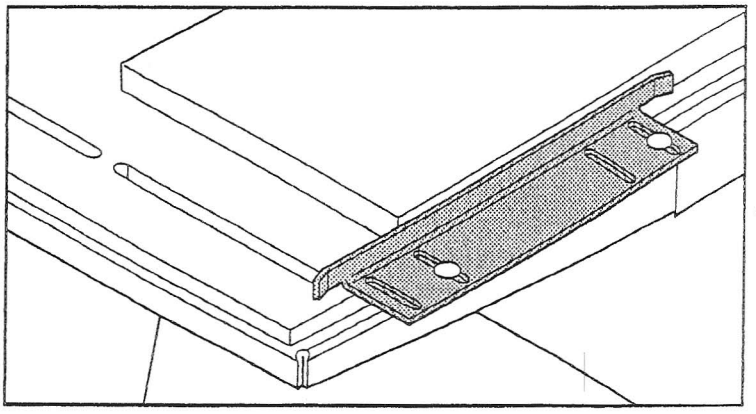
See the left diagram for proper assembly. Tighten the three socket head cap screws.

2. Install saw blade assemblies onto the auxiliary shaft.

Slide the desired amount of saw blade assemblies on to the middle of the shaft. See above diagram.

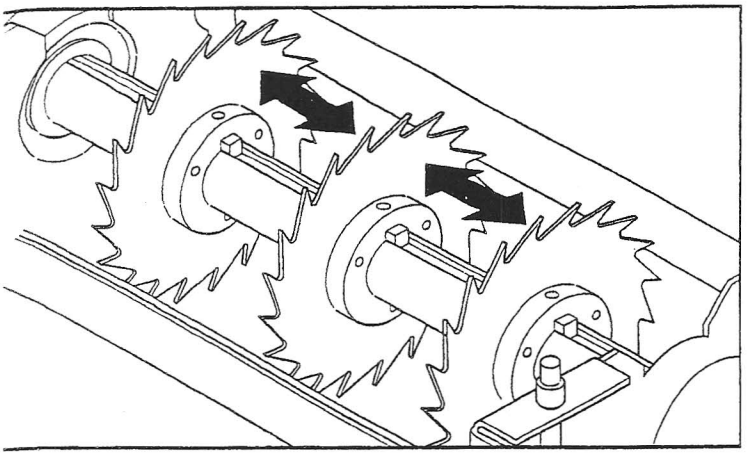
3. Install auxiliary shaft into planer.

See page 12 -13 for proper cutter head and bearing installation.



4. Position the master guide rail.

See above. Attach one guide rail that will be the master location point that the trued lumber edge will ride against on both the in and out feed extension tables. A feather board (not included) may be used on the rough side of the lumber to maintain pressure against the master guide rail.



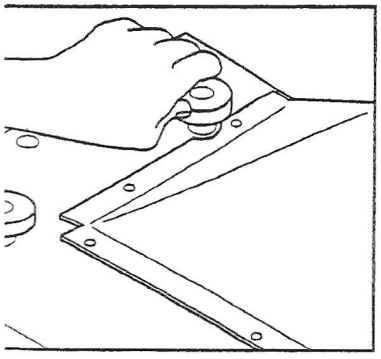
5. Position the saw blade assemblies on the auxiliary shaft.

Once the blade locations are located insert one 3/8" key per saw blade assembly. Insert one set screw into the arbors, one on each side of the saw blade, locking the arbors onto the shaft.

CAUTION

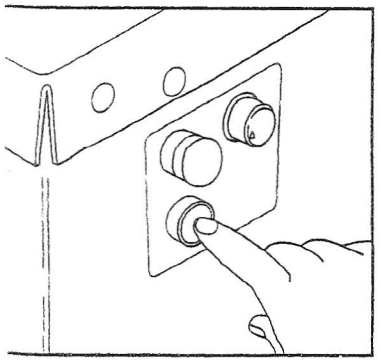
PERFORM A FINAL CHECK

For a safety practice it is a good idea to turn the head 360 degrees to check for any problems that may have occurred. Be sure the chip deflector has been removed. Check that the table is not set to high and the saw blade will collide with the table or bed board. Check to make sure the saw blades are secure.



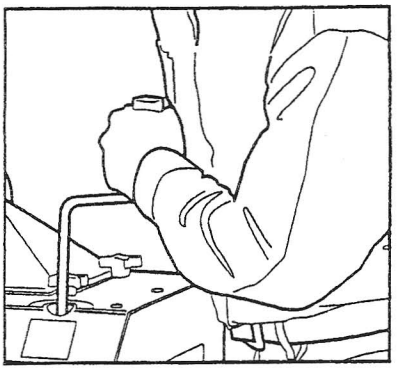
6. Install guards and hood.

Lift hood onto the Woodplaner and tighten the four knobs securing the hood.



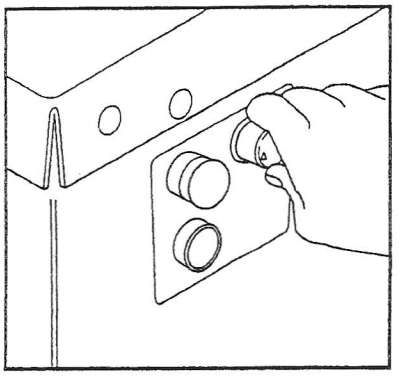
7. Turn on Woodplaner.

Standing to the side of the planer, start the planer by depressing the start switch. If using a dust collector, start the dust collector now as well.



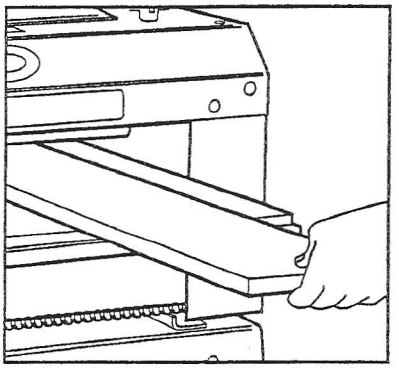
8. Raise the table.

The rip saw blades should cut into the bed board approximately 1/8" to obtain a clean cut on the sides of the board. Turn the height adjustment crank slowly clockwise until you here the knives begin to cut into the bed board. From that point turn the crank in two full revolutions clockwise, this will set the bottom of the knives 1/8" into the bedboard.



9. Set variable speed control.

Adjust the feed accordingly for the species of wood being ripped and the cuts per inch desired. We suggest starting mid range and then adjusting accordingly.



10. Send board through the planer.

Start the board into the planer by wedging it under the in feed roller. The feed rollers will take over the feed of the board into the blades providing a constant speed that can be increased or decreased to a complete stop by adjusting the variable speed control.

Continue sending raw stock through the gang rip saws.

WARNING

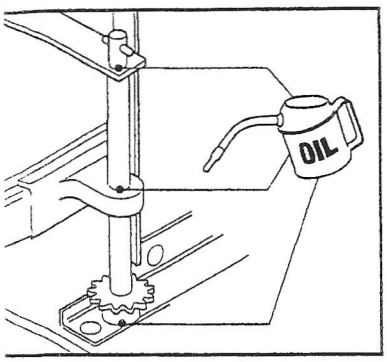
INSPECT WOOD! CHECK ALL WOOD TO BE RIPPED TO BE SURE IT IS FREE OF NAILS, STAPLES, ETC.

WARNING

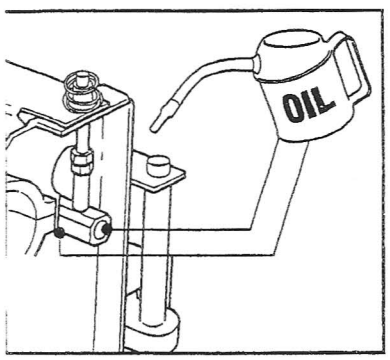
If problem occurs during sawing, immediately stop the planer! The Woodplaner can be stopped by depressing the stop button. Do not start the planer again until lowering the table and removing the wood in the planer. Never attempt to start the planer with wood under the saw blades.

Hawk 3-in-1 Woodplaner Care and Maintenance:

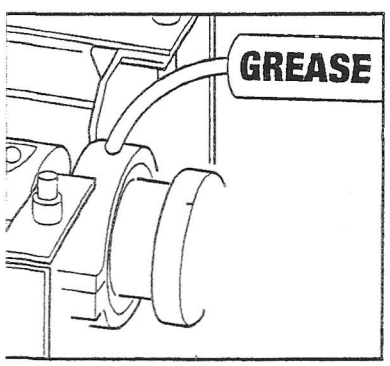
ıbrication:



1. Table and corner screws.
The four corner screws should regularly be cleaned of debris and lightly oiled to prevent corrosion on the threaded screws. Two to Four drop of oil should be applied to the four threaded holes of the table. The top and bottom of the corner screws should be oiled with two to four drops of oil at the machine bushings. Oil these places as required.



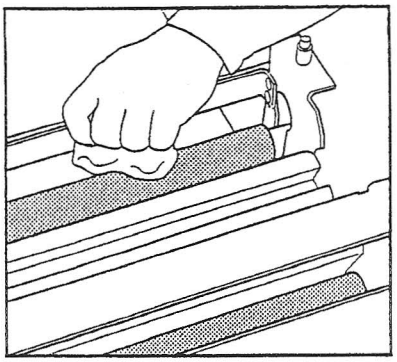
2. Feed roller bushings.
Oil the four brass bushings that retain the feed rollers. Oil with two to four drop of oil where the bushings ride against the frame of the planer. Also, place oil along the outside of the bushing so that the internal feed roller shaft will draw the oil into the bushing. These bushing should be oiled every 20 hours of use or more if ran under a more severe application.



3. Cutter head bearings.
The cutter head bearings are re-greasable and should be re-greased every 20 hours of use or more if ran under a more severe application. Use a grease gun to reapply grease when required. We recommend using a minimum amount of grease when reapplying. Too much grease will cause the bearing to run very hot and not enough will cause a bearing to wear and fail. Depending on the type of grease gun used, we recommend using approximately two pumps of the gun. After applying grease and operating, wipe off any excess grease that may have seeped through the seal on to the edge of the bearings.

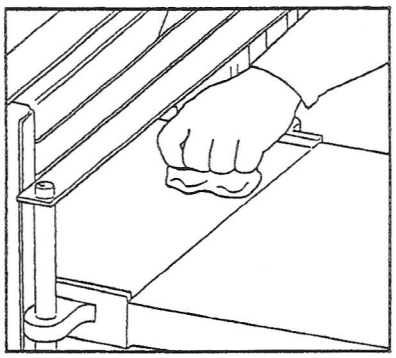
Quick change bearing cradles.
The internal spherical area of the bearing cradles must be kept free of debris and lightly greased at all times.

Feed Roller Cleaning:



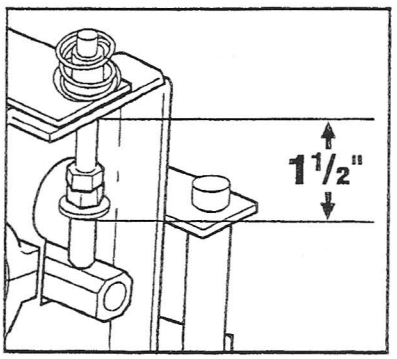
After extended periods of time or under moist wood conditions, a build-up of wood resin can occur on the feed rollers. This can be removed by wiping the urethane portion with a rag damp with rubbing alcohol or acetone.

Table Cleaning:



The table should be periodically waxed to provide a slick surface and also act as a rust inhibitor. The table may first be wiped down with a rag damp with alcohol or acetone. A common car wax will work sufficiently or purchase a table dressing from a wood working supply store. If the table becomes oxidized, feeding lumber will become almost impossible. To correct this, we recommend using a table dressing and scouring pads to scrub away the oxidation.

Feed Roller Tension:

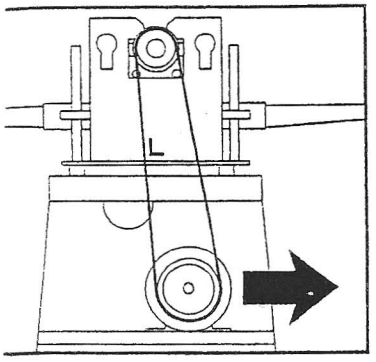


All four feed roller springs should be set to a height of 1-1/2" from the top of the frame to the bottom of the washer retaining the spring. This is the optimal setting for tension with these springs' characteristics. Do not increase spring tension in hopes of achieving more feed roller pressure.

If the springs do need adjusting use two 9/16" wrenches to loosen the doubled nuts and adjust the washer height to the correct dimension and then retighten the double nut configuration.

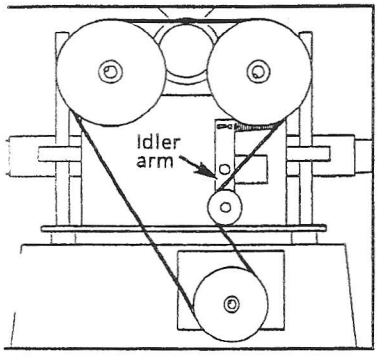
Hawk 3-in-1 Woodplaner Care and Maintenance:

›lt Tension Adjustment:



1. Adjust the drive belt to the cutter head.

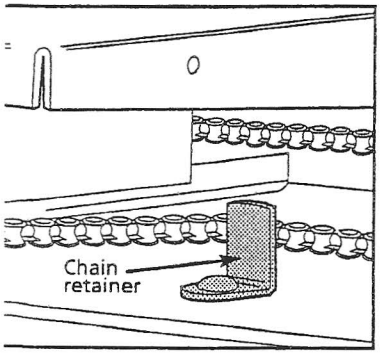
Belt tension should be regularly checked because a loose belt may cause a excessive vibration when operating the Woodplaner. To adjust the tension, simply loosen the four bolt holding the .C motor to the frame and slide the motor back to chieve proper tensioning, then retighten the four bolts.



2. Tension of the feed roller belt.

The belt tension is automatically set and obtained by the idler arm of the feed roller mechanism no maintenance is required here, unless parts are worn.

Roller Chain Tension Adjustment:



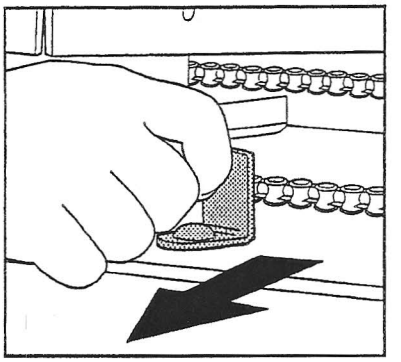
Adjust the chain tension by loosening the chain retainer. Adjust the retainer so all of the extra slack in the chain is taken up. Retighten the chain retainer. Too loose of a chain can make cranking the table difficult, too tight of a chain can make the chain wear quickly.

If you have any questions, please call and speak with one of our tool specialists:

1 800 487 2623

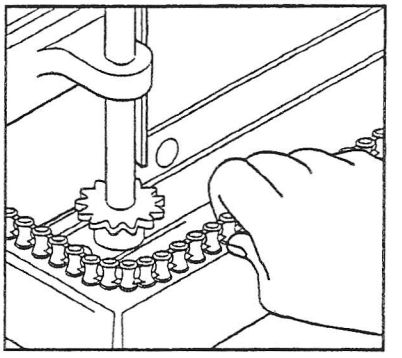
Planer Bed Levelling:

A planer bed may require to be re-levelled such as if the roller chain became too loose and the four corner screws became out of sync with each other and are now binding causing the table to crank extremely difficult.



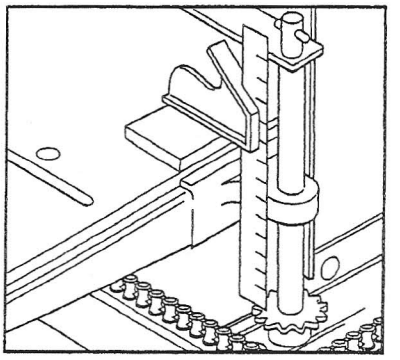
1. Loosen the chain retainer.

Loosen the bolt of the chain retainer removing any tension on the chain.



2. Remove chain from sprockets.

There is enough slack in the chain to slip the chain off of the four corner sprockets and drop the chain on top of the base bellow the sprockets. The chain does not need to be completely removed from the Woodplaner.



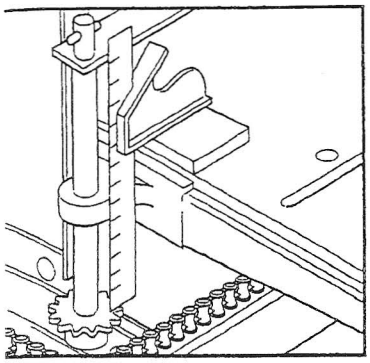
3. Set the offset distance.

We recommend using a parallel block and a combination square to do this. What is most important, is the distance between the face of the table top and the top of the corner sprockets. Pick one corner to use a master dimension, any corner will work. To get your first master distance place the parallel block on top of the table in the corner adjacent to the corner screw being measured. Then use your combination square to sit against the parallel block and drop the measuring portion down on top of the corner sprocket. Lock the combination square at that height and that dimension now becomes your master setting for the remaining three corners.

Continued on Page 22

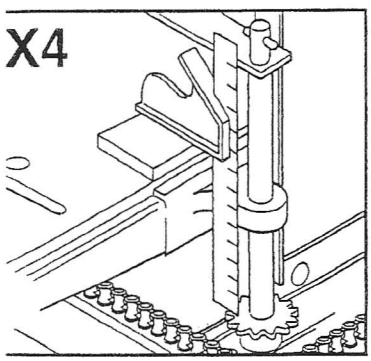
Hawk 3-in-1 Woodplaner Care and Maintenance:

aner Bed Levelling Cont:



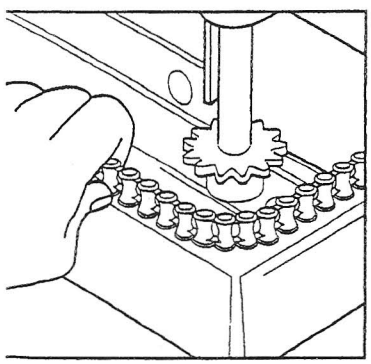
4. Reset the remaining three corner heights.

Move to your next corner and set that corner height to the same dimension as the master by turning the corner screw clockwise or counter clockwise until the height is the same as the master. Do not move
ıe height set previously on the combination square.
epeat on the remaining corners.



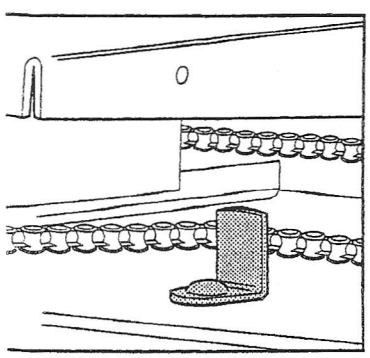
5. Re-check the four corner heights.

To check your work, we suggest going around the four corner screws one more time checking for all of the same dimensions.



6. Re-install the roller chain.

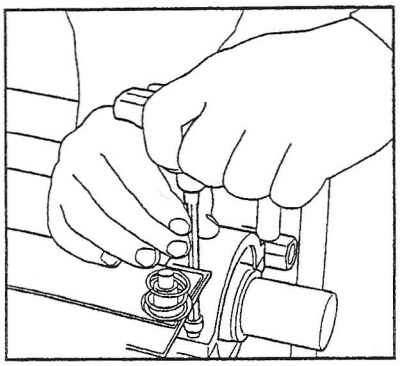
The chain may now be reinstalled starting with the front side and working all of the extra play in the chain towards the back of the Woodplaner. Turn the sprockets just enough to line up with the chain.



7. Re-adjust the chain tension

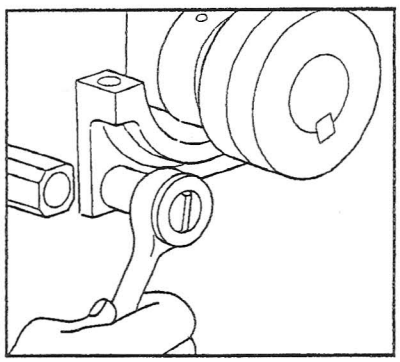
Adjust the retainer so all of the extra slack in the chain is taken up. Retighten the chain retainer.

Cutter Head Levelling:



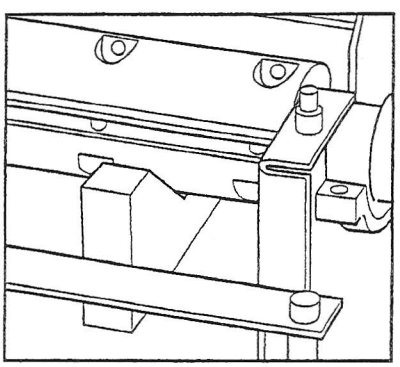
1. Remove the bearing retainers.

Remove the bearing retainer over each cutter head bearing by removing the two socket head cap screw on each retainer. Keep the cutting head in the bearing cradles.



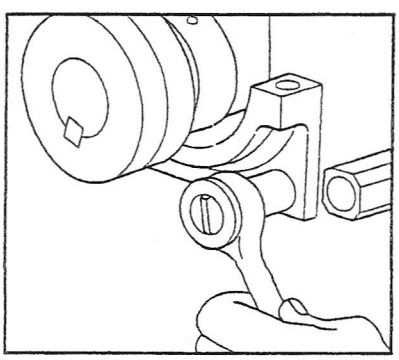
2. Loosen the bearing cradles.

Loosen the bearing cradles by loosening the two 3/8" nuts that attach the cradles to the frame. Repeat for the other cradle. Caution, the bearing cradles may drop suddenly to the bottom of the mating frame hole.



3. Adjust the cutting head horizontally.

We recommend using two matching machinist V-blocks to set on the table top under the cutter head. Then slowly raise the table until the two V-blocks hold the cutter head. The cutter head is now held parallel to the table top.



4. Secure the bearing cradles.

Tighten the two 3/8" nuts to re-secure the bearing cradles to the frame. The table can now be lowered to remove the V-blocks.

5. Re-Install the bearing retainers.

Secure the bearing retainer by reinserting the two socket head cap screws and tightening them. See diagram 1.

Trouble-Shooting:

PROBLEM: Feed rollers push board out.

POSSIBLE CAUSES: Motor turning in wrong direction.

POSSIBLE SOLUTIONS:
Contact Hawk Woodworking Tools on 1 800 487 2623

PROBLEM: Feed rollers turn, but board does not feed.

POSSIBLE CAUSES:
Obstruction on table or bedboard.
Feed rollers worn or damaged.
Build-up of resin on feed rollers.

POSSIBLE SOLUTIONS:
Remove obstruction.
Replace feed rollers. **Order part number: 646-0018**
Clean feed rollers. See page 20 for instructions.

PROBLEM: Feed rollers turn in a jumpy motion.

POSSIBLE CAUSES:
Cut too large.
Feed rollers worn or damaged.
Main drive belt loose or slipping.

POSSIBLE SOLUTIONS:
Reduce depth of cut.
Replace feed rollers. **Order part number: 646-0018**
See page 21 for details on adjusting drive belt. If replacement required **Order part number: 746-0044**

PROBLEM: Feed rollers slip on board.

POSSIBLE CAUSES:
Build up of resin on feed rollers.
Feed roller spring tension too low.
Feed belt worn and slipping.
Idler spring has stretched.

POSSIBLE SOLUTIONS:
Clean feed rollers. See page 20 for instructions.
Adjust feed roller tension springs. See page 20 for instructions.
Replace feed belt. **Order part number: 745-0148**
Replace Idler spring. **Order part number: 745-0063**

PROBLEM: Board is excessively hard to start into planer.

POSSIBLE CAUSES:
Cut too large.
Feed roller spring tension too high.

POSSIBLE SOLUTIONS:
Reduce depth of cut.
Adjust feed roller tension springs. See page 20 for instructions.

PROBLEM: Feed rollers don't turn.

POSSIBLE CAUSES:
Belts loose, off, or broken.

POSSIBLE SOLUTIONS:
Adjust or replace belt. **Order part number: 745-0148**

PROBLEM: Excessive mill marks on board.

POSSIBLE CAUSES:
Feed rate set too high.

POSSIBLE SOLUTIONS:
Slow feed rate using variable speed control knob.

PROBLEM: Ridge or groove along the length of board.

POSSIBLE CAUSES:
Nick in the planer knives.

POSSIBLE SOLUTIONS:
Have knives re-sharpened or replaced.
For replacement planer blades, order part number: 803-0005

PROBLEM: Large chunks torn out of board.

POSSIBLE CAUSES:
Cutting against the grain.
Planer knives dull.

POSSIBLE SOLUTIONS:
Turn board end-for-end.
Have knives re-sharpened or replaced.

Trouble-Shooting Cont:

PROBLEM: Stripping or peeling of board.

POSSIBLE CAUSES:
- ·mber green.
- ,ner knives dull.

POSSIBLE SOLUTIONS:
- Allow lumber to dry.
- Have knives re-sharpened or replaced.

PROBLEM: Press marks in the wood.

POSSIBLE CAUSES:
- Wood chips & resin on feed rollers.
- Wood chips very large.

POSSIBLE SOLUTIONS:
- Clean feed rollers. See page 20 for instructions.
- Reduce the depth of cut.

PROBLEM: Cutterhead slows down.

POSSIBLE CAUSES:
- Planer knives dull.
- Cut too large.
- Low current to the motor.
- Cutterhead drive belt slipping.

POSSIBLE SOLUTIONS:
- Have knives re-sharpened or replaced.
- Reduce depth of cut.
- Have electrician check wiring.
- Adjust belt or replace. **Order part number: 746-0044**

PROBLEM: Excess vibration.

POSSIBLE CAUSES:
- Knives improperly adjusted.
- Knives missing or damaged.
- Build up on cutterhead.
- Drive belt damaged or loose.
- `terhead bearings bad.
- ...otor, cutterhead, or pulleys loose.

POSSIBLE SOLUTIONS:
- Adjust knives.
- Replace missing or damaged knives.
- Clean cutterhead.
- Adjust belt or replace. **Order part number: 746-0044**
- Replace bearings. **Order part number: 746-0005**
- Tighten, or replace as required.

PROBLEM: Planer will not start.

POSSIBLE CAUSES:
- No power to the planer.
- Circuit breaker tripped.
- Plug connection between control box & motor loose.
- Motor overloaded.

POSSIBLE SOLUTIONS:
- Check 220V power source. Is planer properly connected?
- Check circuit board and reset circuit breaker.
- Check all plug connections.
- Let motor cool off and retry after 30 mins.

PROBLEM: Excess snipe (deeper cut at end of a board).

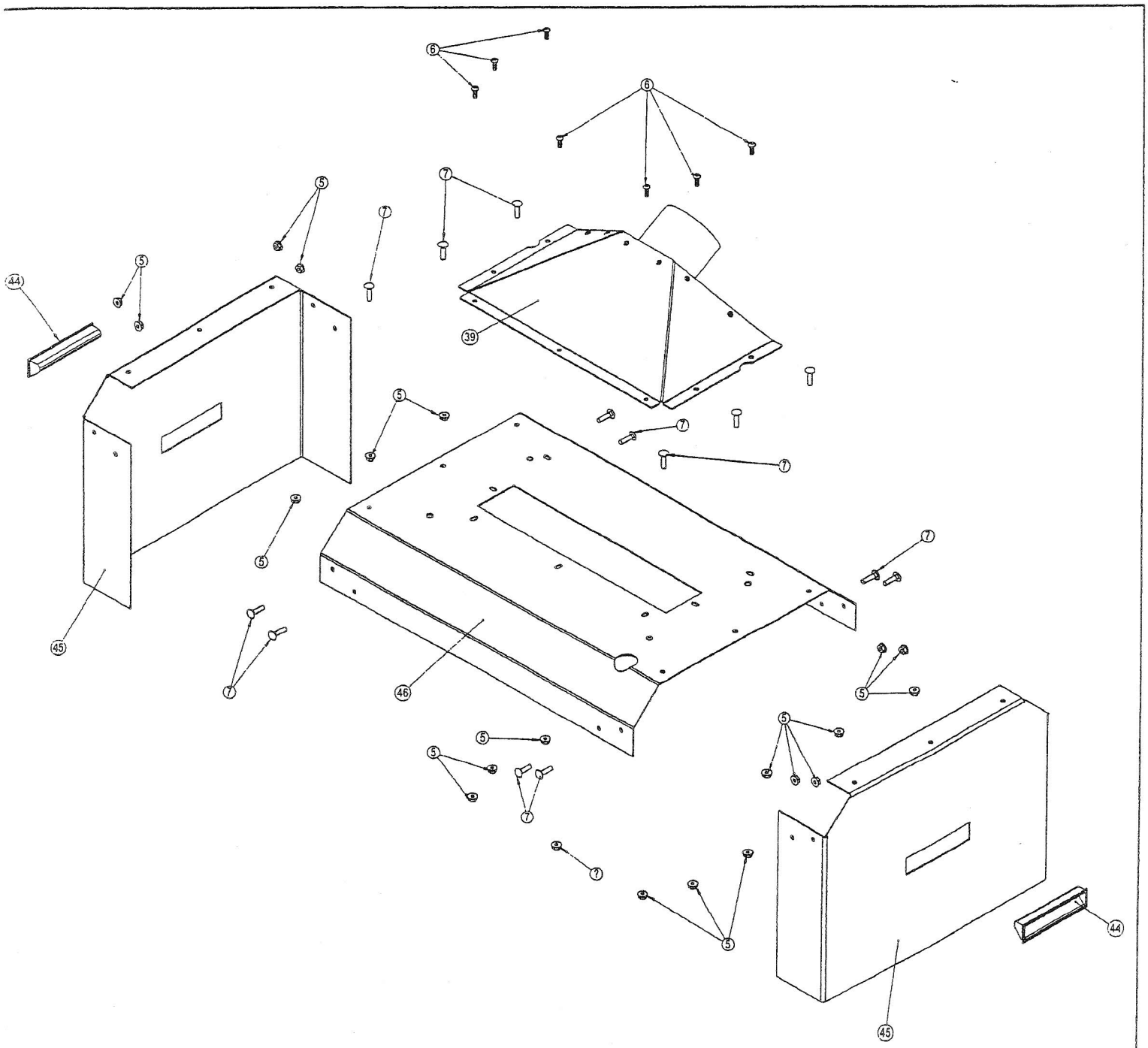
Snipe is a deeper cut at the end of a board, usually the first and last two or three inches. All planers, regardless of make, tend to create snipe. Ranging in depth from almost imperceptible to 1/8". This is caused when a board enters the planer infeed roller, but has not yet reached the outfeed roller. While it is in this position and held down by only one feed roller, the planer blades tend to lift up the board as they cut, pulling it up into the blades. The same thing occurs when the board leaves the infeed roller and is held only by the outfeed roller. Feed roller pressure is adjustable to allow for different conditions, so it's possible to minimize or practically eliminate snipe in most cases.

If you need further assistance please call our Technical Support Department:

1 800 487 2623

Hawk 3-in-1 Woodplaner Hood Assembly Breakdown

Below is a diagram showing all parts to the Hawk 3-in-1 Woodplaner Hood Assembly. If you need to order replacement parts, please note the part number and description of item.



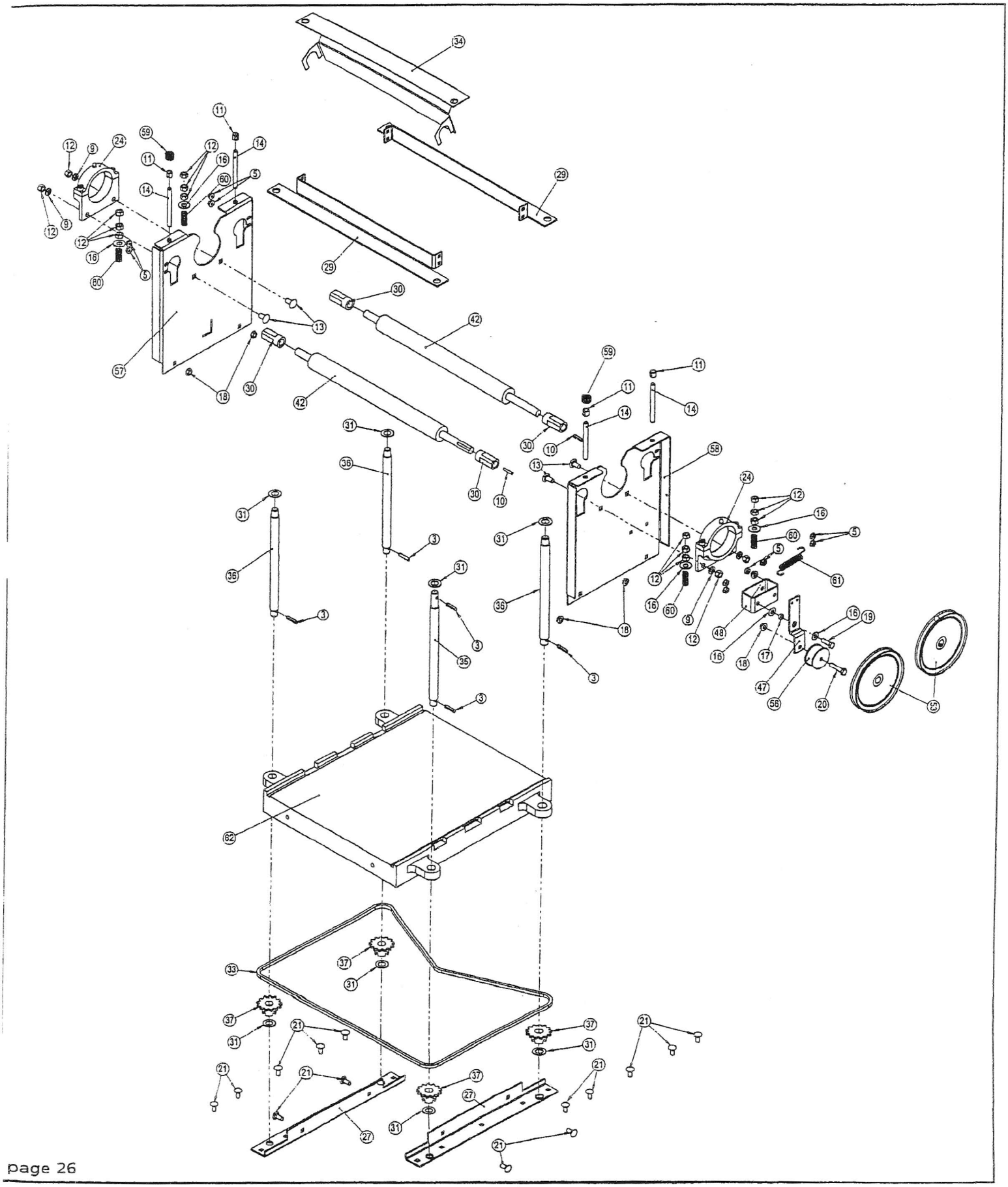
Hood Assembly Parts List

Below is a list of all parts for the Hawk 3-in-1 Woodplaner Hood Assembly

ITEM NO.	PART NO.	DESCRIPTION
5	745-0223	1/4-20 SERRATED HEX FLANGED NUT
6	746-0046	1/4-20 X 1/2" LG. BUTTON HEAD SOCKET SCREW
7	735-0029	1/4-20 X 3/4" CARRIAGE BOLT
39	646-0002	DUST ACCUMULATOR ASSEMBLY
44	746-0038	GRIP INSET HANDLE
45	646-0005	HOOD SIDE 15" PLANER
46	646-0004	HOOD TOP 15" PLANER

Hawk 3-in-1 Woodplaner Top Assembly Breakdown

Below is a diagram showing all parts to the Hawk 3-in-1 Woodplaner Top Assembly. If you need to order replacement parts, please note the part number and description of item.



ıwk 3-in-1 Woodplaner Assembly Parts List

w is a complete list of all parts for the Hawk 3-in-1 Woodplaner

ITEM NO.	PART NUMBER	DESCRIPTION
1	715-0304	#10-32 X 1/2" LG., TRUSS HD.
2	746-0043	#8 X 1/2" LG. SHT. METAL SCREW
3	770-0059	1/4 X 1-1/8" LG. ROLL PIN
4	750-0207	1/4" LOCK WASHER
5	745-0223	1/4-20 SERRATED HEX FLANGED NUT
6	746-0046	1/4-20 X 1/2" LG. BUTTON HEAD SOCKET SCREW
7	735-0029	1/4-20 X 3/4 CARRIAGE BOLT
8	770-0050	3/8" FLAT WASHER
9	770-0071	3/8" SPLIT LOCK WASHER
10		3/8" SQUARE KEY
11	746-0027	3/8" X .550" LG., STANDOFF
12	770-0058	3/8-16 HEX NUT
13	746-0047	3/8-16 X 1" SHORT NECK CARRIAGE BOLT
14		3/8-16 X 3" LG., ALL THREAD
15	746-0037	3/8-16, FEMALE, ROUND KNOB
16	745-0150	5/16" FLAT WASHER
17	745-0158	5/16" ID X 1/2" OD X 3/16" NYLON SPACER
18	770-0080	5/16-18 SERRATED HEX FLANGED NUT
19	770-0181	5/16-18 X 1" LG., HEX HEAD BOLT
20	715-0293	5/16-18 X 1-1/2" LG., HEX HEAD BOLT
21	770-0179	5/16-18 X 3/4" LG., CARRIAGE BOLT
22	746-0045	6MM X 20MM BUTTON HEAD SOCKET SCREW
23	646-0012	BASE
24	746-0004	BEARING BLOCK, QUICK CHANGE, ASSEMBLY
25	746-0005	BEARING, SPHERICAL, 1-1/2" I.D.
26	646-0009	BRACE, LEG
27	646-0013	BRACE, LOWER
28	646-0010	BRACE, MOTOR
29	646-0014	BRACE, UPPER
30	765-0057	BUSHING , BRASS, FEED ROLLER
31	746-0042	BUSHING, MACHINE, CORNER SCREWS
32	645-0069	CHAIN TENSIONER
33	745-0440	CHAIN, #40
34	646-0022	CHIP DEFLECTOR
35	765-1034	CORNER CRANK SCREW
36	765-1005	CORNER SCREW
37	665-0004	CORNER SPROCKET
38	645-0279	CRANK, HEIGHT ADJUSTMENT
39	646-0002	DUST ACCUMULATOR ASSEMBLY
40	746-0027	ELECTRICAL CONTROL BOX
41	646-0028	EXTENSION TABLE ASSEMBLY
42	646-0018	FEED ROLLER
43	646-0011	GEAR MOTOR MOUNT
44	746-0038	GRIP INSET HANDLE
45	646-0005	HOOD SIDE 15" PLANER
46	646-0004	HOOD TOP 15" PLANER
47	646-0015	IDLER ARM
48	646-0001	IDLER BRACKET, 15" PLANER
49	646-0006	LEG, LEFT
50	646-0026	LEG, RIGHT
51	704-0020	MOTOR, 220VAC, 5HP, SINGLE PHASE
52	704-0019	MOTOR,GEAR, 180VDC
53	745-2091	PULLEY , FEED ROLLER
54	646-0020	PULLEY, AC MOTOR
55	646-0019	PULLEY, DC GEAR MOTOR
56	746-0006	PULLEY, IDLER
57	646-0007	SIDE, LEFT
58	646-0008	SIDE, RIGHT
59	746-0040	SPRING, CHIP DEFLECTOR TENSION
60	765-0019	SPRING, COMPRESSION, FEED ROLLER TENSION
61	745-0063	SPRING, IDLER ARM TENSION
62	746-0001	TABLE, MACHINED BED
63	745-0148	V BELT, 3/8" X 55"
64	746-0044	V BELT, GATES-AX49

Hawk 3-in-1 Woodplaner Bottom Assembly Breakdown

Below is a diagram showing all parts to the Hawk 3-in-1 Woodplaner Bottom Assembly. If you need to order replacement parts, please note the part number and description of item.