

INSTRUCTION MANUAL

PT-300

Planer & Thicknesser Combination 304mm Wide Planer Capacity



W613

12" JOINTER/PLANER COMBINATION MACHINE OWNER'S MANUAL



 **WARNING!**

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

 **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 do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

JOINTER/PLANER COMBINATION MACHINA

Product dimensions:

Net Weight	280 kg
Gross Weight	315kg
PackageType	wood Crate

Motor

Type	TEFC Capacitor Start Induction
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Electrical:

Switch	Magnetic with Thermal Overload
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Protection

Speed	50Hz 2850 60Hz 3450RPM
Cycle	50/60Hz
Number Of Speeds	1
Power Transfer	V-Belts
Bearings	Shielded and Lubricated

Main Specifications:

Cutting Capacities(Jointer)

Bevel Jointing	0-45 deg.
Maximum Width of Cut	12 in/304mm
Maximum Depth of Cut	1/8 in/3.17mm
Minimum Stock Length	5-5/8 in/140mm

Cutting Capacities(Planer)

Maximum Width of Cut	11-3/4 in/300mm
Maximum Depth of Cut Planing Full Width	1/8 in/3.17mm
Maximum Depth of Cut Planing 6" Wide Board	5/32 in/4mm
Feed Speeds	22 FPM
Minimum Stock Length	12 in/304mm
Maximum Stock Thickness	8 in/200mm

Knife Information(Jointer)

Number of Knives	4
Knife Type	HSS
Knife Length	12 in/304mm
Knife Width	1 in/25.4mm
Knife Thickness	1/8 in/3mm

Knife Adjustment

Springs and Jack Screws

Cutterhead Information

Cutterhead Type	4 HSS Knives
Cutterhead Diameter	3-1/8 in/78mm

Table Information(Jointer)

Table Length	59-1/2 in/1512mm
Table Width	14 in/355.6mm
Floor To Table Height	35-1/2 in/900mm

Table Information(Planer)

Table Length	23-1/8 in/588mm
Table width	12-1/4 in/310mm
Table Thickness	1-5/8 in/40mm
Floor To Table Height	32-1/2 in/825mm

Construction

Body Assembly Construction	Cast Iron
Cutter head Assembly Construction	Steel
Infeed Roller Construction	Steel
Outfeed Roller Construction	Steel
Stand Construction	Heavy Gauge Sheet Metal
Table Construction	Cast Iron

Other Information

Dust Port Size	4 in/100mm
Number of Dust Ports	2
Measurement Scale(Jointer)	inch
Measurement Scale(Planer)	inch/Metric

Features:

- Quick release Fence(two type)
- Flip up tables and Change Lever Simplify Jointer-Planer Conversion Jointer Tables Lock into Raised Position for Planer Operation; Hand Knobs releas
- Tables Cast Iron Infeed and Outfeed Tables

SECTION 1: SAFETY

⚠️ WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

⚠️ WARNING

Safety Instructions for Machinery

1. **READ THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
2. **ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.
3. **ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust can cause severe respiratory illnesses.
4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing loss.
5. **WEAR PROPER APPAREL. DO NOT** wear loose clothing, gloves, neckties, rings, or jewelry that can catch in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
6. **NEVER OPERATE MACHINERY WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

WARNING

Safety instructions for Machinery

7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.
8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.
9. **MAKE WORK SHOP CHILDPROOF.** Use padlocks, master switches, and remove start switch keys.
10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power OFF and allow all moving parts to come to a complete stop before leaving machine unattended.
11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or when any flammable or noxious fumes may exist.
12. **KEEP WORK AREA CLEAN AND WELL LIGHTED.** Clutter and dark shadows may cause accidents.
13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Grounded cords minimize shock hazards. Undersized cords create excessive heat. Always replace damaged extension cords.
14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY.** Make sure switch is in OFF position before reconnecting.
15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **MADE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery ON.
18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding or misaligned parts, broken parts, loose bolts, and any other conditions that may impair machine operation. Repair or replace damaged parts before operation.
19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. Improper accessories increase risk of injury.
20. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine of accessory was designed.
21. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
22. **DO NOT OVERREACH.** Maintain stability and balance at all times.
23. **MANY MACHINES CAN EJECT WORKPIECES TOWARD OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."
24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.**
25. **CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Be scare of the type of dust you are exposed to and always wear a respirator designed to filter that type of dust.

WARNING

Additional Safety Instructions For Jointers

1. **JOINTER KICKBACK.** “Kickback” is when the workpiece is thrown off the jointer table by the force of the cutterhead. Always use push blocks and safety glasses to reduce the likelihood of injury from “kickback”. If you do not understand what kickback is, or how it occurs, DO NOT operate this machine.
2. **CUTTERHEAD ALIGNMENT.** Keep the top edge of the outfeed table aligned with the outfeed table aligned with the cutterhead knife of insert at top dead center (TDC) to avoid kickback and personal injuries.
3. **PUSH BLOCKS.** Always use push blocks whenever surface planing. Never pass your hands directly over the cutterhead without a push block.
4. **WORKPIECE SUPPORT.** Supporting the workpiece adequately at all times while cutting is crucial for making safe cuts and avoiding injury. Never attempt to make a cut with an unstable workpiece.
5. **KICKBACK ZONE.** The “kickback” zone is the path directly through the end of the infeed table. Never stand or allow others to stand in this area during operation.
6. **MAXIMUM CUTTING DEPTH.** The maximum cutting depth for one pass is 1/8". Never attempt a single cut deeper than this!
7. **JOINTING WITH THE GRAIN.** Jointing against the grain or jointing end grain is dangerous and could produce chatter or excessive chip out. Always joint with the grain.
8. **KEEPING GUARDS IN PLACE.** With the exception of rabbeting, all operations must be performed with the cutterhead guard in place. After rabbeting, be sure to replace the guard.
9. **PROPER CUTTING.** When cutting, always keep the workpiece moving toward the outfeed table until the workpiece has passed completely over the cutterhead. Never back the work toward the infeed table.
10. **USING GOOD STOCK.** Jointing safety begins with your lumber. Inspect your stock carefully before you feed it over the cutterhead. Never joint a board that has loose knots, nails or staples. If you have any doubts about the stability or structural integrity of your stock, DO NOT joint it!

WARNING

Like all machines there is danger associated with this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

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 do so could result in serious personal injury, damage to equipment, or poor work results.

⚠ WARNING

Additional Safety Instructions for Planers

1. **INSTRUCTION MANUAL.** This machine presents significant safety hazards to untrained users. Read/understand this entire manual before starting the planer.
2. **REACHING INSIDE PLANER.** Never reach inside planer or remove covers when the planer is connected to power.
3. **INFEED CLEARANCE SAFETY.** The infeed roller is designed to pull material into the cutterhead. Always keep hands, clothing, and long hair away from the infeed roller during operation to prevent serious injury.
4. **SAFETY POSITION WHILE OPERATING.** The workpiece may kick out during operation. To avoid getting hit, stand to the side of the planer during the entire operation.
5. **PLANING CORRECT MATERIAL.** Only plane natural wood stock with this planer. DO NOT plane MDF, plywood, laminates, or other synthetic products.
6. **GRAIN DIRECTION.** Planing across the grain is hard on the planer and may cause the workpiece to kick out. Always plane in the same direction or at a slight angle with the wood grain.
7. **LOOKING INSIDE PLANER.** Wood chips fly around inside the planer at a high rate of speed. DO NOT look inside the planer or remove
8. **CUTTING LIMITATIONS.** The planer may kick out a workpiece at the operator or be damaged if pushed beyond these limits.
 - Maximum Depth of Cut 1/8"
 - Maximum Width of Cut 12
 - Minimum Board Length 12
 - Maximum Board Thickness 8
9. **CLEAN STOCK.** Only plane clean stock. Planing stock with nails, staples, or imbedded stone will damage your inserts / knives, and may cause a fire hazard if the dust collector captures sparks or hot particles that have contacted the inserts/knives. Always thoroughly inspect and prepare stock to avoid these hazards.
10. **REMOVING JAMMED WORKPIECES.** To avoid serious injury, always stop the planer and disconnect power before removing jammed workpieces.
11. **DULL/DAMAGED INSERTS/KNIVES.** The planer may kick out a workpiece at the operator or give poor finish results if it is operated with dull or damaged inserts/knives.
12. **UNPLUGGING DURING ADJUSTMENTS.** When connected to power, the planer can be accidentally turned ON. Always disconnect power when servicing or adjusting the components of the planer.
13. **WORKPIECE CLEARANCE.** Always verify workpiece has enough room to exit the planer before starting.

⚠ WARNING

Like all machines there is danger associated with this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury, if normal safety precautions are overlooked or ignored, serious personal injury may occur.

⚠ 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 do so could result in serious personal injury, damage to equipment, or poor work

SECTION 2: CIRCUIT REQUIREMENTS

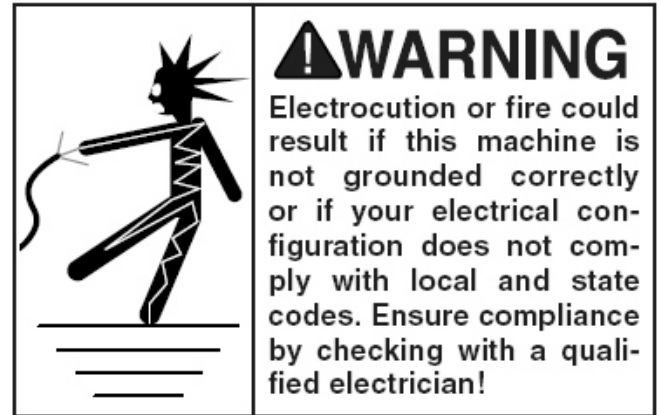
⚠️ WARNING

Serious personal injury could occur if you connect the machine to the power source before you have completed the set up process. DO NOT connect the machine to the power source until instructed to do so.

Circuit Requirements

We recommend connecting your machine to a dedicated and grounded circuit that is rated for the amperage. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.

In the event of an electrical short, grounding reduces the risk of electric shock. The grounding wire in the power cord must be properly connected to the grounding prong on the plug; likewise the outlet must be properly installed and grounded. All electrical connections must be made in accordance with local codes and ordinances.



Extension cords

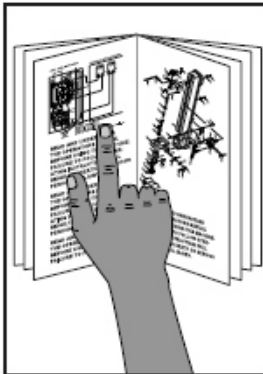
We do not recommend the use of extension cords. Instead, arrange the placement of your equipment and the installed wiring to eliminate the need for extension cords.

If you find it absolutely necessary to use an extension cord at 220V with your machine: Use at least a 10 gauge cord (or 2.0mm) that does not exceed 50 feet in length!

- The extension cord must also contain a ground wire and plug pin.
- A qualified electrician MUST size cord over 50 feet long to prevent motor damage.

SECTION 3: SET UP

Set Up Safety



⚠️ WARNING
This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



⚠️ WARNING
Wear safety glasses during the entire set up process!

Items Needed for Setup

The following items are needed to complete the setup process, but are not included with your machine:

Description

- Safety glasses (for each person) 1
- Power Lifting Equipment 1
- Lifting Straps (800 Lb. Capacity, Optional) 1
- Dust Collection System 1
- 4 Dust Hose (length as needed) 1
- 4" Hose Clam 1
- Shop Rags for Cleaning As needed
- Solvent Cleaner As needed

Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

Note: If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.

- Common Components (Figure 1 & 3) Qty
- A. Jointer/Planer Assembly (Not shown) 1
 - B. Push Blocks 2
 - C. Cutterhead Guard Assembly 1
 - D. Hardware and Tools (Not Shown)
 - Wrench 12/14 1
 - Hex Wrench 3mm 1
 - (Figure 2)
 - E. Knife Setting Jib Hardware
 - Knife Setting Gauge Feet 2
 - Knife Setting Gauge Rod 1
 - E-Clips 10mm 2
 - F. Tools (Not Shown)

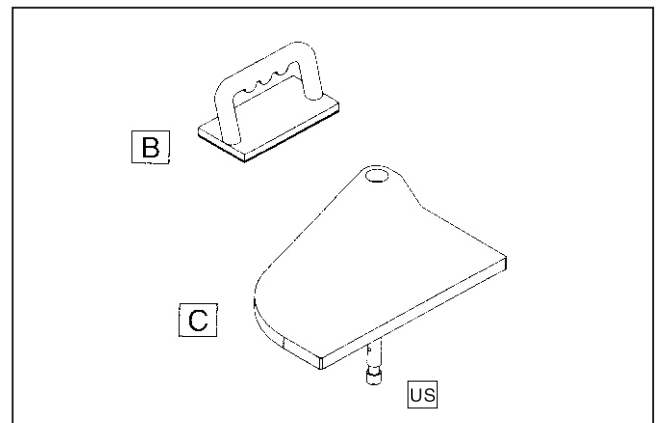


Figure 1. Common components

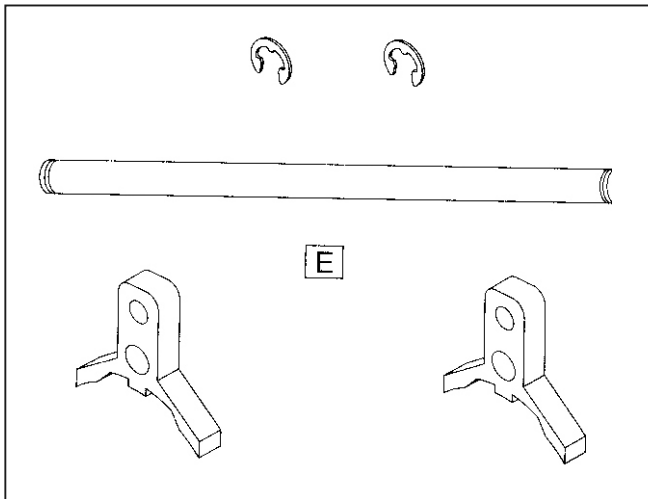


Figure 2. Knife gauge hardware

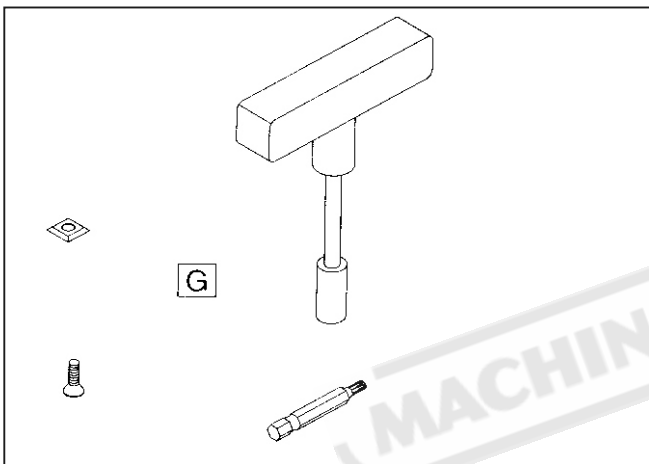


Figure 3. Spiral cutterhead hardware.(Optional)

If any nonproprietary parts are missing (e.g.a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment.remove this protective coating with a solvent cleaner or citrus-based degreaser such as Citrus Degreaser. To clean thoroughly,some parts must be removed.

For optimum performance from your machine ,clean all moving parts or sliding contact surfaces.Avoid chlorine-based solvents,such as brake parts cleaner that may damage painted surfaces.Always follow the manufacturer's instructions when using any type of cleaning product.

	<p>! WARNING Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. DO NOT use these products to clean the machinery.</p>
	<p>! CAUTION Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.</p>

Site Considerations

Floor Load

Refer to the Machine Data Sheet for the weight and footprint specifications of your machine.Some residential floors may require additional reinforcement to support both the machine and operator.

Placement Location

Consider existing and anticipated needs,size of material to be processed throuh each machine and space for auxiliary stands,work tables or other machinery when establishing a location for your new machine.See **Figure 4** for the minimum working clearances.

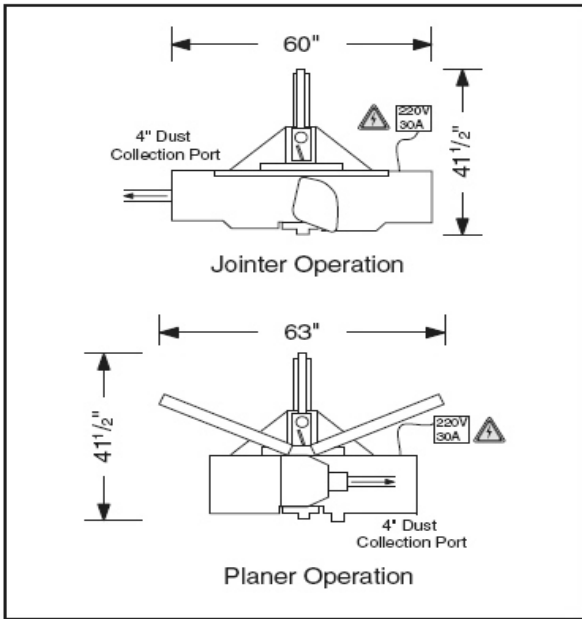


Figure 4. Minimum working clearances.

	<p>⚠ CAUTION</p> <p>Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.</p>
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Moving & Placing Base Unit

	<p>⚠ WARNING</p> <p>The Model W0301/PT300 is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment to move the shipping crate and remove the machine from the crate.</p>
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Unbolt the jointer/planer from the pallet, and use a forklift to lift the machine off the pallet and onto a suitable location as shown in **Figure 5**. Only lift the machine enough to clear the floor.



Figure 5. Lifting model with a forklift.

You can also attach hooks and lifting straps to the machine using the three lifting holes shown in **Figures 6 & 7** with a forklift, hoist, or boom crane. If you choose this alternative, you must punch out the lifting strap holes; this will permanently alter your machine.

If you are unsure how to lift this machine, consult a qualified professional. After setting the machine in place, remove the shipping brackets on both sides (**Figure 6**).

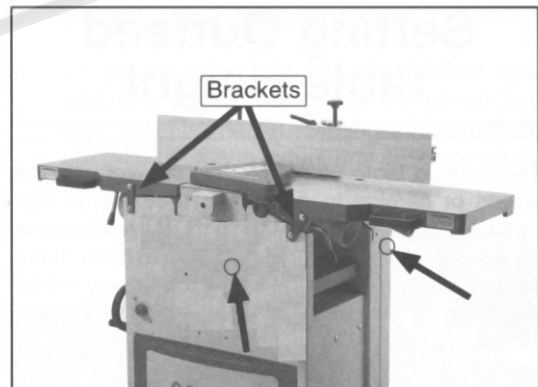


Figure 6. Front and right rear lifting hole locations.

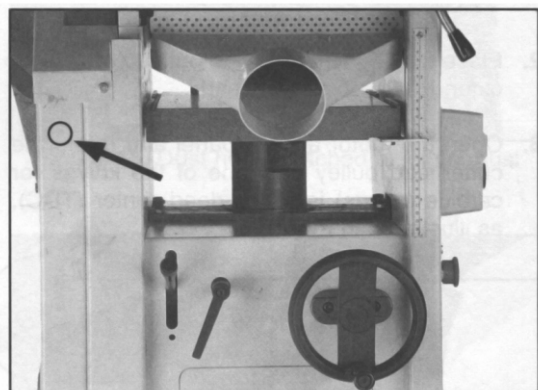


Figure 7. Left rear lifting hole location.

Setting Outfeed Table Height

The outfeed table height **MUST** be level with the knives or carbide inserts when they are at topdead-center. If the outfeed table is set too low, the workpiece will be tapered from front to back. If the outfeed table is set too high, the workpiece will hit the edge of the outfeed table during operation, increasing the chance of kickback.

To set the outfeed table height:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Place a straightedge on the outfeed table so it extends over the cutterhead.
3. Open the motor access panel and rotate the cutterhead pulley until one of the knives (or carbide inserts) is at top-dead-center (TDC) as illustrated in **Figure 8**.

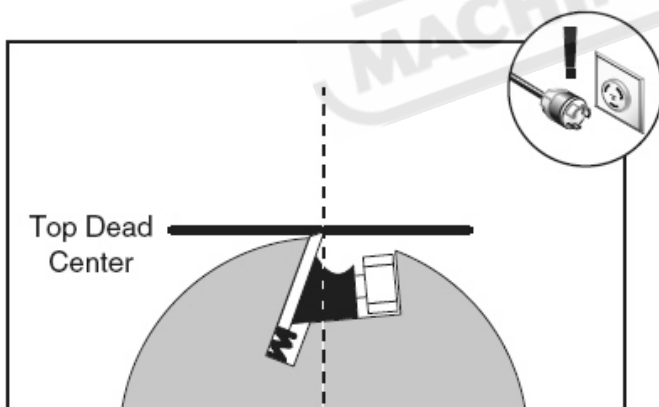


Figure 8. Cutterhead knife at top-dead-center

4. Raise or lower the outfeed table until the Knife (or carbide insert) just touches the straightedge (**Figure 9**).

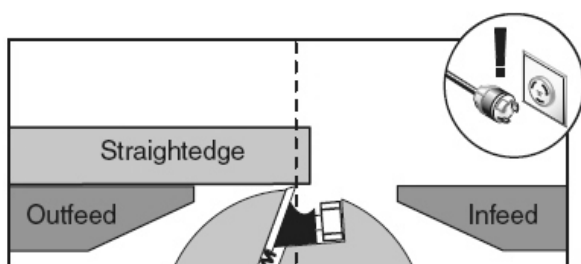


Figure 9. Using a straightedge to align outfeed

Cutterhead Guard

To install the cutterhead guard:(optional)

1. Remove the shaft lock knob and insert the cutterhead guard shaft into the bracket hole as shown in **Figure 10**.

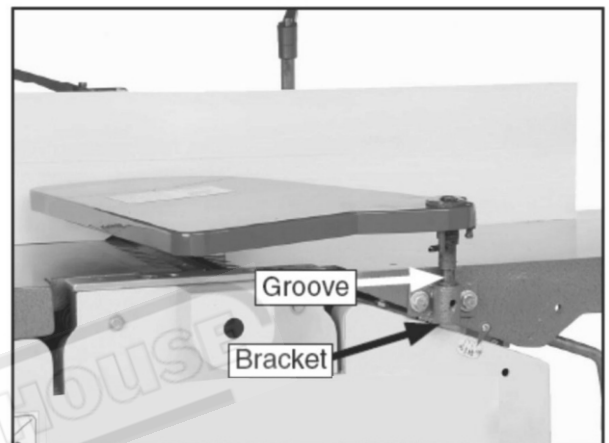


Figure 10. Installing cutterhead guard.

2. Move the fence forward until it touches the cutterhead guard.
3. thread the lock knob into the bracket so the threads fit into the shaft groove (**Figure 10**). And secure the guard into place. Adjust the guard and lock knob as needed so the guard fully covers the cutterhead.
4. Test the guard by pulling it back and letting go. The rubber dot on the guard should hit the fence when the guard comes back. The guard should snap back over the cutterhead without dragging across the table.
 - If the guard drags across the table, raise it until it won't drag, then tighten the shaft lock.
 - If the guard does not snap back, remove it and repeat Steps 1–3.

Knife Setting Gauge

Assemble the knife setting gauge using the knife setting gauge rod, feet and 10mm e-clips as shown in **Figure 11**.

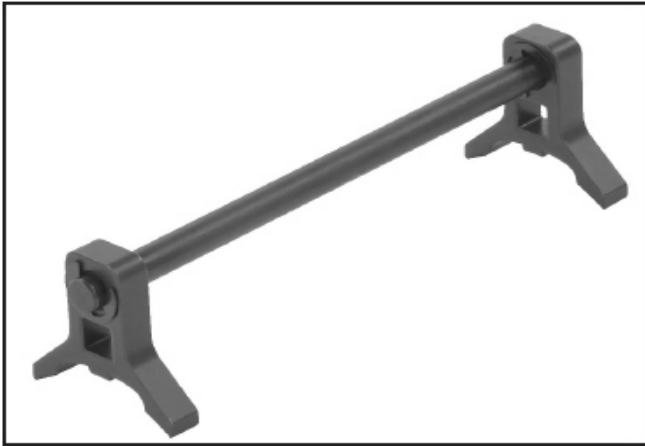


Figure 11. Knife setting gauge assembly.

To connect a dust collection hose:

1. Fit the 4 dust hose over the jointer dust port,(see **Figure 12**, or over the planer dust port(see **Figure 13**),depending upon which operation mode is setup,and secure in place with a hose clamp.

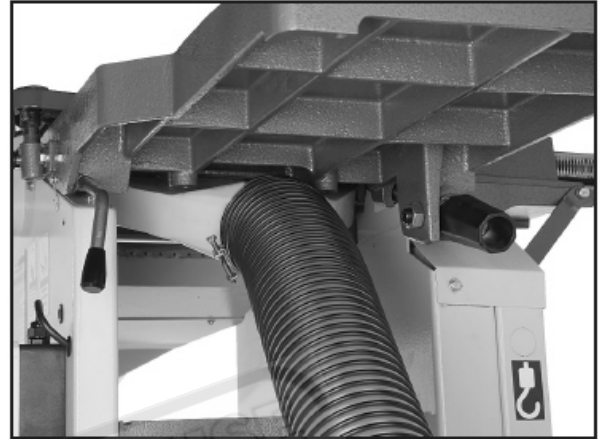


Figure 12. Dust hose attached to jointer dust port.

Dust Collection

⚠ CAUTION

DO NOT operate the Model W0301/PT300 without an adequate dust collection system. This machine creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

Recommended CFM at Each Dust Port:400
Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine (3)number of branches or wyes, and (4)amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to"book.

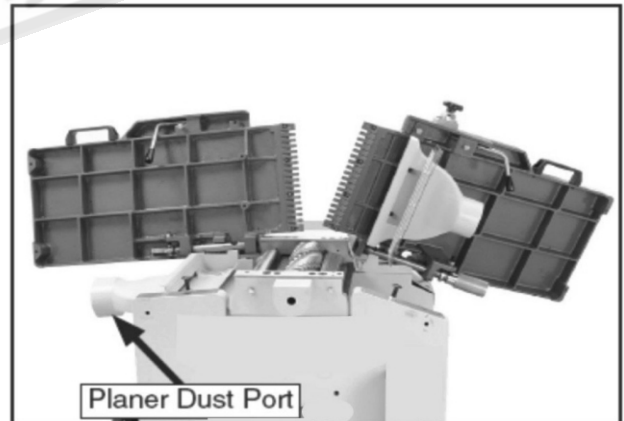


Figure 13. Planer dust port in "down"position.

Test Run

Once the assembly is complete, test run your machine to make sure it runs properly and is ready for regular operation. The test run consists of verifying the following: 1) The motor powers up and runs smoothly and without vibration and 2) the stop button safety feature works correctly.

If during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review Troubleshooting on **Page 32**.

If you cannot find a remedy, contact our Tech Support.

WARNING

Before starting the jointer/planer, make sure you have performed the preceding assembly and adjustment instructions, and you have are familiar with the various functions and safety features on this machine. Failure to follow this warning could result in serious personal injury or even death!

To test run the machine:

1. Make sure you understand the safety instructions at the beginning of the manual and that the machine is setup properly.
2. Make sure all tools and objects used during setup are cleared away from the machine.
3. Make sure the jointer tables are floded down and licker in place (see **Page 17**).
4. Connect the machine to the power source.
5. Push the EMERGENCY OFF button in, then twist it clockwise so it pops out. When the OFF button pops out, the switch is reset and ready for operation (see **Figure 14**).

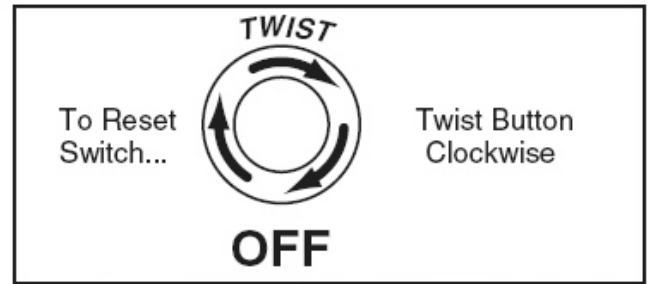


Figure 14. Resetting the Emergency Off switch.

6. Verify that the machine is operating correctly by pushing the green ON button. When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises. Investigate and correct strange or unusual noises or vibrations before operating the machine further.

Always disconnect the machine from power when investigating or correcting potential problems.

7. Press the EMERGENCY OFF button to stop the machine.

8. WITHOUT resetting the switch, press the ON button. The machine should not start.

—If the machine does not start, the EMERGENCY OFF button safety feature is working correctly.

—If the machine does start (with the EMERGENCY OFF button pushed in), immediately disconnect power to the machine. The EMERGENCY OFF button safety feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

9. Press the ON button, then immediately press the OFF button on the magnetic box (**Figure 1, Page 4**).

—If the machine turns off, the OFF button is working correctly. The Test Run is complete.

—If the machine does not stop, disconnect power to the machine. The OFF button is not working correctly. This feature must work properly before proceeding with regular operations. Call Tech Support for help.

Recommended Adjustments

For your convenience, the adjustments listed below have been performed at the factory and no further setup is required to operate your machine.

However, because of the many variables involved with shipping and storage, some of these adjustments may need to be repeated to ensure optimum cutting results.

Keep this in mind as you start to use your new jointer/planer.

Tighten V-Belts

The final step in the setup process must be done after approximately 16 hours of operation. During this first 16 hours, the V-belts will stretch and seat into the pulley grooves. After this 16 hours, you must Retension the V-belts to avoid slippage and burn out. Refer to **Page 26** when you are ready to perform this important adjustment.

Note: Pulleys and belts can get hot. This is a normal condition. Allow them to cool before making adjustments.

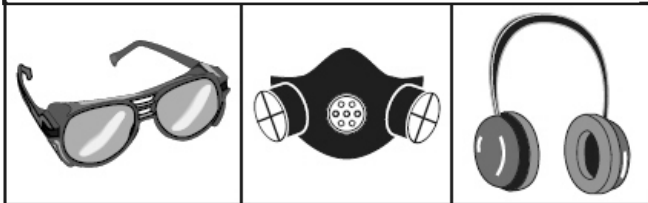
A small amount of black belt dust at the bottom of the belt housing is normal during the life of the machine and does not indicate premature belt failure is in progress.

SECTION 4: OPERATIONS

Operation Safety

⚠ WARNING

Damage to your eyes, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.



⚠ WARNING



Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.

Basic Jointer Controls

This section covers the basic controls used during routine jointer operations.

To use the machine as a planer, you must perform a changeover (see Jointer-Planer Conversion, **Page 17**)

START Button: Starts motor only if the EMERGENCY OFF button is in the out position.

OFF Button: Stops motor when pushed in.
EMERGENCY OFF Button: Disables the

START button. Enable the START button by twisting the EMERGENCY OFF button until it pops out.

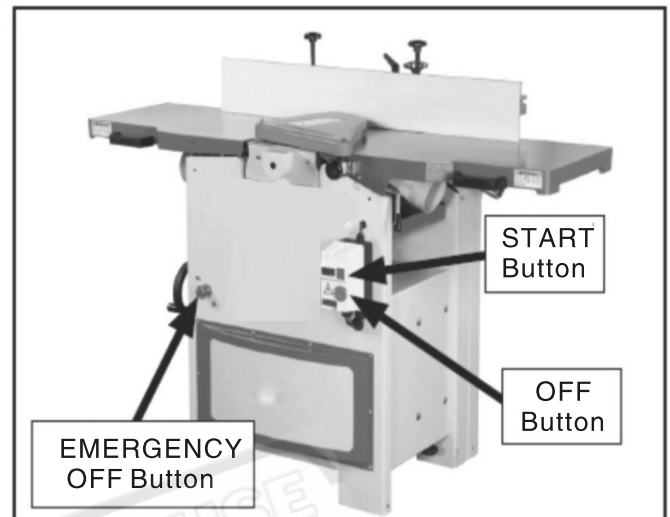


Figure 15. START/STOP button locations.

Table Movement: Loosen the cap screws on the infeed handgrip and outfeed table adjustment knob before moving the infeed and outfeed tables (**Figure 16**). Use an adjust table wrench to turn the outfeed adjustment knob.

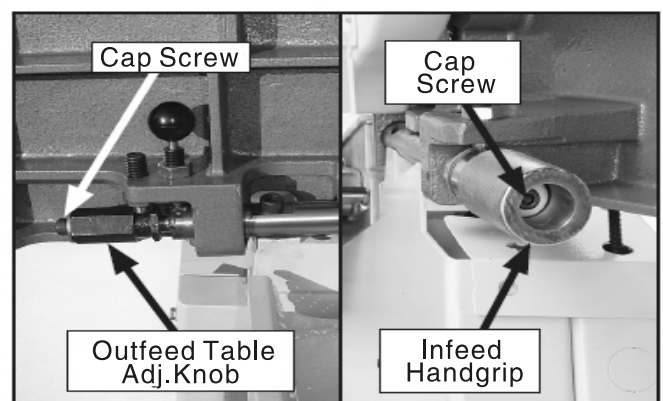


Figure 16. Table control locations.

Fence Movement: The fence lock keeps the fence in position (**Figure 17**). To move the fence, loosen the lock and turn the fence adjustment knob to move it as needed.

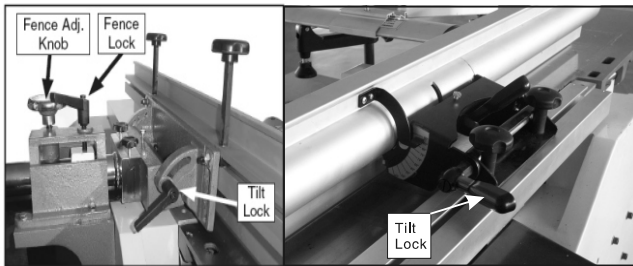


Figure 17. Fence lock location.

Fence Tilting: The tilt lock (**Figure 17**) secures the fence at any position in the available range.

Fence stops set the fence at 90° or 45° Outward. The tilt lock must be tightened before cutting. See **Page 27** for more detail on adjusting the fence stops.

To move the fence to 45° outward, loosen the tilt lock and fence height knobs, move the fence flush against the table (see **Figure 18**), and tighten the height knobs and tilt lock. Verify the angle with a 45° square.

To return the fence to the 90° position, loosen the tilt lock and height knobs, raise the fence to 90° and tighten the height knobs and tilt lock. Check the fence angle with a 90° square, and make sure the fence and table are flush.

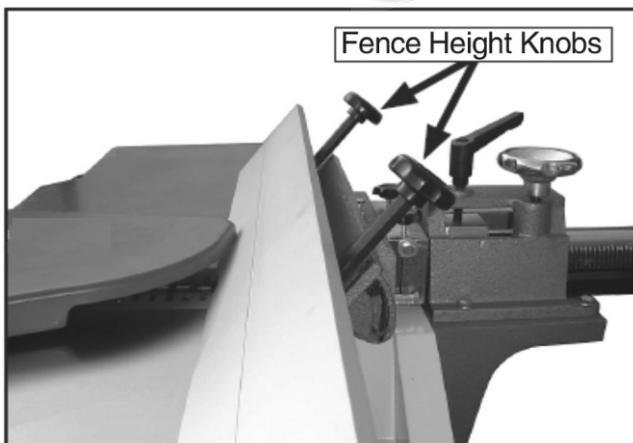


Figure 18. Fence flush with table at 45° .

Basic Planer Controls

This section covers the basic controls used during routine planer operations.

See **Page 14** for a description of START/ STOP/ EMERGENCY OFF buttons.

Table Height Handwheel: To move the planer table, rotate the table height handwheel (**Figure 19**).

Table Lock Lever: Turn the lever clockwise to prevent the table moving during planer operations; loosen to move the table handwheel.

Table Height Scale: Read depth-of-cut from the inch/millimeter scale.

Change Lever: When the lever is in the "up" position this converts the machine to planer operations

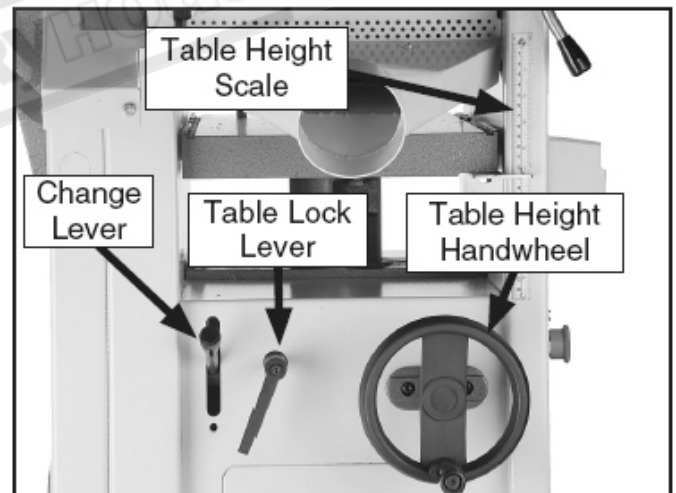


Figure 19. Planer table control locations. .

Jointer-Planer Conversion

The Model W0301/PT300 is ready for jointer operations after it is setup. To use the machine as a planer, you must perform a conversion.

To set up the machine for planer operations:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Remove the cutterhead guard (two type).
3. Loosen the quick release knobs (**Figure 20**) and slide the fence off the machine.

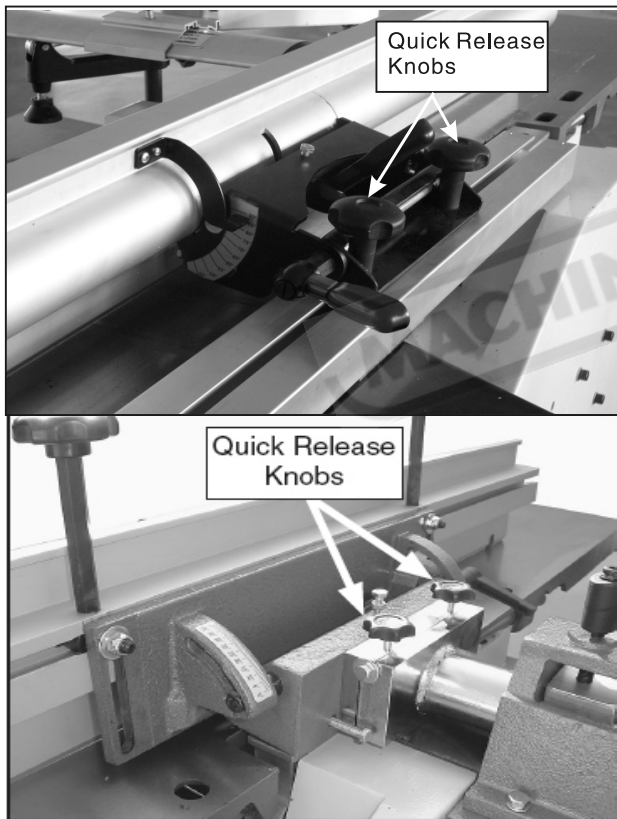


Figure 20. Fence removal.

4. Remove the dust hose from the jointer dust port.
5. Turn the table lock lever (**Figure 21**) clockwise, pull it out, and turn the table up. The table will lock into place when raised to its highest

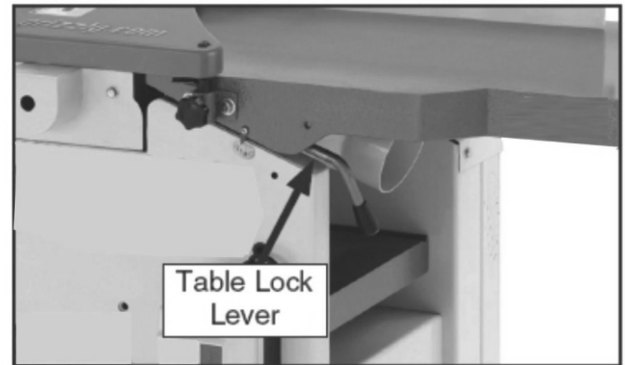


Figure 21. Infeed table lock lever.

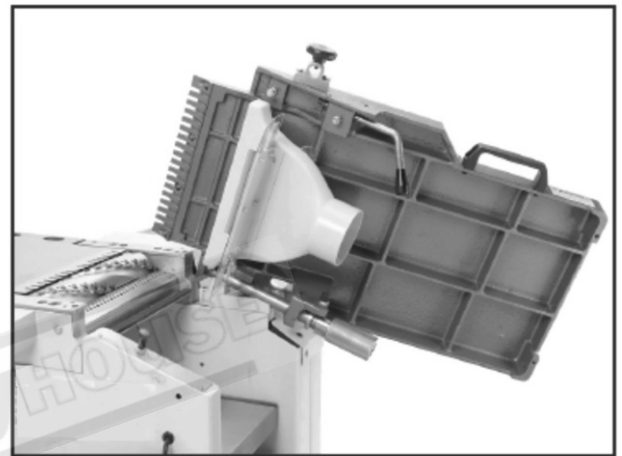


Figure 22. Infeed table in "up" position.

6. Raise the outfeed table in the same manner as you did with the infeed table.
7. Swing the planer dust port clockwise over the cutterhead as shown in **Figure 23**.



Figure 23. Planer dust port setup.

8. Connect the dust hose to the planer dust port.
9. Flip the change lever (**Figure 19**) up. To change the machine for jointer operations:
 1. Lower the planer table to below the 4" mark on the table height scale.

2. Reverse Steps 2–9 in the previous subsection. Pull up on the table lock knobs to Lower the table. Make sure you lower the planer dust port to the "down" position (as shown in **Figure 24**).



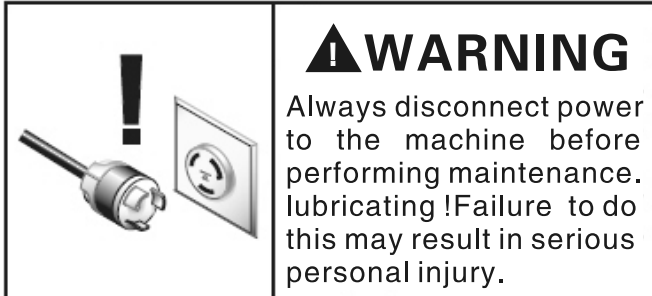
Figure 24. Planer dust port in "down" position.

! CAUTION

Serious personal injury could occur if you place your fingers between the tables and base or between pivot points. Your hands could be pinched or crushed!

MACHINERYHOUSE

SECTION 5: MAINTENANCE



Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Check:

- Clean unpainted cast iron parts of jointer and planer tables
- Lubricate feed rollers

Weekly Check:

- Clean cutterhead

Monthly Check:

- Inspect V-belt tension, damage, or wear
- Clean/vacuum dust buildup from inside cabinet and off motor
- Lubricate worm gear
- Lubricate roller chains
- Lubricate elevation lead screw
- Lubricate worm shaft

Cleaning

Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth this ensures moisture from wood dust does not remain on bare metal surfaces. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning. We recommend products like SLIPIT,

V-Belts

V-belt removal and replacement involves removing the V-belts, rolling them off of the pulleys, replacing them with new belts, then retensioning them.

Always replace V-belts as a set, or belt tension may not be even among the belts and may cause premature belt failure.

To adjust/replace belts the V-belts:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Remove the five cap screw securing the V-belt cover (see **Figure 25**).

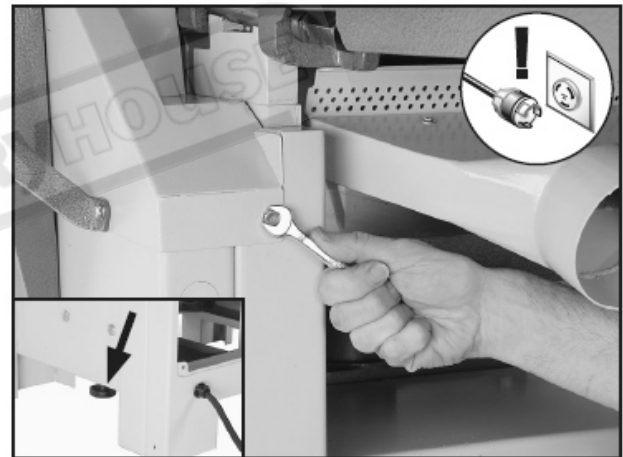


Figure 25. Removing Capscrew on V-belt cover and belt tension knob (inset).

3. Remove the fence and fence bracket, then remove the motor access cover and belt tension knob (**Figure 25**).

4. Using a 14mm wrench, loosen the four adjustment nuts and raise the motor (see **Figure 26**) to remove V-belt tension.

It may help to use a 2x4 to lift the motor.

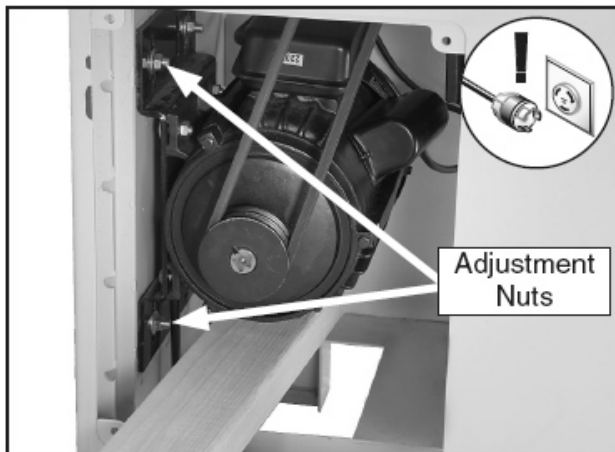


Figure 26. Removing V-belt tension.

5. Remove both the belts and replace them with a new set.
 6. Lower the motor and reinstall the belt tension knob.
 7. Using the belt tension knob, adjust the Vbelt tension so there is approximately 1/4"–1/2" deflection when the V-belts are pushed with moderate pressure as shown in **Figure 27**.
- Note: After the first 16 hours of belt life, retension the belts, as they will stretch and seat during this time.
8. Replace the motor access cover, fence bracket, and fence.

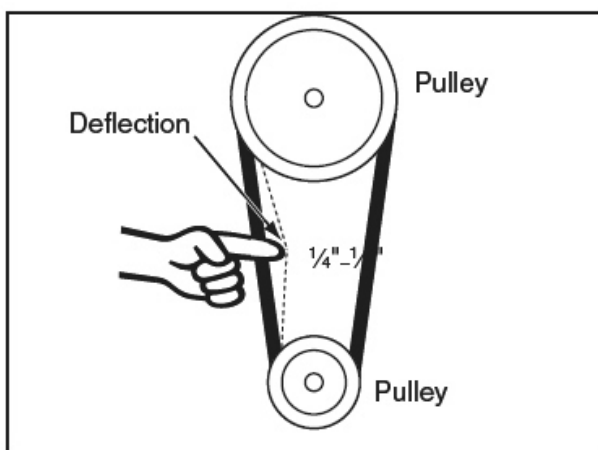
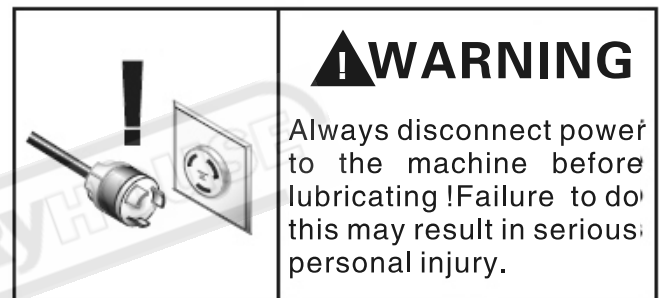


Figure 27. Checking V-belt tension.

Lubrication

Since all bearings are sealed and permanently lubricated, simply leave them alone until they need to be replaced. **DO NOT** lubricate them.

Proper lubrication of other jointer/planer components is essential for long life and rouble-free operation. Below is a list of components that require periodic lubrication. Schedules are based on daily use. Adjust accordingly for your level of use.



Roller Chains: Inspect monthly and lubricate with multi-purpose grease when needed to avoid rust and binding. See the locations shown in **Figure 28**, and refer to Parts Breakdown, Remove the fence assembly and V-belt cover to gain access.

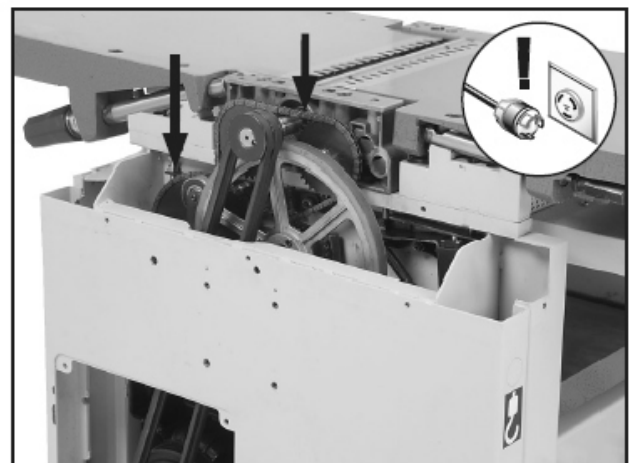


Figure 28. Roller chains.

Lead Screw: The lead screw should be lubricated with multi-purpose grease once a month.

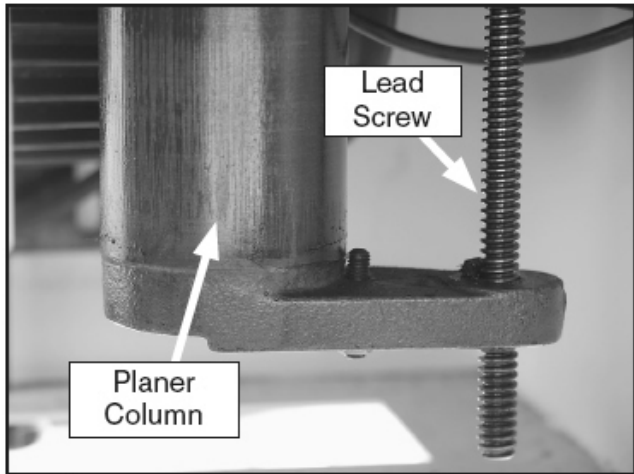


Figure 29. Planer column and lead screw.

Planer Column: Clean with solvent, wipe dry, and relubricate with multi-purpose grease when needed.

Worm Gear: Inspect every six months and lubricate with multi-purpose grease when needed (see Parts Breakdown). Remove the worm gear box to inspect.

Fence (Optional) : Lubricate with multi-purpose grease when needed in the locations shown in Figure 30.

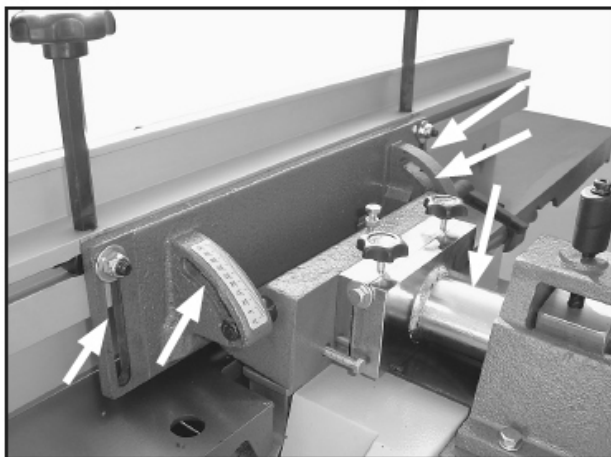


Figure 30. Fence lubrication locations.

Checking/Adjusting Jointer Table Parallelism

The outfeed table is preset by the factory parallel with the cutterhead. However, it is critical to check this setting. If the tables are not parallel with the cutterhead or each other, then poor cutting results and kickback can occur.

Tools Needed

- Qty Straightedge 1
- Adjustable Wrench 1

Checking Outfeed Table Parallelism

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Put on leather gloves, then remove the cutterhead guard and fence.
3. Place the straightedge on the outfeed table so it hangs over the cutterhead in one of the positions shown in Figure 31.

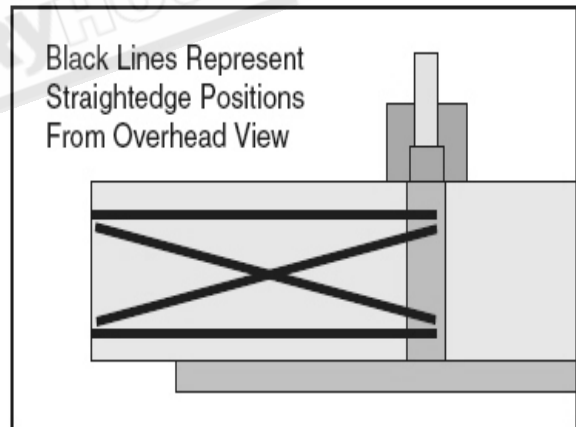


Figure 31. Straightedge positions for verifying if outfeed table is parallel with cutterhead.

4. Try to fit a feeler gauge or combination of feeler gauges 0.062" to 0.069" between the bottom of the ruler and the cutterhead body as shown in Figure 32.

If the feeler gauge slides with slight resistance between the ruler and cutterhead and no gaps appear, go to Step 5.

If the feeler gauge(s) do not fit between the ruler and cutterhead, or if there is a gap, adjust the table height until the feeler gauge slides with slight resistance between the ruler and table.

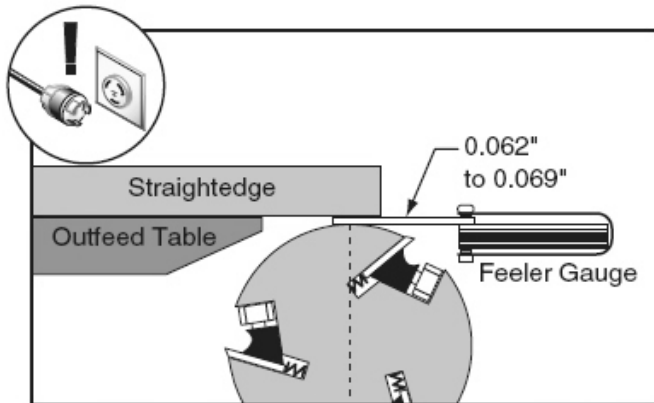


Figure 32. Using feeler gauge to check outfeed table–cutterhead height.

5. Continue placing the straightedge in the remaining positions shown in **Figure 31**. In each position, the feeler gauge measurement should be nearly identical. If the outfeed table height above the cutterhead is equal across the table in each position, then the outfeed table is already parallel with the cutterhead. Go to **Checking Infeed Table Parallelism**, on **Page 22**.

If the outfeed table height is not equal across the table in any of the positions, then the outfeed table is not parallel with the cutterhead.

Correct the outfeed table parallelism, then correct the infeed table parallelism.

Correcting Outfeed Table to Cutterhead Parallelism

This procedure involves turning the table stop bolts to raise or lower the front of the tables until they are parallel with the cutterhead.

To correct outfeed table parallelism:

1. Loosen the lock nuts on both stop bolts shown in **Figure 33** at the front of the table.

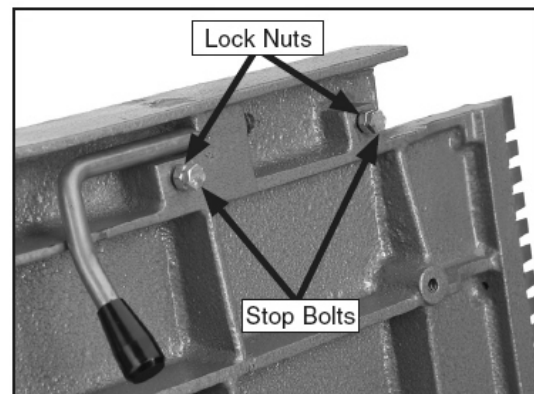


Figure 33. Outfeed table stop bolt and lock nut.

2. Raise the stop bolts just enough so the front edge of the table is higher than the cutterhead, then adjust each stop bolt a sixth of a turn clockwise to gradually lower the table.
3. Check the outfeed table height again (see Steps 3–5, **Page 21**).
4. Continue lowering the bolts and checking until the outfeed table height above the cutterhead is equal across the table.

Checking Infeed Table Parallelism

1. Follow all the steps for checking the outfeed table parallelism to first make sure that the outfeed table is parallel with the cutterhead.
2. Place the straightedge halfway across the infeed table and halfway over the outfeed table, and adjust the infeed table even with the outfeed table, as shown in **Figure 34**.

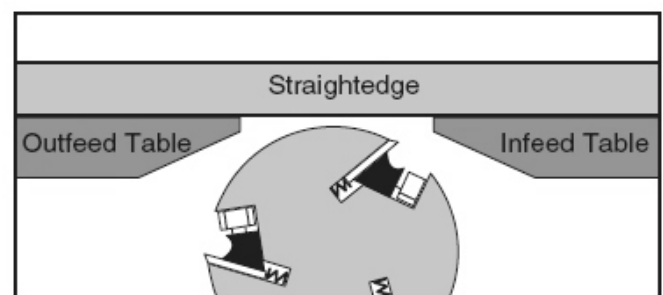


Figure 34. Infeed and outfeed tables set evenly.

- If a knife or insert touches the straightedge, turn the cutterhead so the knives do not interfere.
- If the cutterhead touches the straightedge, raise the outfeed table higher than the cutterhead.

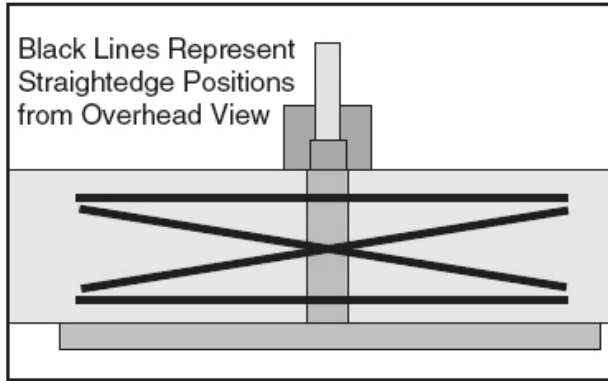


Figure 35. Straightedge positions for checking infeed/outfeed table parallelism.

If the straightedge sits flat against both the infeed and outfeed table, then the tables are parallel. Set the outfeed table height and replace the cutterhead guard (**Page 13**).

If the straightedge does not sit flat against both the infeed and outfeed table in any of the positions, then follow the Adjusting Table Parallelism instructions.

Adjusting Jointer Table Parallelism

For safe and proper cutting results, the tables must be parallel to the cutterhead. Adjusting them to be parallel is a task of precision and patience and may take up to one hour to complete. Luckily, this is considered a permanent adjustment and should not need to be repeated for the life of the machine. Due to the complex nature of this task, we recommend that you double check the current table positions to make sure that they really need to be adjusted before starting. (table raised for clarity.) You can adjust stop bolts on the front of the tables and shim under the back of the tables to adjust them parallel to the cutterhead.

The correct order for adjusting the table Parallelism is to first adjust the outfeed table parallel with the cutterhead, then adjust the infeed table parallel with the outfeed table.

To adjust the jointer table parallelism:

1. Perform the "Checking/Adjusting Table Parallelism" procedure on **Page 21**, including making any necessary adjustments so the cutterhead and outfeed table are parallel.
2. Place the straightedge halfway across the infeed table and halfway over the outfeed table, as shown in **Figure 35**.
3. Place the straightedge in one of the positions shown in **Figure 35**.

—If the front of the infeed table is higher or lower than the outfeed table, adjust the infeed table stop bolts (see Correcting Infeed Table to Cutterhead Parallelism on **Page 21**).

—If the rear of the infeed table is higher or lower than the outfeed table, shim the infeed table to adjust it parallel with the outfeed table. Follow Steps 4–6.

4. Loosen the cap screws shown in **Figure 36**.

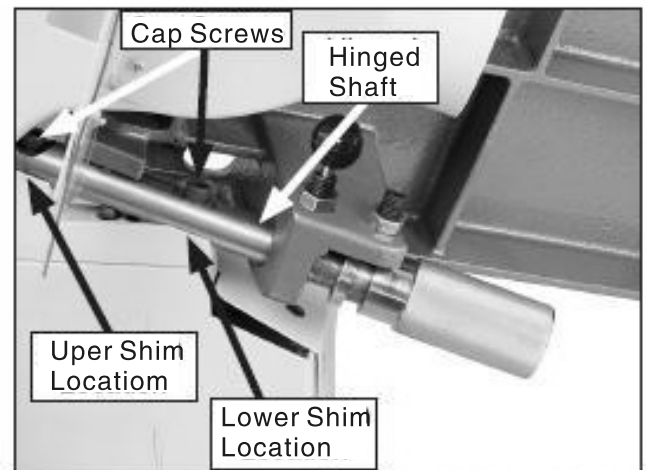


Figure 36. Infeed table hinged shaft. (Jointer table raised for clarity)

5. While an assistant raises the infeed table, slip shims between the hinged shaft and the jointer base, then retighten the cap screw. Shimming the top position will raise the rear cutterhead side of the table, shimming the lower position will raise the rear infeed side.

6. Repeat Step 3 with each of the remaining straightedge positions and adjust the table front to back using the shims as many times as necessary until the infeed table is parallel with the outfeed table.

7. Set the knives (refer to **Page 24**).

8. Reinstall the cutterhead guard.

Inspecting Knives

Tools Needed:	Qty
Knife Setting Gauge	1
Straightedge	1

The height of the knives can be inspected with the knife setting jig or with a straightedge. Inspecting the height of the knives with a Straightedge ensures that they are set evenly with the outfeed table at their highest point in the cutterhead rotation.

To inspect the knives with the knife setting gauge:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Remove the cutterhead guard.
3. Raise both tables out of the way.
4. Place the knife setting gauge on the cutterhead, directly over a knife, as shown in **Figure 37**.

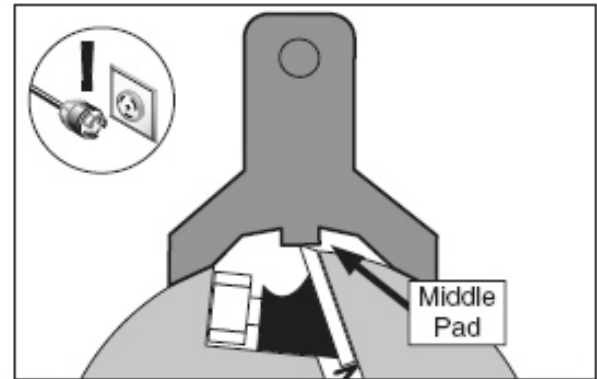


Figure 37. Typical gauge positioned over cutterhead knife.

5. Carefully inspect how the gauge touches the cutterhead and the knife.

—If both outside legs of the gauge sit firmly on the cutterhead and the middle pad just touches the knife, then that knife is set correctly. (Repeat this inspection with the other knives.)

—If the gauge does not sit firmly on the cutterhead and touch the knife edge as described, then reset that knife. (Repeat this inspection with the other knives before resetting.)

6. Lower the tables back over the cutterhead.

7. REPLACE CUTTERHEAD GUARD!

To inspect the knives with a straightedge:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Remove the cutterhead guard or block it out of the way.
3. Using a straightedge on the outfeed table, check the height of each knife at the positions shown in **Figure 38**.

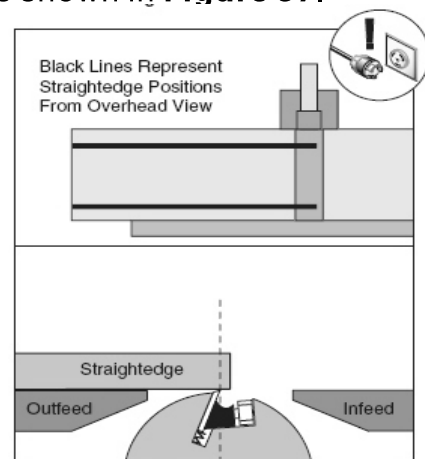


Figure 38. Checking knife height with a straightedge.

The knives are set correctly when they just touch the bottom of the straightedge in each of the straightedge positions. If the knives do not touch the straightedge or they lift it up in any of the positions, then those knives need to be adjusted.

Adjusting Replacing Knives

Tools Needed:	Qty
Straightedge	1
Hex Wrench 3mm	1
Wrench 8mm	1

Setting the knives correctly is crucial to the proper operation of the jointer and is very important in keeping the knives sharp. If one knife is higher than the others, it will do the majority of the work, and thus, dull much faster than the others.

There are two options for setting the knives—the straightedge method and the knife setting jig method. Each option has advantages and disadvantages and the correct one for you will become a matter of personal preference.

For best results, the tables must be parallel with each other (Checking/ Adjusting Table Parallelism on **Page 20**) and the outfeed table height must be properly set (Setting Outfeed Table Height on **Page 11**).

Straightedge Method:

A high quality straightedge held flat against the outfeed table and the knife heights are set to the bottom of the straightedge, as shown in **Figure 38**.

Because the knife projection height from the cutterhead is dependent on the outfeed table height, the outfeed table must be parallel to the cutterhead (**Page 20**) and set as described in Setting Outfeed Table Height on Page 11 for this method to work correctly.

Knife Setting Jig Method: Both tables are flipped up to fit the gauge on the cutterhead, as shown in **Figure 39**, and the knife heights are set to just touch the middle pad of the gauge.

The knife setting gauge makes it easy to ensure that the knives project out of the cutterhead evenly. After using the knife setting gauge to set the knives, you have to re-adjust the outfeed table height to ensure that it is even with the knives at their highest point of rotation.

The included knife gauge is designed to set the knives approximately 0.062" higher than the cutterhead.

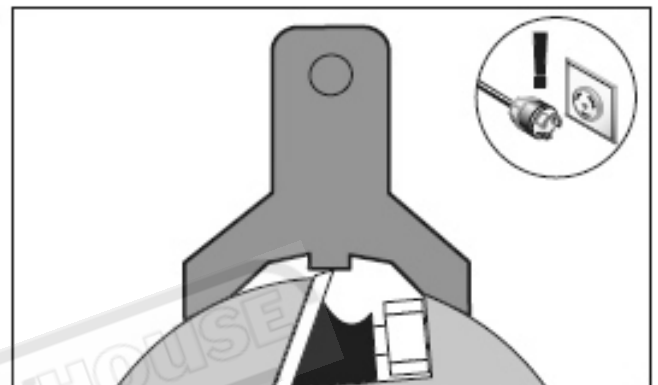


Figure 39. Using knife setting gauge to set knife height.

The Model W0301/PT300 comes with both jack screws and springs inside the cutterhead to provide two options for adjusting the knives (see **Figure 40**).

Note: Only one of these options is needed to set the knives see Step 5 for clarification.

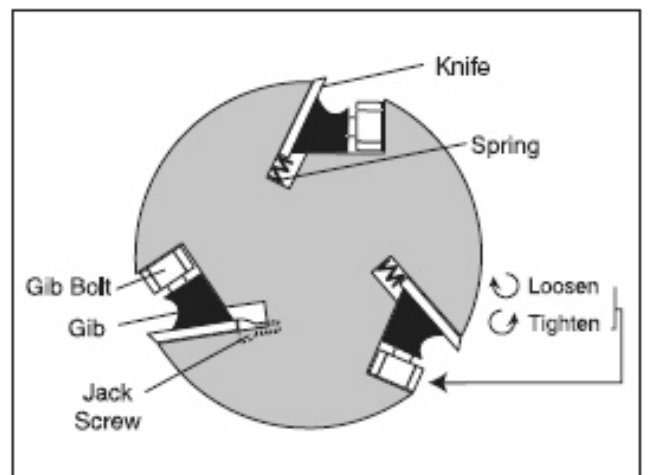


Figure 40. Cutterhead profile diagram.

To adjust/replace the knives:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Remove the cutterhead guard from the table, and flip up the lower the infeed and outfeed tables. This will give you unrestricted access to the cutterhead.
3. Remove the motor access panel to expose the motor pulley.
4. Rotate the motor pulley to give you good access to one of the cutterhead knives.

⚠ CAUTION

Knives are sharp! When adjusting knives, wear gloves or cover knives with rags to avoid contact with knives, which could cause serious personal injury.

He jack screws through the access holes in the cutterhead (**Figure 41**) and rotate them to raise/ lower the knife. When the knife is set correctly, it will barely touch the middle pad of the knife setting gauge. For now, only tighten the gib bolts enough to hold the knife in place. Repeat Steps 5–7 with the other Knives.

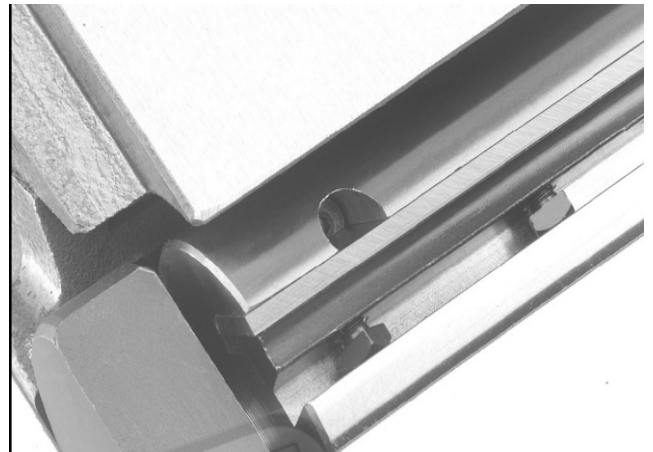


Figure 41. Jack screw access hole.

5. Loosen the cutterhead gib bolts, starting in the middle and alternating back and forth until all of the gib bolts are loose, but not falling out.

If this is the first time you are setting the knives, remove the gib and knife from the cutterhead. Decide which adjustment option you are going to use between the jack screws and the springs.

If you decide to use the jack screws, remove the springs from the cutterhead (they are located directly below the knives).

If you decide to use the springs, just thread the jack screws completely into the cutterhead so they will not get lost the gib and knife.

6. Remove and clean the gibs and clean inside the cutterhead slot to remove all pitch or sawdust.

Coat the knives and gibs with a metal protectant, then fit the gibs back in the cutterhead with the new knives.

7. Adjusting the knife heights:

Jack Screws: Using a 3mm hex wrench, find

Springs: Push the knife down with the gauge so that the knife edge is touching the middle pad of the gauge. Hold the gauge down and only tighten the gib bolts enough to hold the knife in place. Repeat Steps 5–7 with the other knives.

8. Rotate the cutterhead to the first knife you started with. Slightly tighten all the gib bolts by following the tightening sequence show in **Figure 42**. Repeat this step on the rest of the knives, then final tighten each gib bolt.

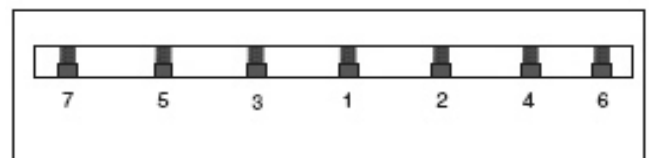


Figure 42. Gib tightening sequence.

9. If you used the knife setting gauge to set the knife heights, use the straightedge to adjust the outfeed table height evenly with the knives at top dead center (the highest point in their rotation).

If you used the straightedge to set the knife heights, skip to the next step.

10. Replace the cutterhead guard and the motor access panel.

Replacing Carbide Inserts (optional)

Tools Needed: Qty

T-Handle Wrench w/T-20 Torx Bit 1

The cutterhead is equipped with 56 indexable carbide inserts.

Each insert can be rotated to reveal any one of its four cutting edges. Therefore, if one cutting edge becomes dull or damaged, simply rotate it 90° to reveal a fresh cutting edge (**Figure 43**).

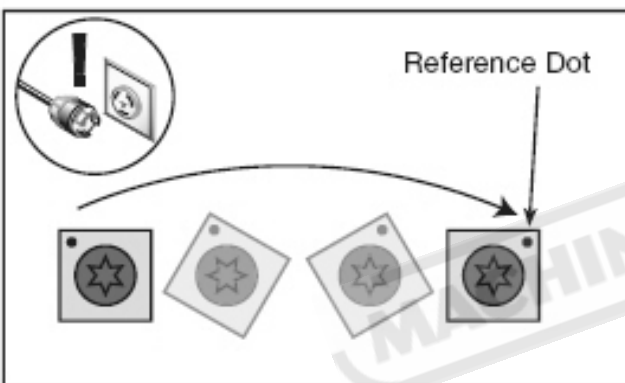


Figure 43. Insert rotating sequence.

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

To rotate or change a carbide insert:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!

2. Remove any sawdust from the head of the carbide insert Torx screw.

3. Remove the Torx screw and carbide insert.

4. Clean all dust and dirt off the insert and the cutterhead pocket from which the insert was removed, and replace the insert so a fresh, sharp edge is facing outward.

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

5. Lubricate the Torx screw threads with a light machine oil, wipe the excess oil off the threads, and torque the Torx screw to 48–50 inch/pounds.

Note: Excess oil may squeeze between the insert and cutterhead, thereby lifting the insert slightly and affecting workpiece finishes.

Calibrating Depth Scale

The depth scale on the infeed table can be calibrated or "zeroed" if it is not correct.

Tools Needed Qty

Straightedge 1

Phillips Screwdriver 1

To calibrate the depth scale:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!

2. Set the outfeed table height as described in the Setting Outfeed Table Height instructions on **Page 11**.

3. Use the straightedge to help adjust the infeed table exactly even with the outfeed table, as shown in **Figure 44**.

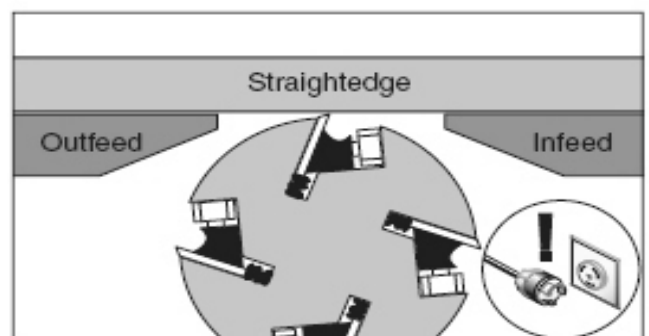


Figure 44. Infeed table even with outfeed table.

4. Using a screwdriver, adjust the scale pointer to zero (**Figure 45**).

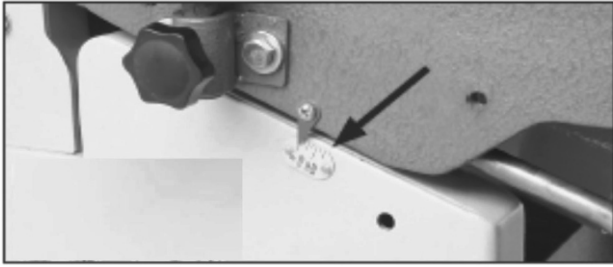


Figure 45. Depth scale adjusted to “0” position.

Pulley Alignment

Tools Needed :

	Qty
Straightedge.....	1
Hex Wrench 3mm.....	1
C-Clamps.....	2

Proper pulley alignment (see **Figure 46**) prevents premature belt wear. The pulleys are properly aligned when they are parallel and in the same plane as each other.

To align the pulleys:

1. Remove the fence assembly, fence bracket and the V-belt cover (**Figure 46**).



Figure 46. Fence and V-belt cover removed.

2. Place a 2" C-clamp on each pulley so the adjustment shaft faces out, place a straightedge on the clamps, as shown in **Figure 46**, and visually check pulley alignment.

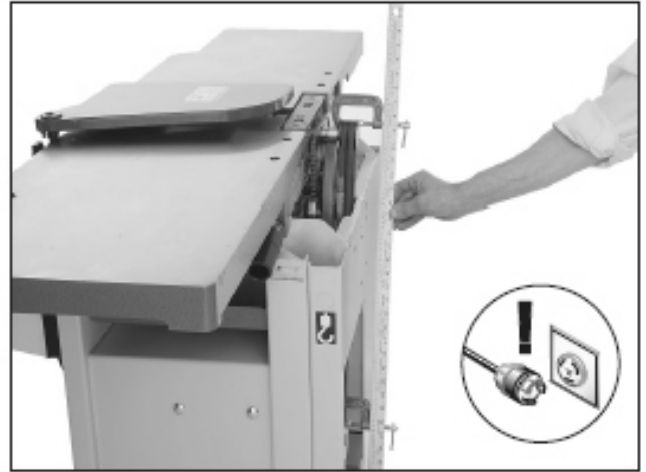


Figure 47. Checking belt alignment.

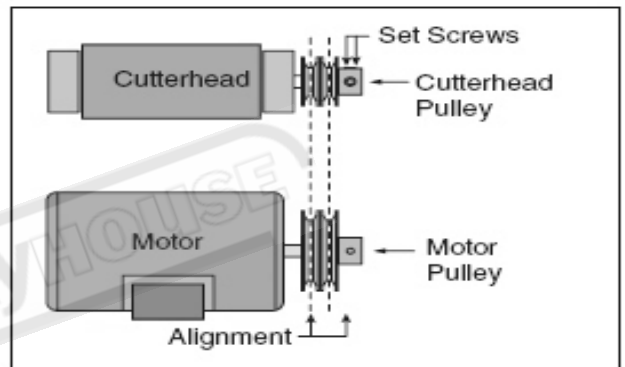


Figure 48. Pulleys properly aligned.

Vbelts are parallel and coplaner.

If the pulleys are aligned, then no adjustments are necessary.

If the pulleys are NOT aligned, perform Steps 3 & 4.

3. Remove the V-belts (see **Page 34**), loosen the set screws on the end of the cutterhead pulley, and align the cutterhead pulley with the motor pulley.

4. Tighten the set screws, replace the V-belts, and repeat Step 2.

5. Reinstall the V-belt cover, fence bracket and fence assembly.

Setting Fence Stops

The fence stops simplify the task of adjusting the fence to 45° and 90°

Tools Needed	Qty
45° Square	1
90° Square	1
Sliding Bevel	1
Wrench 10mm	1

To set the 90° fence stop:

1. Loosen the lock nut on the 90° fence stop bolt shown in **Figure 49**, and loosen the fence tilt lock.
2. Place a 90° square against the table and fence, and adjust the stop bolt, so the fence is set exactly at 90° .

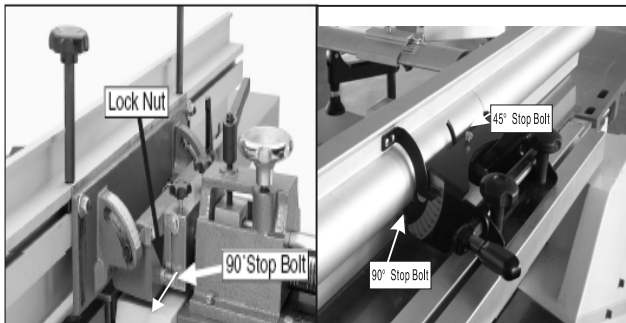


Figure 49. Adjusting fence to 90°

3. Tighten the lock nut.
4. Adjust the indicator (if necessary) to 0° to calibrate the fence tilt scale.

To set the 45° fence stop:

1. Loosen the fence tilt lock, and position the fence against the 45° stop bolt.
2. Loosen the lock nut on the 45° fence stop bolt (**Figure 50**).

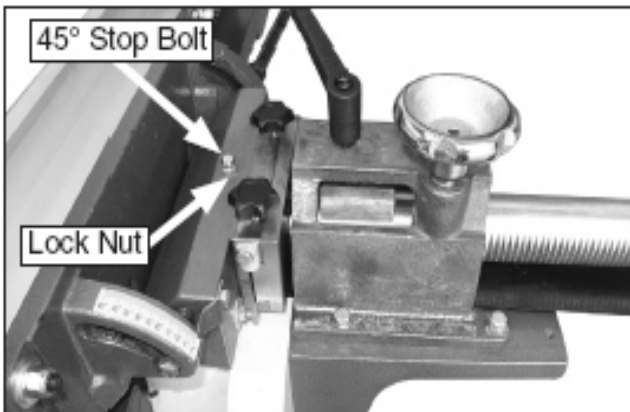


Figure 50. Adjusting fence 45° outward.

3. Adjust the 45° stop bolt until the fence is exactly 45° outward while resting on the bolt

(check the angle with a sliding bevel set to 135° or with a 45° square.

4. Retighten the lock nut loosened in Step 2.

Adjusting Table Lock Levers

The table lock levers can be adjusted if they do not lock.

Tools Needed	Qty
Wrench 14 mm	1

To adjust the table lock levers:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Remove the cutterhead guard.
3. Raise the table on the side of the lock lever that does not lock.
4. Loosen the lock nut on the special bolt under the table, as shown in **Figure 51**.

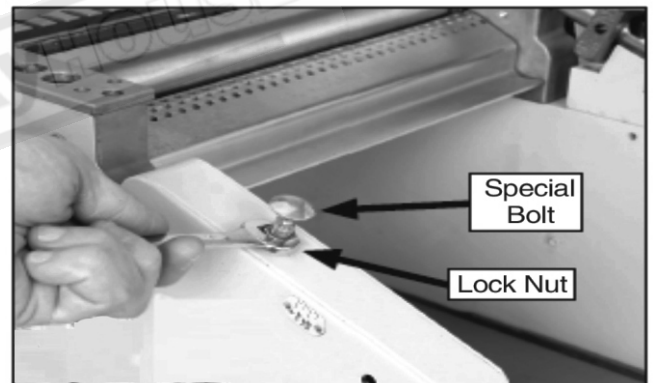


Figure 51. Table lock lever bolt.

5. Adjust the bolt height a few turns, lower the table, and try engaging the lock lever.
6. Repeat Steps 3–5 until the lever engages, then secure the lock nut.

Adjusting Gibs

The function of the table gibs is to eliminate excessive play in the table movement. The gibs also control how easy it is to move the tables.

Tools Needed	Qty
--------------	-----

- Adjustable Wrench 1
- Hex Wrench 6mm 1

To adjust the table gibs:

1. Using an adjustable wrench, loosen the infeed table gib nut under the rear of the table (Figure 52).

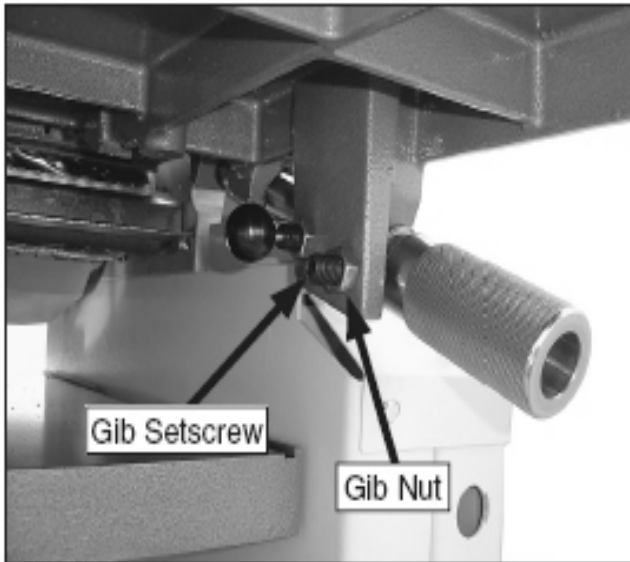


Figure 52. Infeed table gib control.

2. Using an 8mm hex wrench, tighten the gib setscrew a small amount, then check the table by moving it up and down. Adjust these screws as needed until the friction of the table movement is balanced between minimal play and ease of movement, then secure the lock nut.

Note: Tighter gibs reduce play but make it harder to adjust the tables.

3. Repeat Steps 1–2 with the outfeed table gib control (Figure 53).

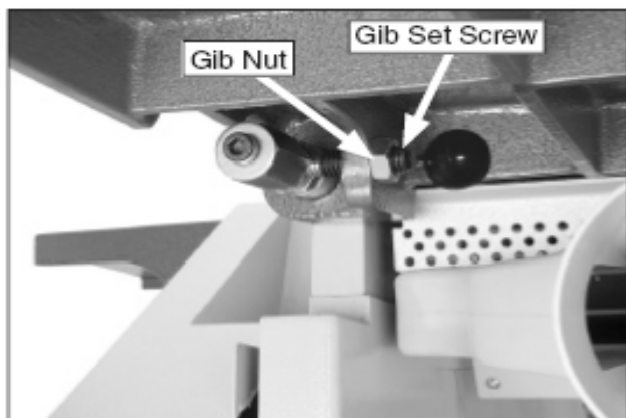


Figure 53. Outfeed table gib control.

4. Set the outfeed table height as described in

Setting Outfeed Table Height on Page Planer Table Parallelism

Maximum Allowable Tolerances:

- Cutterhead/Table Side-to-Side .. 0.002"/0.05mm
 - Head Casting/Table Front/Back0.020"/0.05mm
- Tools Needed: Qty

- Rotacator 1
- Wrench 12mm 1
- Hex Wrench 4mm 1
- Hex Wrench 6mm 1

Table parallelism is critical to the operation of the planer. As such, it is essential that the planer table is parallel with the cutterhead (within 0.002") fromside-to-side, as illustrated in

Figure 54.

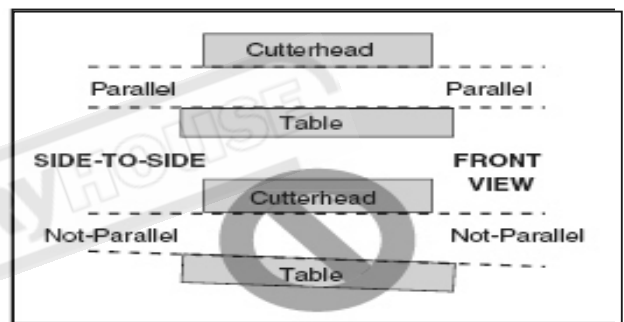


Figure 54. Side-to-side parallelism of table and cutterhead.

How the planer table sits in relation to the head casting from front-to-back is also important (see Figure 55). The tolerances on the front to back positioning are not as critical as the cutterhead/table side-to-side positioning.

Therefore, the maximum allowable tolerance for the front-to-back parallelism is not more than 0.020".

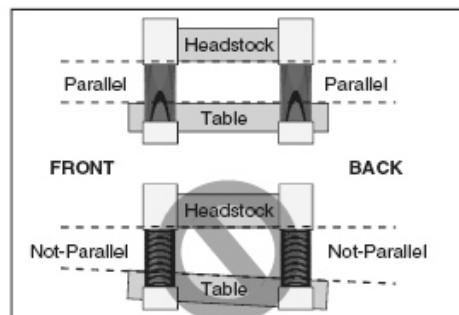


Figure 55. Front-to-back parallelism.

Table Parallelism Inspection

The easiest way to determine if your planer table has a parallelism problem with the headstock is to plane a workpiece and measure the thickness in multiple locations. If the workpiece is tapered from left-to-right or from front-to-back, then parallelism may be a problem.

Use your Rotacator to further inspect the table parallelism. If you do not have a Rotacator, a wood block and feeler gauges may be used, but extra care must be taken to ensure accuracy.

If the table is not within the maximum allowable tolerances, it must be adjusted.

Table Parallelism Adjustments

The table is adjusted with the set screws on the cylinder liner.

To adjust the table parallelism:

1. DISCONNECT THE JOINTER/PLANER FROM THE POWER SOURCE!
2. Raise the planer table as far as possible.
3. Loosen the four cap screws on the cylinder liner, as shown in **Figure 56**.

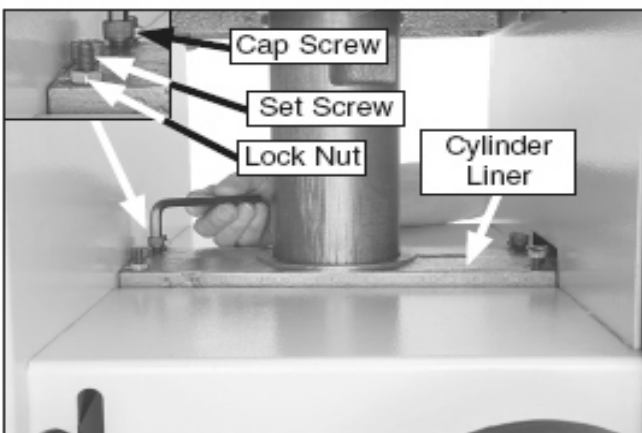


Figure 56. Adjusting table parallelism.

If the table is not parallel to the cutterhead Side-to-side (**Figure 56**), loosen the two lock nuts on the right or left side of the cylinder liner. Adjust the set screws to raise or lower the table so it is parallel to the cutterhead.

If the table is not parallel to the cutterhead front-to-back (**Figure 54**), loosen the two lock nuts at the front or back of the cylinder liner. Adjust the set screws to raise or lower the front or back of the table so it is parallel to the cutterhead.

4. Tighten the four cap screws on the cylinder Liner.

Spring Tension

Tools Needed: Qty
 Hex Wrench 6mm 1
 Roller spring tension must be adjusted so that feed roller pressure is uniform. Roller spring tension will vary, depending on the type of wood you plane. This is usually determined from trial-and-error.

Generally speaking, less spring tension is more forgiving on workpieces. Therefore, if you primarily plane milled lumber with relatively consistent surfaces, you can get away with having less spring tension. Likewise, if you primarily plane rough lumber with inconsistent surface heights, more spring tension is a must to keep the workpiece feeding through the planer without stopping.

If workpieces regularly stop feeding during operation, it may be a sign of weak spring tension.

To adjust feed roller spring tension:

1. Locate the four adjustment screws located on the top of the planer, as shown in **Figure 57**.

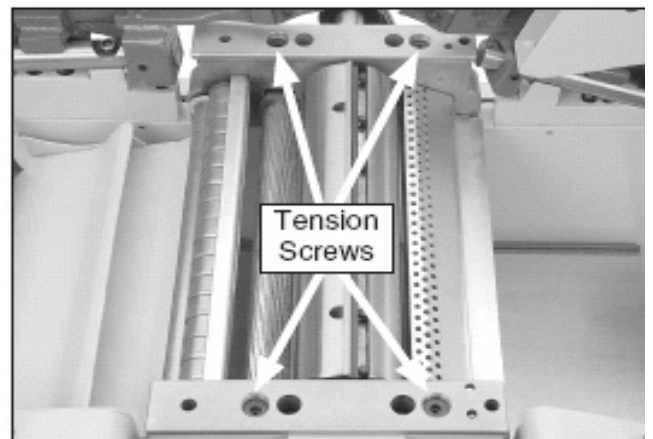


Figure 57. Spring tension screws.

2. Adjust the tension screws counterclockwise so that they are five to seven turns below the top of the head casting.

If the workpiece slips when you feed it, turn the screws 1/2 to 1 turn counterclockwise to increase spring tension.

If the workpiece is abruptly grabbed when initially fed into the planer, turn the screws 1/2 to 1 turn clockwise to decrease spring tension.

Anti-Kickback Fingers

The Model w0301/pt300 provides an anti-kick back system as a safety feature. The anti-kickback fingers hang from a rod suspended across the cutterhead casting. The anti-kickback fingers should be inspected regularly.

Check the fingers (**Figure 58**) to ensure that they swing freely and easily. If the fingers do not swing freely and easily, clean them with a wood resin solvent.

Do not apply oil or other lubricants to the anti-kickback fingers. Oil or grease will attract dust, restricting the free movement of the fingers.



Figure 58. Anti-kickback fingers.

! WARNING

Proper operation of the anti-kickback fingers is essential for the safe operation of this machine. Failure to ensure that they are working properly could result in serious operator injury.

SECTION 6:SERVICE



Troubleshooting

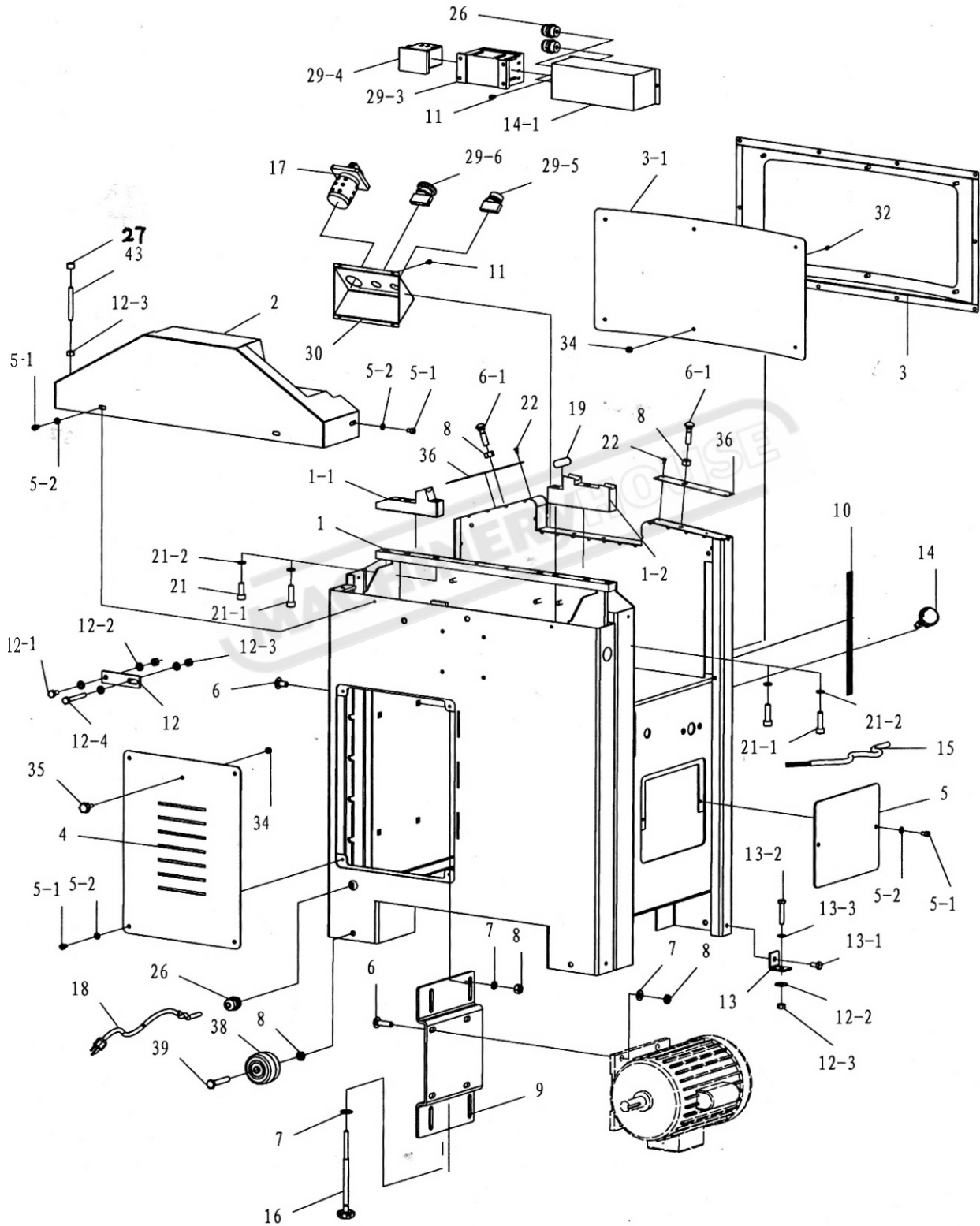
Motor & Electrical

Symptom	Possible Cause	Possible Solution
Motor will not start or fuses or circuit breakers blow.	<ol style="list-style-type: none"> 1. Emergency off button depressed. 2. Short circuit in line cord or plug . 3. Star capacitor is at fault. 4. Thermal protection circuit breaker amperage is set too low or motor is at fault. 5. Open circuit in motor or loose connections. 	<ol style="list-style-type: none"> 1. Rotate clockwise until it pops out/replace. 2. Repair or replace cord or plug for damaged insulation and shorted wires. 3. Replace a start capacitor. 4. Unplug machine, open magnetic switch cover, turn amperage dial on Thermal Protection Circuit Breaker to a higher amperage setting. If switch is maxed out replace motor. 5. Inspect all lead connections on motor for loose or open connections.
Motor fails to develop full power or motor decreases rapidly with load, overheats, or stalls.	<ol style="list-style-type: none"> 1. Motor run capacitor at fault. 2. Motor overloaded during operation. 3. Air circulation through the motor restricted. 4. Motor overloaded during operation. 5. Thermal protection circuit breaker amperage is set too low or motor is at fault. 6. Short circuit in motor loose connections. 7. Circuit breaker tripped . 	<ol style="list-style-type: none"> 1. Replace run capacitor. 2. Reduce cutting load; take lighter cuts. 3. Clean out motor to provide normal air circulation. 4. Reduce cutting load; take lighter cuts. 5. Unplug machine, open magnetic switch cover, turn amperage dial on Thermal Protection Circuit Breaker to a higher amperage setting. If switch is maxed out, replace motor. 6. Repair or replace connections on motor for loose or shorted terminals or worn insulation. 7. Install correct circuit breaker; reduce number of machines running on that circuit.
Cutterhead slows or squeals when cutting, especially on start-up.	<ol style="list-style-type: none"> 1. V-belt loose. 2. V-belt worn out . 	<ol style="list-style-type: none"> 1. Tighten V-belt(Page 18). 2. Replace V-belt(Page18).
Loud repetitive noise coming from machine.	<ol style="list-style-type: none"> 1. Pulley set screws or keys are missing or loose. 2. V-belts are damaged. 3. Motor fan is hitting the cover. 	<ol style="list-style-type: none"> 1. Inspect keys and set screws. Replace or tighten if necessary. 2. Replace V-belts(Page18). 3. Adjust fan cover mounting position ,tighten fan, of shim fan cover.

Cutting (Jointer and Planer)

Symptom	Possible Cause	Possible Solution
Excessive snipe (gouge in the end of the board that is uneven with the rest of the cut.)	<ol style="list-style-type: none"> 1.Outfeed table is set too low. 2.Operator pushing down on trailing end of workpiece. 3.Workpiece is not supported as it leaves the planer. 	<ol style="list-style-type: none"> 1.Align outfeed table with cutterhead knife at top dead center (Page 11.) 2.Reduce/eliminate downward pressure on trailing end of workpiece. 3.Support the workpiece as it leaves the outfeed end of the planer.
Workpiece stops/slow in the middle of the cut.	<ol style="list-style-type: none"> 1.Taking too heavy of a cut. 2.Table not parallel with head casting. 3.Pitch and glue build up on planer components. 	<ol style="list-style-type: none"> 1.Take a lighter cut. 2.Adjust the table so it is parallel to the head casting (Page 28) 3.Clean the internal cutterhead components with a pitch/resin dissolving solvent.
Chipping(consistent pattern).	<ol style="list-style-type: none"> 1.Knots or conflicting grain direction in wood. 2.Nicked or chipped knife or carbide insert. 3.Taking too deep of a cut. 	<ol style="list-style-type: none"> 1.Inspect workpiece for knots and grain direction;only use clean stock. 2.Replace the knife or rotate/replace affected insert (Page 23) 3.Take a smaller depth of cut.(Always reduce cutting depth when surface planing or working with hard woods.)
Fuzzy grain.	<ol style="list-style-type: none"> 1.Wood may have high moisture content or surface wetness. 2.Dull knives or inserts. 	<ol style="list-style-type: none"> 1.Check moisture content and allow to dry if moisture is too high. 2.Rotate/replace the knives or inserts (Page 23).
Long lines or ridges that run along the length of the board.	<ol style="list-style-type: none"> 1.Nicked or chipped knives or inserts(s). 	<ol style="list-style-type: none"> 1.Replace or offset knives or rotate/replace inserts (Page 23).
Uneven knife or insert marks, wavy surface, or chatter marks across the face of the board.	<ol style="list-style-type: none"> 1.Knives not adjusted at even heights in the cutterhead. 2.Carbide inserts not installed evenly. 3.Worn cutterhead bearings. 	<ol style="list-style-type: none"> 1.Adjust the knives so they are set up evenly in the cutterhead(Page 23). 2.Make sure carbide inserts do not have debris under them;make sure inserts are torqued down evenly. 3.Replace cutterhead bearings.
Glossy surface. (Planer)	<ol style="list-style-type: none"> 1.Knives or carbide inserts are dull. 2.Cutting depth too shallow/ 	<ol style="list-style-type: none"> 1.Rotate/replace the knives or inserts (Page 23). 2.Increase the depth of cut.
Chip Marks (inconsistent pattern). (Planer)	<ol style="list-style-type: none"> 1.Chips aren't being properly expelled from the cutterhead. 	<ol style="list-style-type: none"> 1.Use a dust collection system
Board edge is concave or convex after jointing.(Jointer)	<ol style="list-style-type: none"> 1.Board not held with even pressure on infeed and outfeed table during cut. 2.Board started too uneven. 3.Board has excessive bow or twist along its length. 4.Insufficient number of passes. 	<ol style="list-style-type: none"> 1.Hold board with even pressure as it moves over the cutterhead. 2.Take partial passes to remove the extreme high spots before doing a full pass. 3.Surface plane one face so there is a good surface to position against the fence. 4.It may take 3to5passes to achieve a perfect edge, depending on starting condition of board and depth of cut.

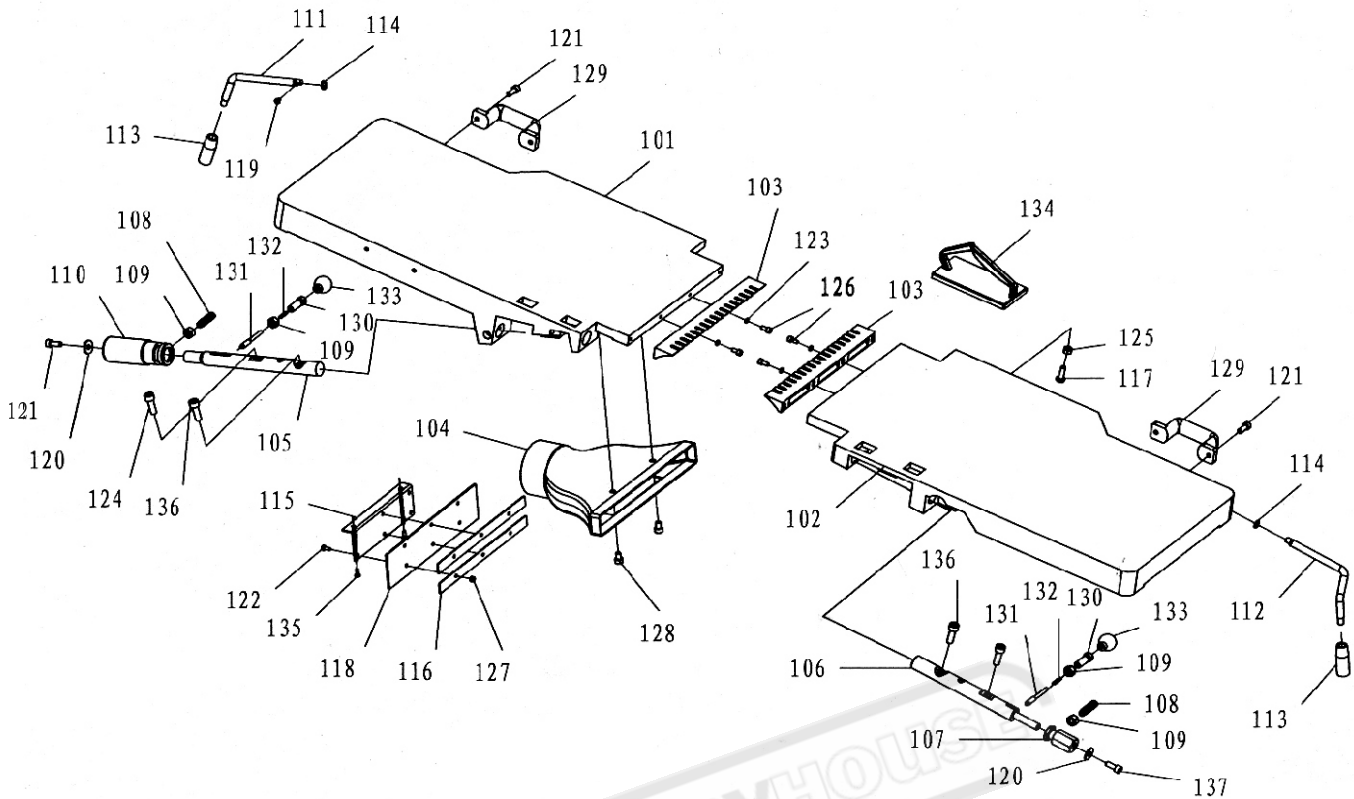
Stand Assembly Parts Breakdown



STAND PARTS LIST

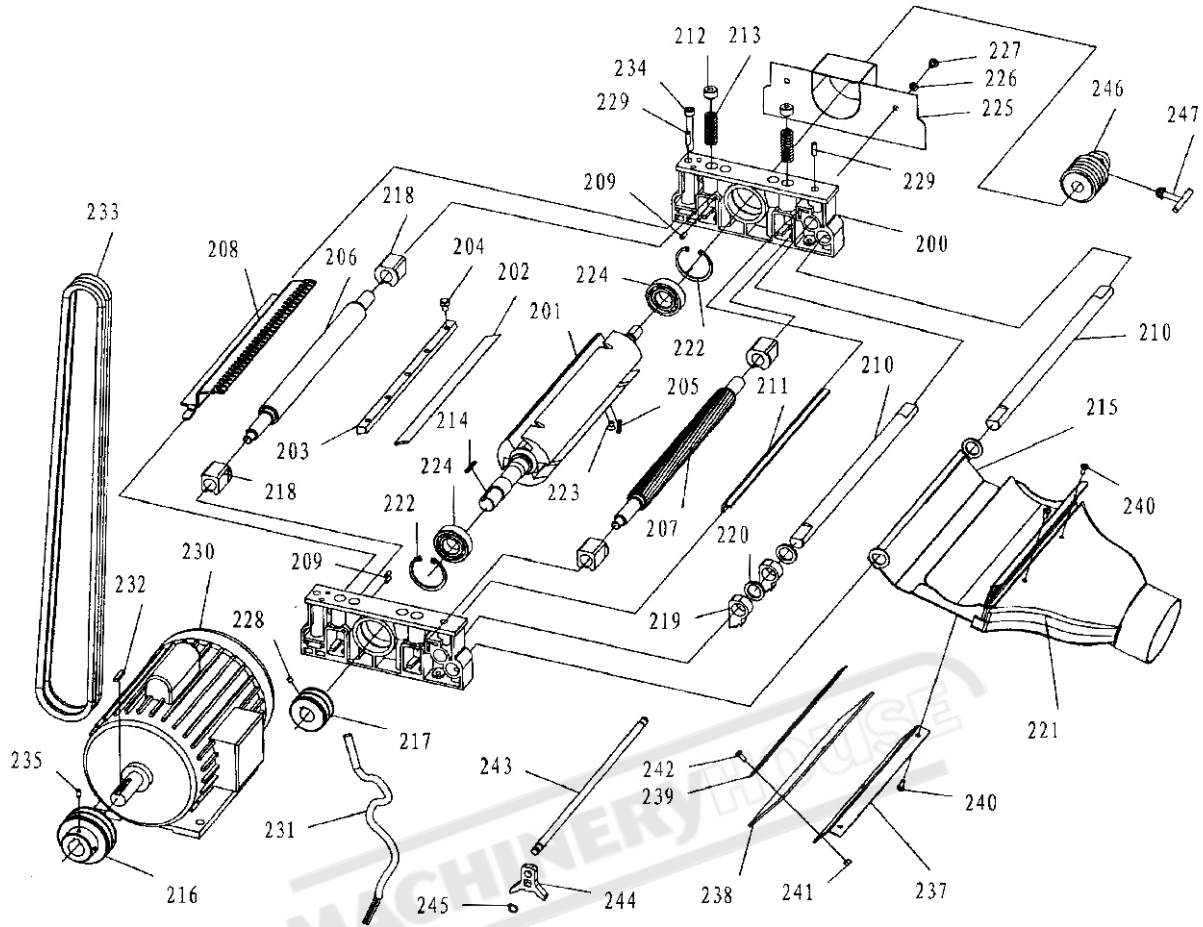
REF	DESCRIPTION	REF	DESCRIPTION
1	FRAME	13-3	FLAT WASHER 8
1-1	HINGE SHAFT BRACKET (RIGHT)	14	EMERGENCY OFF SWITCH
1-2	HINGE SHAFT BRACKET (LEFT)	14-1	PROTECT COVER
2	DRIVE SHAFT COVER	15	EMERGENCY STOP SWITCHCORD
3	COVER FRAME	16	KNOB BOLTM8
3-1	COVER	17	SWITCH
4	DOOR	18	POWER CORD
5	SIDE OPENING COVER	19	DEPTH SCALE
5-1	HEX BOLT M6*10	21	CAP SCREW M10*25
5-2	FLAT WASHER 6	21-1	CAP SCREW M10*35
6	CARRIAGE BOLT M10*25	21-2	LOCK WASHER 10
6-1	SPECIAL SCREW M10*40	22	PHLP HD SCREW M4*10
7	FLAT WASHER M10	26	STRAIN RELIEF
8	HEX NUT M10	27	PLASTIC NUT
9	MOTER BRACKET	29-3	CONTACTOR
10	PLANER SCALE	29-4	THERMAL RELAY
11	PHLP HD SCREW M5*10	29-5	ON BUTTON
12	REINFORCEMENT PLATE	29-6	OFF BUTTON
12-1	HEX BOLT M8*16	30	SWITCH BOX
12-2	FLAT WASHER 8	32	PHLP HD SCREW M6*16
12-3	HEX NUT 8	34	HEX NUT M6
12-4	HEX BOLT M8*60	35	KNOB M6*17
13	SQUARE SUPPORT	36	PROTECTION PLATE
13-1	HEX NUT M8*12	43	SPECIAL SCREW
13-2	TAP SCREW M8*40		

Table Assembly Parts Breakdown And List



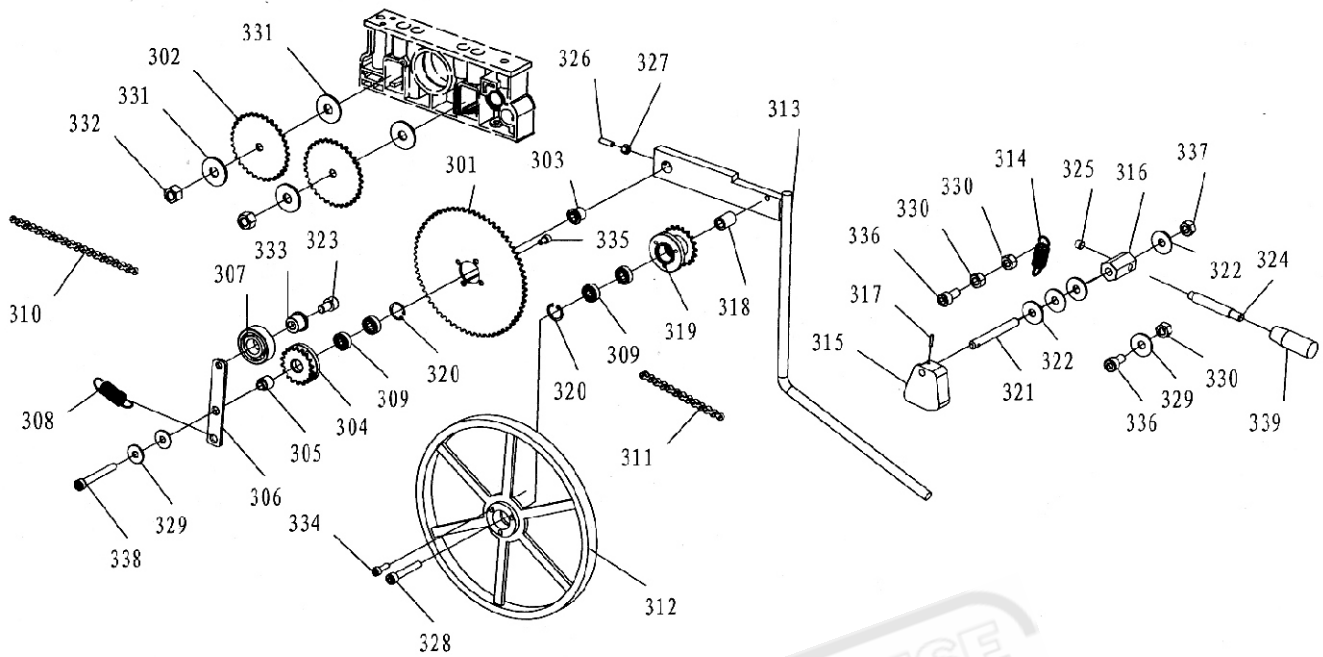
REF	DESCRIPTION	REF	DESCRIPTION
101	INFEED TABLE	120	WASHER 8
102	OUTFEED TABLE	121	CAP SCREW M8*20
103	TABLE LIP	122	PHLP HD SCREW M5*12
104	JOINTER DUST PORT	123	LOCK WASHER 6
105	HINGE SHAFT A	124	CAP SCREW M10*25
106	HINGE SHAFT B	125	HEX NUT M8
107	OUTFEED TABLE ADJ KNOB	126	CAP SCREW M6*16
108	GUIDE SCREW	127	HEX NUT M5
109	HEX NUT M12	128	CAP SCREW M8*12
110	INFEED HANDGRIP	129	HANDLE
111	INFEED LOCK LEVER	130	SPECIAL SCREW M12
112	OUTFEED LOCK LEVER	131	PLUNGER
113	PLASTIC KNOB M10	132	SPRING
114	RETAINING RING 12MM	133	KNOB M6
115	LBRACKET	134	PUSH BLOCK
116	PLATE	135	PHLP HD M5*10
117	HEX BOLT M8*25	136	CAP SCREW M10*30
118	PLATE	137	CAP SCREW M8*16
119	PHLP HD SCREW M5*6		

Cutterhead And Motor Breakdown



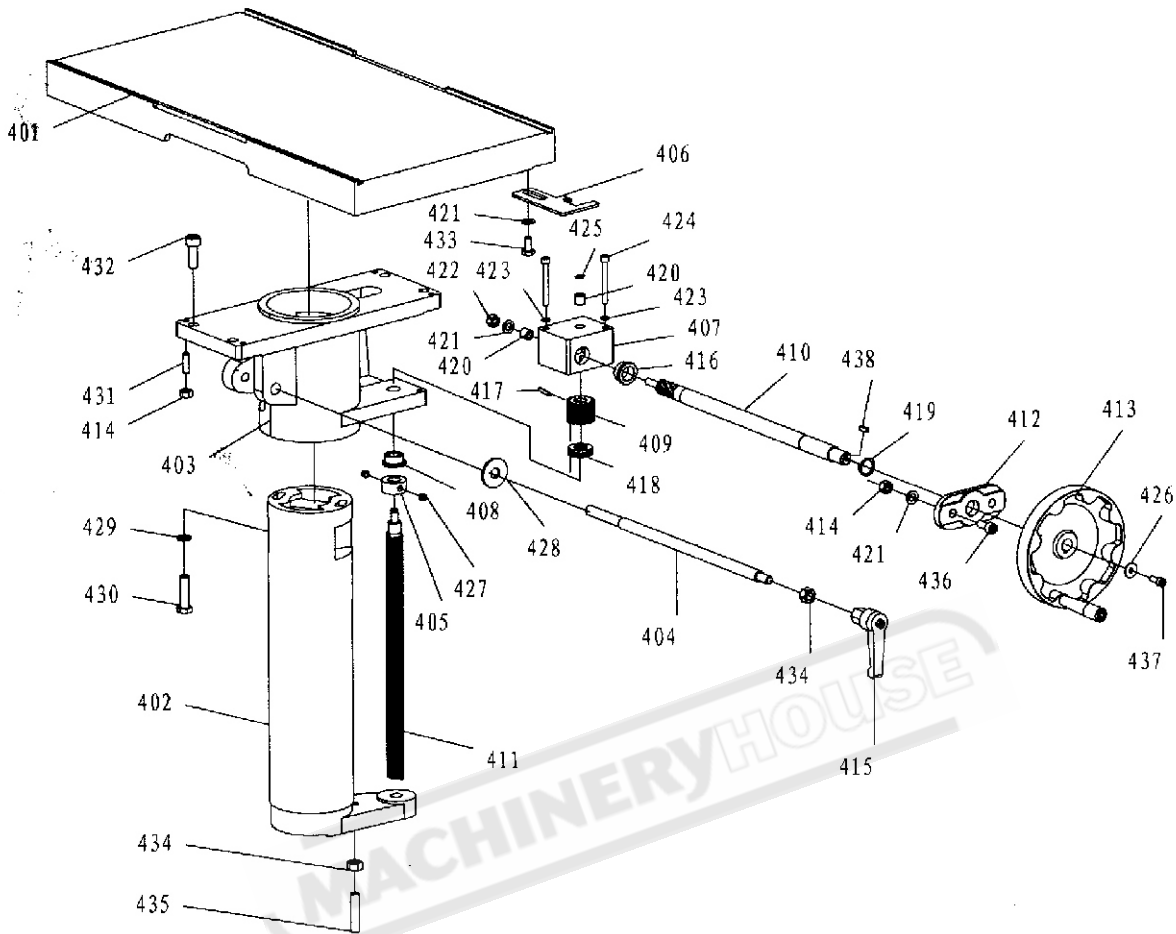
REF	DESCPTION	REF	DESCPTION	REF	DESCPTION
200	CUTTERHEAD BLOCK	216	MOTOR PULLEY	231	MOTOR CORD
201	CUTTERHEAD	217	PULLEY	232	PIVOT PIN 8*35
202	BLADE	218	SUPPORT	233	V-BELT Ø1300
203	GIB	219	ANTIKICKBACK FINGER	234	CAP SCREW M8*80
204	GIB BOLT M8*10	220	SPACER	235	SET SCREW M6*10
205	SPRING	221	DUST CHUTE	237	BRACKET
206	OUTFEED ROLLER	222	RETAINING RING 52mm	238	PLATE
207	INFEED ROLLER	223	FLAT HD ALLEN SCR M5*16	239	PLATE
208	COVER	224	BALL BEARING 6205	240	PHLP HD SCREW M5*12
209	ALIGNMENT PIN 5*16	225	GUARD	241	HEX NUT M5
210	PIVOT PIN	226	FLAT WASHER 6	242	PHLP HD SCREW M5*10
211	SQUARE SUPPORT	227	HEX BOLT M6*8	243	KNIFE GAUGE
212	DOWEL	228	SET SCREW M6*6	244	KNIFE GAUGE BAR
213	COMPRESSION SPRING	229	SET SCREW M6*20	245	RETAINING RING 10
214	KEY 6*20	230	MOTOR	246	BORER1-13MM
215	DUST CHUTE PLATE			247	BORER WRENCH

Drive Assembly Breakdown And List



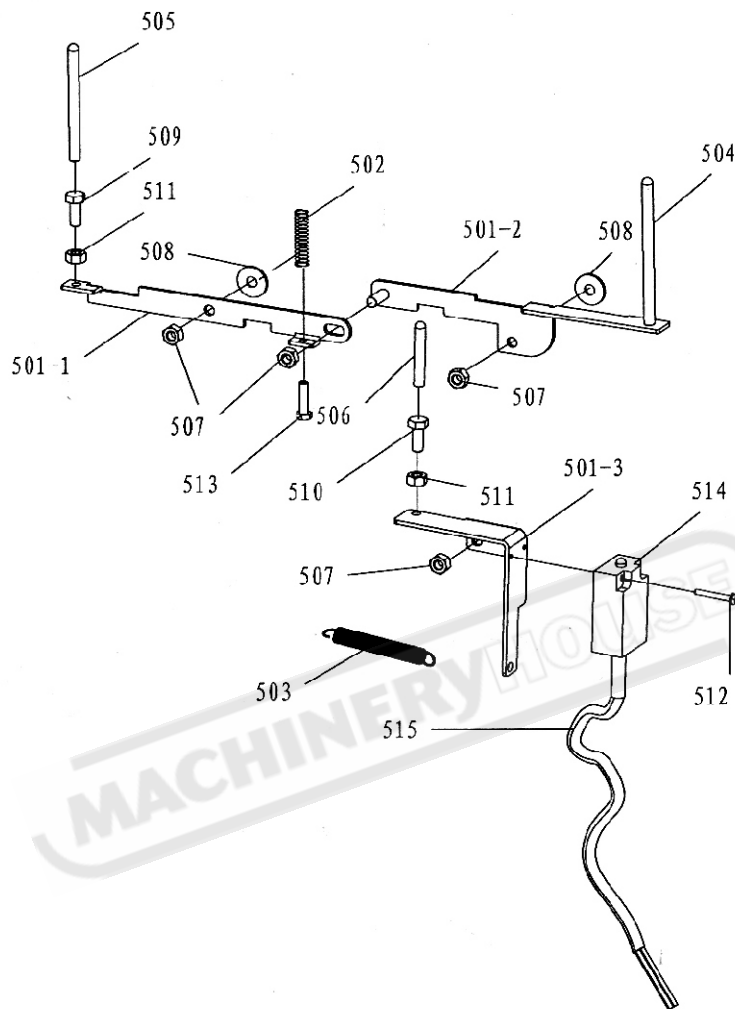
REF	DESCRIPTION	REF	DESCRIPTION
301	SPROCKRT 66T	320	RETAINING RING 22MM
302	SPROCKET 34T	321	STUD
303	BUSHING	322	FLAT WASHER10
304	SPROCKET 18T	323	CAP SCREW M10*12
305	SPACER	324	LEVER
306	ARM	325	SET SCREW M10*12
307	BALL BEARING 6204	326	SET SCREW M6*25
308	TENSION SPRING	327	HEX NUT M6
309	BALL BEARING 608	328	CAP SCREW M8*50
310	ROLLER CHAIN	329	FLAT WASHER 8
311	ROLLER CHAIN	330	HEX NUT M10
312	CONTRACT WHEEL	331	FLAT WASHER 12
313	LEVER	332	HEX NUT M12
314	TENSION SPRING	333	BUSHING
315	CAM	334	CAP SCREW M5*20
316	CAM SHAFT	335	CAP SCREW M6*10
317	ROLL PIN ϕ 3*16	336	CAP SCREW M8*20
318	SPACER	337	LOCK NUT M10
319	SPROCKET 19T	338	CAP SCREW M8*65
		339	M10 PLASTIC KNOB

Planer Table Breakdown And List



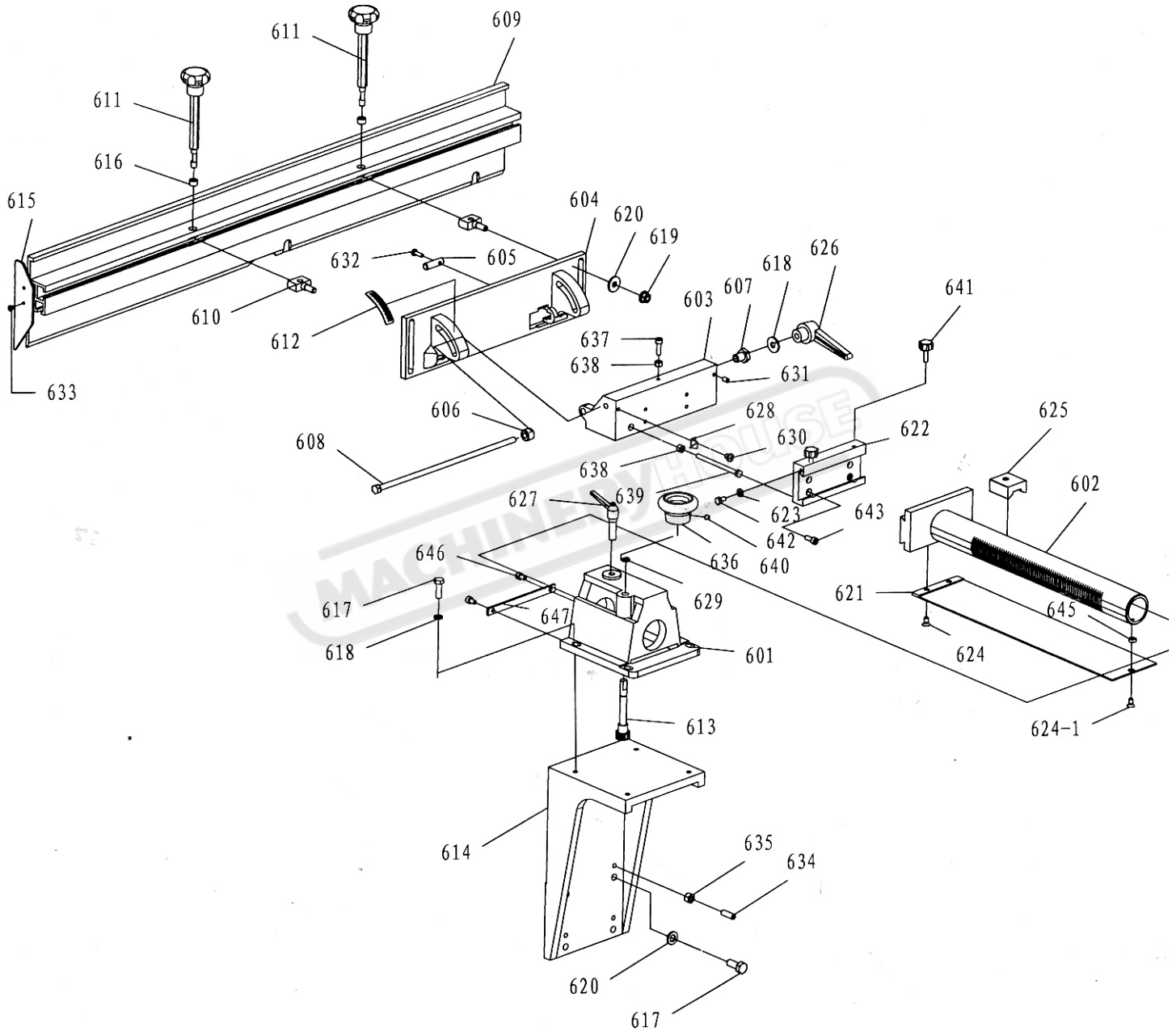
REF	DESCRIPTION	REF	DESCRIPTION	REF	DESCRIPTION
401	PLANER TABLE	414	HEX NUT M8	427	SET SCREW M8*6
402	COLUMN	415	UNIVERSAL LOCK LEVER	428	FLAT WASHER 12
403	CYLINDER LINER	416	BUSHING	429	LOCK WASHER 10
404	LOCK SCREW	417	ROLL PIN 4*25	430	HEX BOLT M10*35
405	COLLAR	418	THRUST BEARING 51102	431	SET SCREW M8*35
406	THICKNESS POINTER	419	RETAING RING 19MM	432	CAP SCREW M10*30
407	GEAR BOX	420	BUSHING	433	HEX BOLT M8*12
408	BUSHING	421	FLAT WASHER 8	434	HEX NUT M10
409	GEAR	422	LOCK NUT M8	435	SET SCREW M10*50
410	WORM SHAFT	423	LOCK WASHER 6	436	PHLP HD SCREW M8*20
411	ELEVATION LEAD SCREW	424	CAP SCREW M6*55	437	CAP SCREW M6*16
412	SHIELD PLATE	425	RETAINING RING 8	438	KEY 5*20
413	HANDWHEEL	426	BIG WASHER 6		

Limit Switch Breakdown And List



REF	DESCRIPTION	REF	DESCRIPTION
501-1	SWING LEVER (F)	508	FLAT WASHER 8
501-2	SWING LEVER (M)	509	HEX BOLT M8*25
501-3	LIMIT SWITCH BRACKET	510	HEX BOLT M8*16
502	COMPRESSION SPRING	511	HEX NUT M8
503	EXTENSION SPRING	512	CAP SCREW M4*30
504	SWITCH ACTIVATION ROD	513	CAP SCREW M6*20
505	SWITCH ACTIVATION ROD	514	LIMIT SWITCH
506	SWITCH ACTIVATION ROD	515	LIMIT SWITCH CONTRAL CORD
507	LOCK NUT M8		

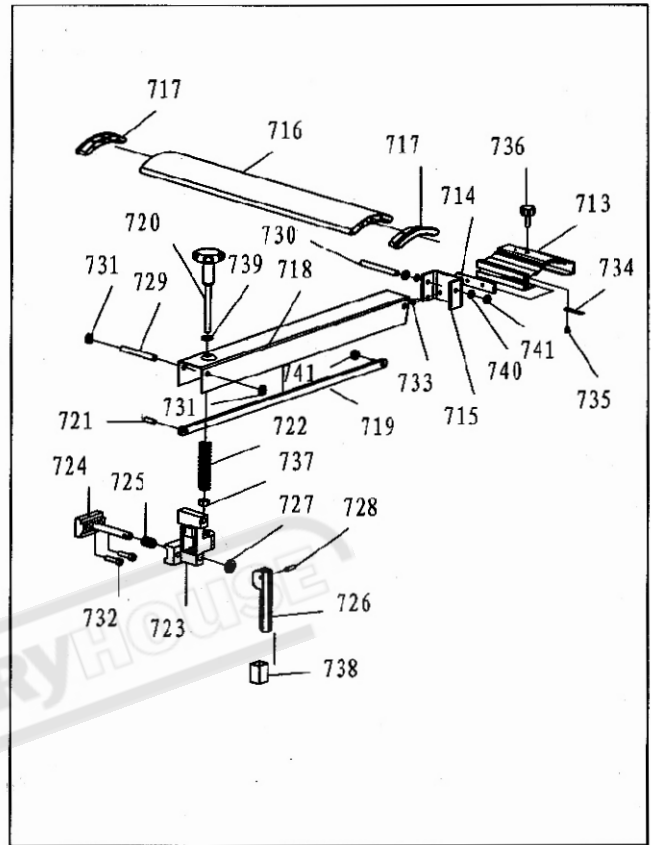
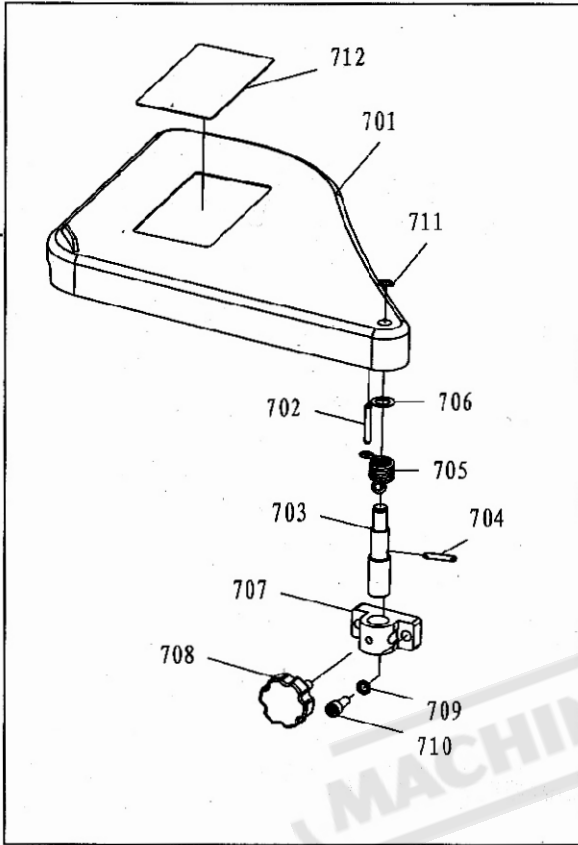
Fence Breakdown and List



FENCE BREAKDOWN AND LIST

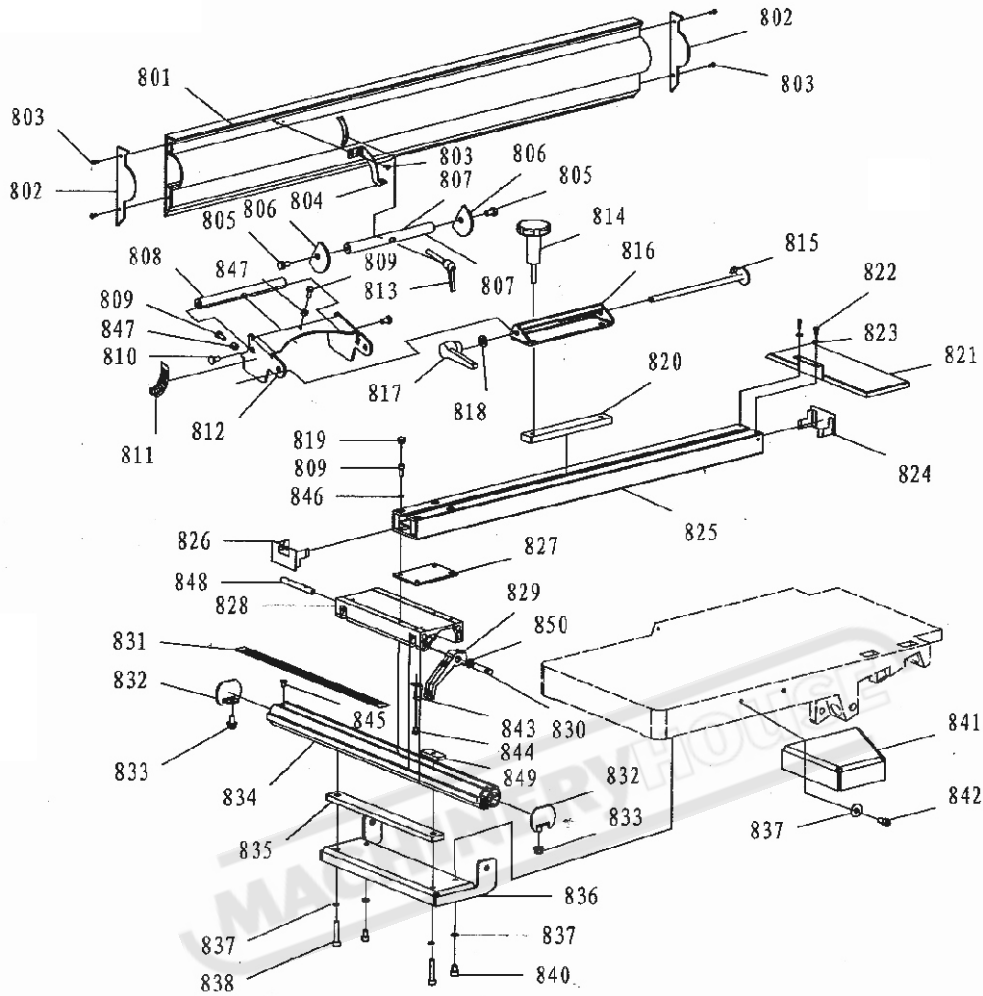
REF	DESCRIPTION	REF	DESCRIPTION
601	FENCE BASE	624	PHIP HD SCREW M6*10
602	ADJUSTMENT TUBE W/RACK	625	TUBE LOCKING SHOE
603	TRUNNION BRACKET	626	UNIVERSAL LOCK LEVER M8*63
604	TRUNNION	627	UNIVERSAL LOCK LEVERM10*80*50
605	PIVOT STUD	628	POINTER
606	SPACER	629	RETURNING RING 10
607	ADJUSTMENT SCREW	630	PHIP HD SCREW M5*6
608	ADJUSTMENT ROD	632	PHLP HD SCREW M5*16
609	FENCE	633	PHLP HD SCREW ST3.9*10
610	SLIDING BOLT	634	SET SCREW M8*25
611	ECCENTRIC SHAFT	635	NUT M8
612	FENCE ANGLE SCALE	636	HANDLE
613	PINION SHAFT	637	HEX BOLT M6*20
614	FENCE SUPPORT	638	NUT M6
615	SIDE PLATE	639	HEX NUT M6*90
616	BUSHING	640	SET SCREW M6*6
617	HEX BOLT M8*30	641	KNOB SCREW M6*25
618	WASHER 8	642	HEX BOLT M6*12
619	LOCK NUT M8	643	CAP SCREW M6*25
620	BIG WASHER 8	645	WASHER 4
621	GUTTER KNIFE GUARD	646	PHLP HD SCREW M5*10
622	DOVETAIL BRACKET	647	FENCE BASE PLATE
623	WASHER 6	624-1	PHLP HD SCREW M6*212

CUTTERHEAD GUARD ASSEMBLY AND LIST



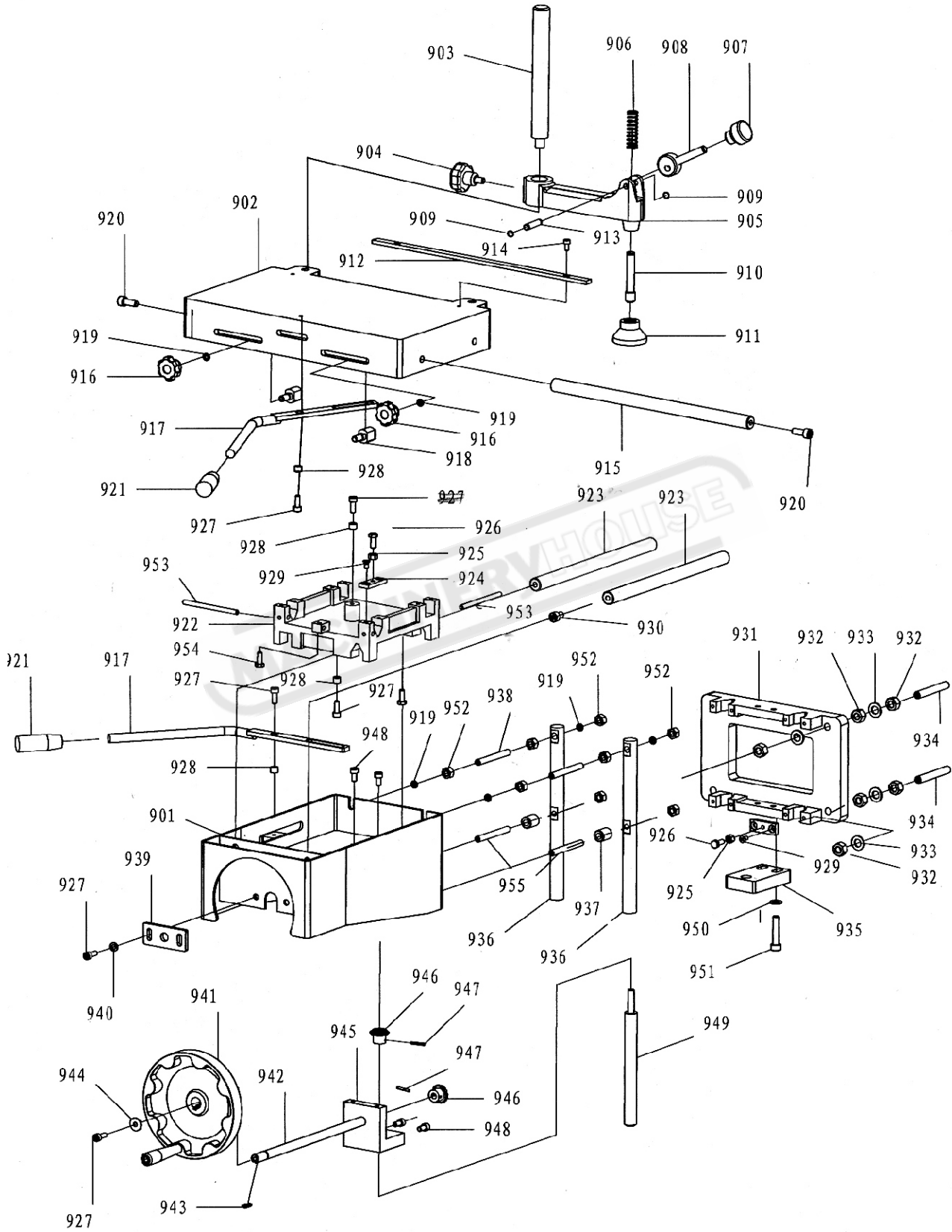
REF	DESCRIPTION	REF	DESCRIPTION	REF	DESCRIPTION
701	CUTTERHEAD GUARD	715	BLADE GUARD PLATE	729	STUD I
702	ROLL PIN 6*40	716	BLADE GUARD	730	STUD II
703	STUD	717	BLADE GUARD LID	731	LOCK NUT M8
704	ROLL PIN 5*30	718	SQUARE TUBE	732	CAP SCREW M6*20
705	TORSION SPRING	719	LINK	733	PHLP HD SCREW M5*10
706	LOAD WASHER 18	720	ADJUSTMENT KNOB	734	PROTECT PLATE
707	GUARD BRACKET	721	SET SCREW M6*20	735	PHLP HD SCREW M4*6
708	KNOB SCREW M8*20	722	SPRING	736	KNOB M6*17
709	LOCK WASHER 8	723	ADJUSTMENT BASE	737	NUT M8
710	CAP SCREW M8*25	724	UNMOVE BASE	738	RUBBER HANDLE
711	EXT RETAINING RING 12	725	LOCK SPING	739	WASHER 8
712	WARNING LABEL	726	LOCK HANDLE	740	WASHER 6
713	BLADE GUARD BASE	727	WASHER	741	LOCK NUT M6
714	SLIDING PLATE	728	SPRING PIN \varnothing 5*20		

FENCE ASSEMBLY AND LIST



REF	DESCRIPTION	REF	DESCRIPTION	REF	DESCRIPTION
801	FENCE	818	WASHER 10	835	PAD
802	SIDE PLATE	819	PLASTIC INSERT	836	SUPPORT PLATE
803	PHLP HD SCREW 5*16	820	SLIDING BAR	837	WASHER 8
804	SCALE POINTER	821	PROTECT PLATE	838	CAP SCREW M8*25
805	CAP SCREW M8*20	822	CAP SCREW M4*8	840	CAP SCREW M8*16
806	SUPPORT PLATE	823	WASHER 4	841	SIDE SUPPORT PLATE
807	SUPPORT ROD	824	BLOCK	842	CAP SCREW M8*20
808	LOCK ROD	825	CROSS BEAM	843	SPRING PLATE
809	CAP SCREW M6*16	826	BLOCK	844	PHLP HD SCREW M4*8
810	SPECIAL BOLT	827	SLIDING BAR	845	CAP SCREW M5*12
811	ANGLE SCALR	828	CARRIAGE	846	LOCK WASHER 6
812	TURNNING BASE	829	LOCK HANDLE	847	NUT M6
813	ADJUSTING BOLT M10*65	830	ROLL PIN	848	LOCK PIN
814	LOCK HANDLE M8*20	831	LENGTH SCALE	849	RAIL INSERT
815	LOCK BAR	832	BLOCK	850	SPRING WASHER
816	LOCK BASE	833	HEX BOLT M8*12		
817	ADJUSTING BOLT M10*95	834	RAIL		

MOTISER ASSEMBLY DIAGRAM AND PART LIST



MOTISER ASSEMBLY DIAGRAM AND PART LIST

REF	DESCRIPTION	REF	DESCRIPTION
901	BASE	929	FLAT HD SCREW M5*12
902	TABLE	930	CAP SCREW M8*16
903	SUPPORT SHAFT	931	PLANTE
904	LOCK KNOB	932	NUT M10
905	PRESS WOOD BASE	933	WASHER 10
906	SPRING	934	SCREW M10*70
907	KNOB	935	RAISING PLANTE
908	LOCK BAR	936	VERTICAL RAIL BAR
909	C-RING 8	937	RING
910	SPRING SHAFT	938	SCREW M8*60
911	SPRING BASE	939	BLOCK
912	KEY	940	WASHER 6
913	SHAFT	941	HAND WHEEL
914	CAP SCREW M5*12	942	SHAFT
915	SHAFT 1	943	KEY 4*15
916	LOCK KNOB M8	944	WASHER 6
917	SHAFT	945	GEAR SUPPORT
918	WIDTH ADJUSTING BAR	946	GEAR
919	WASHER 8	947	SPRING PIN 3*16
920	CAP SCREW M8*30	948	CAP SCREW M6*16
921	KNOB M12	949	RISE SHAFT
922	CARRIAGE	950	WASHER 8
923	SHAFT 2	951	CAP SCREW M8*30
924	RAIL GUIDE	952	NUT M8
925	NUT M6	953	PIN
926	HEX BOLT M6*12	954	SET SCREW M6*6
927	CPA SCREW M6*30	955	CAP SCREW M8*35
928	RING WASHER		