



Busy Bee Tools

16" Jointer Planer Combo Machine BBJP16

User's Manual



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V1.0-2026

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V1.0



General Shop Safety instructions

Notice: Safety First! The paramount concern in operating this equipment is safety. It is imperative to adhere strictly to the following instructions. Neglecting any of the listed guidelines may lead to risks such as electric shock, fire hazards, or severe personal injury.

This tool is specifically designed for certain applications. We emphasize the importance of refraining from modifying or repurposing the tool for any other use beyond its designated application. If you have inquiries regarding its appropriate application, refrain from using the tool until you have communicated with us and received our guidance. Please refer to the below safety symbols

- 

 Implies an imminently hazardous situation, which, if not avoided, could 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, could result in minor or moderate injury.

Please Note that this manual has some instructions and processes to help you maintain and prolong the life of your machine please perform all the recommended cleaning and maintaining processes diligently.

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Introduction

It is with distinct honor and excitement that we present to you the BBJP16, a premier addition to our esteemed line of precision woodworking equipment. At Busy Bee Tools, we are committed to engineering excellence, and this machine exemplifies our dedication to providing craftsmen with superior tools for their trade.

This manual has been meticulously crafted to guide you through the setup, safe operation, and maintenance of your new BBJP16. By following the detailed instructions and recommendations contained within these pages, you can anticipate many years of dependable and satisfying performance. This commitment to quality underscores Busy Bee Tools' promise of enhancing customer satisfaction through innovation and reliability.

Included within this manual are precise specifications, illustrations, and photographs that represent the BBJP16 in its current configuration. Please note, in our pursuit of continual improvement and to exceed industry standards, Busy Bee Tools reserves the right to make enhancements to this model without prior notice.

For your convenience, we continuously update all our product manuals which are available on our website at www.busybeetools.com. We encourage you to visit this site regularly to download the latest updates and ensure that you are always informed about the best practices for operating and maintaining your machine. At Busy Bee Tools, your safety and satisfaction are our utmost priority, and we are dedicated to ensuring that your experience with the BBJP16 is exceptional.

Welcome to the Busy Bee Tools family, where craftsmanship meets innovation.

Contact Us

In case you require additional assistance or have any further questions, please do not hesitate to reach out to our dedicated Customer Service and Technical Support Department at:

Busy Bee Tools Head Office
130 Great Gulf Drive
Concord ON, L4K 5W1

Or at any of our stores across Canada.

Visit our website for the latest deals and for more information. Call us Toll Free: 1-800-461-2879.

Email us at: cs@busybeetools.com

Our team of experts is here to provide you with the guidance and support you need to ensure the safe and efficient operation of your machine. Your satisfaction and safety are our top priorities, and we are committed to assisting you in any way we can.



Machine Data Sheet

This machine has a helical cutterhead with carbide inserts.

Motor.....	4 HP
Motor Speed (no load).....	3400 RPM
Volts	220 V
Amps, Hertz.....	.20 A, 60 Hz
Cutterhead Diameter	2-4/5" (72 mm)
Cutterhead Speed (RPM / CPM).....	6000 RPM
Number of Carbide Inserts.....	4-sided X 72
Maximum Depth of Cut (Planing & Jointing).....	1/8" (3.18 mm)
Maximum Cutting Width (Planing & Jointing).....	16" (304.8 mm)
Maximum Planing Height.....	8-7/8" (200 mm)
Planer Table Size.....	16"X23-1/2" (406.5X596MM)
Feed Speed Planing SF/min.....	23 ft/min (7 M ² /min)
Jointer Table Size.....	16-1/2"X70-5/8" (419X1778MM)
Jointer Table Height	33-1/2" (850 mm)
Fence Tilting Degree.....	0 - 45°
Dust Port.....	4-1/2" Diameter
Dust Collection Required CFM.....	750 Min.
Noise Level (no load).....	≤98dB
Noise Level (with load).....	≤107dB
Overall Size (LXWXH).....	36"X70-5/8X39-1/2" (914.5X1778X1003.3MM)
Base Size.....	24-3/4"X23-1/2" (628.5X5969MM)
Net Weight.....	859.8 lbs. (390 kg)
Mobility Kit.....	Optional

NOTE: The specifications, pictures, diagrams, and information in this manual represent the current model when the manual was prepared. Changes and improvements may be made at any time, with no obligation on the part of Busy Bee Tools to modify previously delivered units. A lot of care has been taken to ensure that the information in this manual is correct, providing you with the guidelines for the proper safety, assembly, and operation of these machines. Manuals are periodically updated you can always download an updated version from our website: www.busybeetools.com.



Controls and Components

- A. Cabinet
- B. ON/OFF Switch
- C. Jointer Table Lock Handle
- Figure 1: Front view 1
- D. Cutterhead Guard Assembly
- E. Jointer Fence
- F. Infeed Table
- G. Planer Table
- H. Planer Outfeed Table
- I. Motor Mounting Fasteners
- J. Planer Table Height Adjustment Wheel
- K. Dust Port (Jointing Position)
- L. Guard Release Lever Handle
- M. Outfeed Table
- N. Jointer Table Lift Handle
- O. Jointer Table Height Adjustment Lever
- P. Planer Drive Belt Release Lever
- Q. Planer Height Scale
- R. Dust Port (Planing Position)
- S. Dust Port Lock & Release Knob

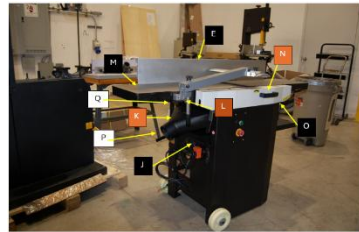
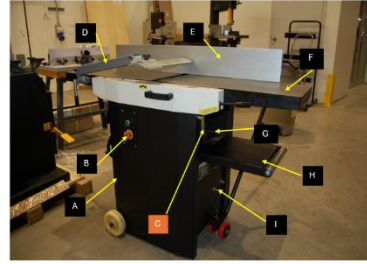



Figure 2: Front view 2




Figure 3: Planer view.

Section 1: Safety

General Shop Safety instructions

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Implies an imminently hazardous

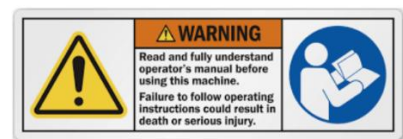
situation, which, if not avoided, could result in death or serious injury.



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, could result in minor or moderate injury.



Self protection and personal Safety

GENERAL SAFETY

Familiarize Yourself with Your Power Tool: Carefully study the owner's manual to understand the tool's intended applications, capabilities, and potential hazards.

Pre-Use Checks: Before operating the machine, thoroughly read and adhere to all Safety and Operating Instructions to prevent serious injury and equipment damage.

1. **Hazardous Dust Awareness:** Acknowledge that certain dust produced by power tools contains chemicals recognized by the State of California as potential causes of cancer, birth defects, or reproductive harm. Examples include lead, crystalline silica, arsenic, and chromium. Minimize exposure by working in well-ventilated areas and utilizing approved safety equipment such as dust masks designed to filter microscopic particles.



2. **Comprehensive Manual Reading:** Fully acquaint yourself with the Owner's Manual to understand proper tool usage for its designated applications.

3. **Grounding Protocol:** Ensure all tools are properly grounded by connecting to a 3-contact electrical receptacle as specified. Never remove the grounding prong to prevent accidental electric shock.

4. **Environmental Considerations:** Avoid using electrical tools in damp or rainy conditions, as well as in the presence of flammable substances.

5. **Workspace Organization:** Maintain a clean, well-lit, and orderly work area, free from slippery surfaces or hazardous debris.

6. **Restricted Access:** Prohibit access to the immediate work area, especially during tool operation, to prevent accidents involving visitors or children.

7. **Proper Tool Usage:** Refrain from forcing tools to perform tasks beyond their designed capacity to ensure safety and optimal performance.

8. **Personal Protective Equipment:** Wear suitable attire, avoiding loose clothing or accessories that may become entangled in moving parts. Long hair should be covered to prevent contact with machinery.

9. **Workshop Safety Measures:** Implement childproofing measures such as removing switch keys and padlocking tools when not in use.

10. **Electrical Safety:** Always disconnect tools from power sources before adjusting, replacing parts, or performing maintenance.

11. **Guard Maintenance:** Ensure protective guards are in place and functioning correctly to prevent accidents.

12. **Startup Precautions:** Verify that power switches are in the "OFF" position before connecting to power sources to prevent accidental activation.

13. **Clear Workspace:** Remove all maintenance tools from the vicinity before initiating machine operation.

14. **Correct Accessory Usage:** Utilize only recommended accessories to prevent operator injury and tool damage.

15. **Respiratory Protection:** Wear appropriate dust masks in well-ventilated areas to avoid inhaling harmful particles, following the Canadian Center for Occupational Health and Safety CCOHS/OSHA guidelines for respiratory protection.

16. **Supervision During Operation:** Never leave tools running unattended; ensure they come to a complete stop before leaving them.

17. **Tool Usage Caution:** Avoid standing on tools to prevent tipping or accidental contact.

18. **Safe Storage Practices:** Do not store items above or near tools where they may tempt someone to stand on them to reach.
19. **Balance Maintenance:** Maintain balance and wear appropriate footwear to prevent slips or falls.
20. **Tool Maintenance:** Keep tools clean and well-maintained, sharpen blades regularly, and replace worn abrasive accessories promptly.
21. **Inspection Protocol:** Prior to use, thoroughly inspect tools for damaged parts, ensuring all guards are operational and aligned correctly.
22. **Operating Conditions:** Refrain from operating tools while fatigued or under the influence of drugs, medication, or alcohol.
23. **Workpiece Securing:** Always secure workpieces with clamps or jigs instead of relying on manual holding.
24. **Vigilance During Operation:** Stay alert, exercise caution, and use common sense when operating power tools to avoid accidents.
25. **Correct Extension Cord Usage:** Utilize appropriate extension cords in good condition, ensuring they can carry the necessary current without voltage drops or overheating. Only use 3-wire extension cords with proper grounding.
26. **Additional Resources:** Access further information regarding safe tool operation from authorized sources.

Machine Specific Safety Instructions

Technical and Professional Guidelines for Safe Operation of the jointer/planer machine. This machine is designed specifically for processing natural, solid woods within designated dimensions as outlined in the Technical Specification. DO NOT use this machine with engineered wood, such as MDF etc. Any deviation from intended use, such as modifications to the machine or utilization of unapproved parts, poses potential risks leading to unforeseen damages and nullification of warranty.

Attention: The operation of this planer/jointer entails inherent risks which cannot be entirely

mitigated by the manufacturer. Hence, users must exercise caution and adhere strictly to safety protocols as woodworking machines inherently entail hazards if operated without due care.

Guidelines for Safe Operation of the Jointer/Planer:

1. Familiarize yourself thoroughly with the provided instructions before operating the machine.
2. Ensure complete assembly of the machine before attempting to operate it.
3. Do not power ON the machine if any components are damaged or missing.
4. Proper grounding of the machine is mandatory.
5. Seek assistance from a qualified individual if you are unfamiliar with the machine's operation.
6. Always wear approved safety eyewear and hearing protection while operating the machine.
7. Utilize a dust mask, ensure adequate dust collection, and maintain proper ventilation.
8. Avoid wearing loose clothing or jewelry and secure long hair.
9. Prior to plugging in the machine, ensure the power switch is in the OFF position.
10. When not in use or during cleaning, assembly, or setup operations, always unplug the machine and ensure the power switch is OFF.
11. Confirm all safety guards and hardware are securely tightened before commencing operation.
12. Regularly inspect and secure the blades in the cutterhead.
13. Exercise caution to keep hands and fingers away from moving parts to prevent injuries. Employ push blocks for handling shorter or narrower stocks.
14. Avoid jointing wood less than 8" long, widths under 3/4", or material thinner than 1/4".



15. Limit cuts to a maximum depth of 1/8" for optimal results.
16. Ensure the workpiece is free from knots, nails, or foreign objects before surfacing.
17. Exercise caution when handling large, warped, or small workpieces. Flatten warped boards before planing.
18. Use additional supports for large workpieces to prevent tipping.
19. Always plane wood in the direction of the grain and avoid planing end cuts.
20. Process only one workpiece at a time and vary feeding along the cutterhead for blade longevity.
21. Avoid reaching into the machine while it's in operation to prevent accidents.
22. In the event of a jammed workpiece, stop the machine, unplug it, and then clear the obstruction.
23. Position yourself to the side of the machine during operation to avoid potential kickback hazards.
24. Use only manufacturer-recommended accessories or attachments to prevent injuries and machine damage.
25. Promptly replace dull or damaged knives to prevent user or machine harm.
26. Source replacement knives/inserts from manufacturer-recommended suppliers.
27. Maintain a clean work area by removing debris and materials promptly.

Warning: This manual serves as a guide for assembly, adjustments, and general usage and is not intended for instructional purposes. DO NOT use this machine unless you are trained on its operations properly.

Electrical Safety Instructions

ELECTRICAL SAFETY:

This device necessitates the installation of a 220V plug (not included) and mandates

grounding during operation to mitigate the risk of electric shock to the operator.

Grounding serves as the preferred pathway for electrical current in the event of a malfunction or breakdown, thereby diminishing the likelihood of electric shock. Equipped with an electric cord housing an equipment grounding conductor, this tool demands a grounding plug (not provided). The grounding plug must be inserted into a corresponding electrical receptacle that is appropriately installed and grounded in accordance with all local codes and ordinances.

Under no circumstances should any modifications be made to the plug. In cases where it does not fit the electrical receptacle, it is imperative to engage a qualified electrician for the proper installation of the requisite electrical receptacle.

Improper electrical connection of the equipment grounding conductor may precipitate the risk of electric shock. The equipment grounding conductor is identified by its green insulation (with or without yellow stripes). When repair or replacement of the electric cord or plug becomes necessary, refrain from connecting the equipment grounding conductor to a live terminal.

If uncertainties persist regarding the grounding instructions or the proper grounding of the tool during plug installation or replacement, consult with qualified electrician or service personnel.

Promptly replace any damaged or worn cord.

This tool is designed for utilization on a circuit equipped with a 220-volt electrical receptacle. Figure (7) illustrates the type of 220V, 3-wire electrical plug and electrical receptacle featuring a required grounding conductor.

GUIDELINES FOR UTILIZING EXTENSION CORDS

The use of an extension cord with this machine is discouraged. For optimal power and safety, connect the machine directly to a dedicated grounded electrical outlet within the supplied cord length of the machine.

In scenarios where an extension cord is necessitated, it should only be employed for limited machine operation. The extension cord should be as short as possible and possess a minimum gauge size of 14AWG.

Utilize solely a 3-wire extension cord furnished with the appropriate type of 3-prong grounding plug, matching both the machine's 3-prong plug and the 3-pole receptacle accepting the tool's plug.

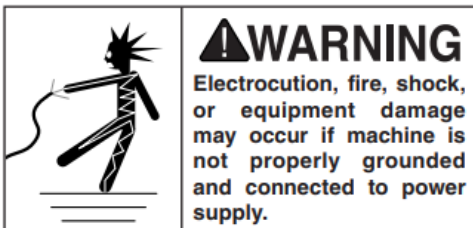
Before each use, inspect extension cords thoroughly, and replace any damaged ones immediately. The use of a tool with a damaged cord must be avoided, as contact with the compromised area may result in electrical shock, leading to severe injury.

Select an appropriate extension cord, ensuring it is listed by Underwriters Laboratories (UL). Utilization of extension cords not meeting these standards may result in voltage drop, diminishing power output, and potentially causing tool overheating. When operating a power tool outdoors, employ an outdoor extension cord labeled as "W-A" or "W," specifically designed for outdoor usage, thereby minimizing the risk of electric shock.

Maintain clear space around the extension cord within the working area to prevent entanglement with lumber, tools, or other obstructions during tool operation.

Canadian electrical codes mandate certification of extension cords as SJT type or better. In Canada, the use of adapters is deemed unacceptable.

Section 2: Power Supply Convenience



Before installing any machine, consider the availability and proximity of the needed electric

supply needed. A new electric breaker and circuit must be installed if the existing ones are not suitable for your new machine, such procedure will minimize the risk of damage to personnel and to the machine.

Full-Load Current

Full load current is the amperage input to a machine at %100 output. Machines with multiple motors the input is calculated as the sum of all motors and electrical components or the Amperage of the largest motor. Overloading a machine will result in excess Amperage draw, over time this will eventually cause significant damage to the motor and the machine.

Circuit Information

Included in the power supply circuit, all electrical components between the breaker box, and the machine. The power supply circuit must be designed to accommodate the machine's electrical needs so it can handle the current drawn by the machine. In case if the machine is connected a fuse protected circuit, then it must be a delay fuse. Below the requirements information is provided for your convenience, see figures (4,5).

Electric Motor Information

This motor is:

- 4HP.
- 220 Volts.
- 18 Amp.
- 3400 RPM.
- **A 30 Amp breaker is needed for this machine.**

Section 3: Set-up and Assembly instructions

Hardware Packing List:

- Wrenches 13mm & 10/8 mm.
- T20 Star T-wrench.
- Allen keys 4mm, 5mm, 6mm.
- Cutterhead Guard Cap (not shown in the figure).
- Push Block.

- Spare cutterhead knives and screws X5 each.



Figure 4.

Unboxing the Machine and Location Choice



Figure 5.

This machine was carefully packaged in a wooden crate to protect it during the transportation. Carefully remove the wooden crate with a crowbar, the machine is wrapped in a plastic bag, and it is oiled to protect it from humidity and rot. Prior to assembly, please perform a quick inventory of the accessories included in the crate with the machine. Contact our customer service department immediately should you require replacement of the missing parts, also if you receive the crate with apparent damage the first step is to indicate the damage on your shipping invoice, and second you should contact our customer service immediately to report the damage. It is imperative to refrain from carrying it utilizing the infeed and outfeed rollers. Instead, employ a forklift or pallet jack beneath the machinery for lifting and relocation purposes, alternatively utilizing straps or two 2"X4" wooden posts

⚠ WARNING positioned underneath the planer bed. Do not discard the packing material and shipping carton. It is crucial not to dispose these materials until the

machine setup is completed and operational. Retaining the packing materials is essential as they can be repurposed for shipping in the event of any issues arising during setup or operation.

Figure 6.



Prior to installation, ensure the placement of the machine on a stable, level foundation, providing adequate space both in front of and behind the planer/jointer for the manipulation of lumber destined for milling operations. Proper alignment of the machine is crucial to mitigate potential kickback hazards, ensuring that no aisles, doorways, or other occupied workspaces are within the trajectory. Moreover, refrain from positioning or utilizing the machinery in environments characterized by damp or wet



conditions.

2. Affix the machine securely to a pallet using four bolts and nuts. Upon reaching its designated location, unfasten the machine from the pallet by removing the bolts located within the two designated openings at the bottom ends.

3. Exercise caution when maneuvering the machine off the pallet, utilizing the lower body/frame for pushing while avoiding exertion on the extension table, upper lid area, or the jointer infeed & outfeed tables, which could potentially compromise the integrity of the machine.

4. Upon final placement within the workshop, ensure the machine's stability by securing it to the floor using lag screws (not provided). Utilize

the same four holes initially used for securing the planer/jointer to the transport pallet.

Initial Clean up

As mentioned earlier oil has been applied to all exposed metallic parts of this machine to prevent rust damage. Cleaning thoroughly is important. You can use a degreaser to remove all trace of oil from the machine prior to the operation. **DO NOT use any aggressive degrease or remover such as break cleaning fluid, gasoline, paint thinner, and mineral spirits, these will strip the pain off the machine.**

Once the machine is cleaned and oil free apply a light coat of protective wax to all exposed metal surfaces, this will aid in protecting the metal from rust, then thoroughly wipe with a clean dry microfiber cloth. When reaching inside the planer please mind the cutterhead inserts these knives are very sharp and can cause serious injury if touched.

Assembly



It is imperative that the machine remains unplugged, and the power switch is set to the 'OFF' position until the assembly process is fully completed. This machine Installing the Power Plug

requires minimal assembly.

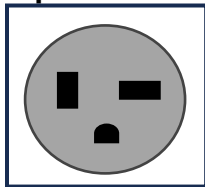


Figure 7.

The Planer/Jointer is intentionally shipped without an electrical 220 volt plug to allow for the installation of the appropriate plug type for your shop, matching the 220 Volt outlet in your workshop. ANEMA6-20P is one of the appropriate plugs you can use see figure (7). Refer to section 8 for detailed information on electrical safety protocols, as well as proper plug connections and usage. It is imperative that the plug is inserted into a corresponding electrical receptacle that has been correctly installed and grounded in compliance with ALL local codes and ordinances. If there are any uncertainties

regarding the grounding instructions or the proper grounding of the tool when installing or replacing a plug, it is strongly advised to consult with qualified electrician or service personnel for clarification and assistance.

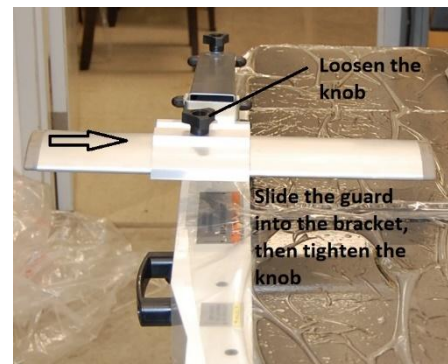
This machine is designed for operation on a circuit equipped with a 220-volt electrical receptacle. As depicted in figure (7), the electrical plug and receptacle are of the 220V, 3-wire configuration, featuring a grounding conductor, which is mandatory for proper usage and safety compliance. Always consult a qualified electrician if the distance away from the electric panel is greater than 30 feet.

Installing the Cutterhead Guard

The cutterhead guard of this machine is delivered in two parts: the Arm and Bracket Assembly, pre-assembled on the outfeed table, and the Guard separately. When fully assembled, the cutterhead guard can be adjusted to afford maximum protection to the user against the sharp insert knives of the cutterhead, see figure (8).

It is essential to always operate the machine with the guard properly adjusted to the width and thickness of the stock being jointed. Additionally, ensure that the guard covers the full cutterhead when the machine is not in use to mitigate any potential accidents.

When working on or near the machine's bed, exercise caution to avoid the risk of personal



injury from cuts that may result from contact with the sharp edges of the knife inserts.

Figure 8.

1. Insert the 16-7/8 inches long x 4 inches wide Cutterhead Guard through the guard assembly Sleeve. The guard can be slid back and forth to cover the cutterhead and can be secured in position using the sleeve's top Handle/Knob, as depicted in Figure 9. The entire Cutterhead Guard Assembly can also be rotated off the jointer table to provide unrestricted access to the

 **WARNING** jointer width or for maintenance.

2. Release the spring-loaded Handle, figure, causing the guard assembly to move forward and disengage from the Locking Support bolted to the outfeed table.

3. Once released from the support, the entire guard assembly can be rotated to the left, allowing it to hang down out of the way below the jointer table, as illustrated in figure (8).

4. To reinstall the guard assembly for normal surfacing protection, reverse the process.

NOTE: Extra caution must be exercised when rotating the Cutterhead Guard Assembly off the machine, as the sharp knives of the cutterhead are exposed.

Dust Collection

The operational efficiency of this machine necessitates a dust collection rate ranging between 500-600 CFM (Cubic Feet per Minute) at the machine's port. In the event of connection to a dust collection system, it is imperative that all machines linked to this system are equipped with blast gates capable of being opened and closed as per the specific machines in use at any given time. This ensures optimal dust collection performance and operational effectiveness.

First Run

Upon completing the assembly of the cutterhead guard and the machine, proceed to plug the machine into the power source and press the ON button to initiate its first operation. Pay close attention to the sounds emitted by the machine. Is it smooth? Are there any grinding noises? Is there any indication of hunting? If the machine fails to start, kindly refer to the troubleshooting

section of this manual and follow the instructions provided therein. After making sure that the machine is operating well, and it is safe to start the adjustments you may begin by executing the workpiece squaring example in the operations section.

Adjustments and Tuning

DO NOT plug the machine into the power outlet while performing any adjustments or maintenance work, this may result in serious injury and bodily harm.

Jointer Adjustment

The jointer fence plays a crucial role in providing lateral support during surface planing operations.

1. To adjust the jointer fence to accommodate different workpiece widths, begin by loosening the Locking Handles. This allows for the movement of the fence forward or backward over the jointer bed and cutterhead until it matches the width of the workpiece.

2. The jointer fence also offers flexibility in angle adjustment, ranging from 90° (0°) to 45° (135°). To modify the fence angle, loosen the large Locking Handle by lifting it up. The Angle Scale provides an approximate indication of the fence tilt angle. For precise angle settings, it is recommended to utilize a calibrated gauge in conjunction with the fence adjustment.

3. Once the desired angle is achieved, securely tighten the locking handle by pushing it down to firmly position the fence in place, ensuring stability during operation.

Setting the Fence's 90° and 45°

1. To ensure the fence is precisely perpendicular to the table surface at a 90° angle, employ a try square placed against the fence extrusion.

2. Gently loosen the two Hex Bolts located on the rear of the curved Arm Supports. Adjust these hex bolts until the fence aligns perfectly square with the jointer table.

3. Once the fence extrusion achieves exact perpendicularity at 90°, securely tighten the hex



CAUTION nuts to firmly lock the fence in its position. Subsequently, when adjusting the angle in the future, the fence will automatically revert to the 90° setting when tilted up and engaged with the two preset Hex Bolts.

4. For setting the fence precisely at a 45° angle, utilize a miter square against the fence extrusion. It's important to note that this angle represents 135° from the jointer table.

5. There exist two Hex Screws integrated into the vertical sides of the Support Plate. These screws contact the rear of the Support Arms when the fence is set at the 45° position. Adjust these hex screws until the fence extrusion is accurately set at 45°, then secure the bolts in position using their Cap Nuts.

Infeed Table Adjustment

The jointer's Infeed Table facilitates vertical adjustments through the employment of the adjusting Lever, controlling the cutting depth for both edge jointing and surface planing operations.

1. Utilize the adjusting Lever to manipulate the vertical position of the table, allowing for raising or lowering as necessary.
2. Adjacent to the adjusting lever, the Scale provides a reference for the depth of cut, indicating the amount of material being removed. This scale ranges from 0" to 1/8".

CAUTION **It is imperative to refrain from making cuts deeper than 1/8". Optimal results are achieved by executing multiple cuts of 1/16" or less, ensuring a superior finish quality.**

Planer Table Height Adjustment

The height adjustment of the planer's table is facilitated by the Hand wheel. Each complete turn of the crank results in a 5/32" change in the height of the Planer's table.

- Clockwise rotation of the Hand wheel raises the planer bed.
- Conversely, counterclockwise rotation lowers the planer bed. The thickness of the material being planed is indicated on the Scale.

It's essential to adhere to the following guidelines:

- A maximum material removal (depth of cut) of 1/8" (4mm) is permitted in a single pass through the planer. Exceeding this depth of cut may lead to machine damage.

- The maximum thickness of stock eligible for planing is 7-7/8", while the maximum width of boards is 12" wide.

ON and OFF Switches

The planer is outfitted with a safety-oriented push button ON/OFF Switch prominently positioned on the front panel of the machine, as depicted in Fig. ().

- To initiate planer operations, press the top blue button.
- Conversely, press the lower red button to promptly halt planer activity.

In addition to the primary ON/OFF Switch, an integrated safety feature in the form of an automatic OFF micro-switch is discretely located beneath the rear, Right Guard (#91) of the machine. This safeguard is designed to promptly cease machine operation if the cover is opened while the machine is in operation, ensuring user safety and preventing potential accidents.

Note: During any maintenance or service tasks on the planer, it is imperative to ensure that the red OFF button is engaged, and further, the power cord is unplugged from the power source to mitigate any risk of inadvertent activation or injury.

Rotating or Replacing Cutterhead inserts

This machine features a state-of-the-art helical cutterhead comprising four rows of carbide knife inserts, totaling 56 inserts overall. Each insert is meticulously indexed and possesses four sharpened sides for extended operational efficiency. In the event of dullness or damage, such as nicks, the user can effortlessly address the issue by simply loosening the retaining screws utilizing the provided star head wrench.



Subsequently, the inserts can be lifted, rotated to expose a fresh cutting edge, and then repositioned onto the cutterhead. No intricate setting procedures are necessary, as the cutterhead is precision-machined to automatically index and align the inserts for seamless operation. **Please note** that these inserts are four sided and can be used on all sides before replacement.



Figure 9.

To facilitate the rotation or replacement of an insert knife, adhere to the following steps:

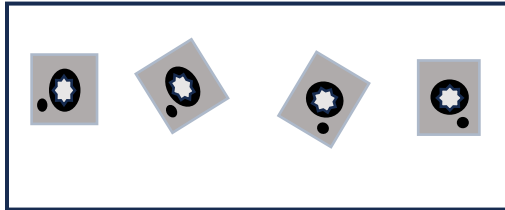


Figure 10.

1. Disconnect the power cable to ensure safety during maintenance procedures.
2. Remove Screw , responsible for securing the Insert in the cutterhead, along with the Insert Knife as illustrated in Fig. (9).
3. While the insert is removed, meticulously cleanse any resin buildup or trapped dust from the cutterhead surfaces using a suitable solvent. A toothbrush is recommended for safe cleaning around the sharp inserts, as any accumulated dust may compromise the insert's seating within the cutterhead.
4. Rotate the insert to position a new, sharpened edge accordingly. Each insert is conveniently equipped with an indication mark on its top surface corner to facilitate the referencing of dulled or sharpened edges see Fig. (10).
5. Carefully tighten the insert's set screw to secure it in place, ensuring not to over-tighten to

avoid damaging the insert. Recommended torque is within the range of 50-55 in/lbs. The inserts are very sharp yet very brittle.

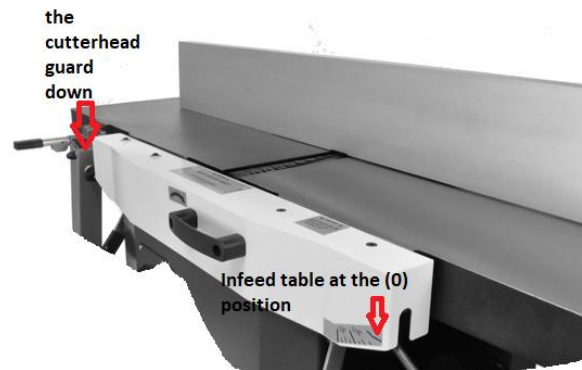


Figure 11.

6. Reconnect the power cable once all maintenance tasks are completed and resume jointing and planing operations with confidence.

Aligning the Jointer Table

For ideal resurfacing performance of workpieces, precise alignment of the jointer's infeed and outfeed tables is essential to ensure a uniform and co-planer surface. This alignment is critical to obtain accurate surfacing results when measuring the flatness of a board from side-to-side and end-to-end.

Upon initial setup, the machine is calibrated at the factory, with the infeed table aligned to the cutterhead knives, followed by the outfeed table being set to the infeed table. However, once the machine is installed in its final location within the workshop, it is imperative to verify the alignment of the tables to mitigate any potential displacement during transportation or handling.

To conduct the alignment check:

1. Securely position the infeed table at its highest setting, denoted as '0', ensuring it is level with the outfeed table.
2. Displace the fence and cutterhead guard to the sides, enabling full access to the surfaces of both tables Fig. (9). Note: Removing the fence assembly and guard may simplify this process.
3. Rotate the cutterhead to a position where the knife inserts do not obstruct the measurement process.

- Utilizing a long metal straight edge, place it lengthwise along the outfeed table, extending it onto the infeed table. The straight edge should seamlessly rest level across both tables. If so, it indicates proper alignment between the tables, and the machine guards can be reinstalled for operational use Fig. (12). However, if the straight edge fails to lie flat across both tables, adjustments are required.

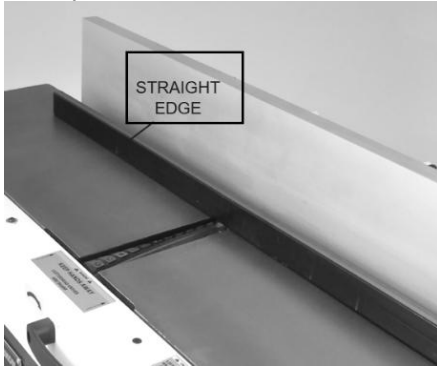


Figure 12.

In such cases, fine-tuning should focus on the outfeed table, aligning it similarly to how the infeed table was initially set at the factory to match the cutterhead.

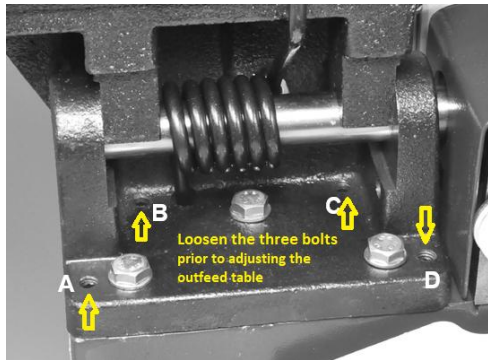


Figure 13.

Outfeed Table Adjustment

- To begin the adjustment process, elevate the jointer table upwards and back into its vertical position, referring to page () for comprehensive instructions (steps 1 & 2). Ensure that the Dust Chute (#66) remains in the down position designed for jointer use, facilitating adjustments.

- With the table elevated, the Support Base (#120) for the outfeed table becomes accessible. This base is secured to the cabinet using three Hex Bolts (#132) and four Set Screws (#134). The set screws can be manipulated to minutely tilt the table, aligning it with the infeed table Fig. (13- A,B,C, and D).

- Slightly loosen the three hex bolts to enable adjustment of the set screws. Utilizing small increments of 1/8 or 1/4 turns, adjust the set screws as necessary. Clockwise turns will advance the set screws, while counterclockwise turns will retract them from the base casting.

- The pair of set screws to the far left (A & B) will raise the left end of the table.
- The pair of set screws to the far right (C & D) will raise the forward edge of the table, closest to the cutterhead.
- The pair of screws furthest back in the base (B & C) will tilt the back of the table upward.
- The pair of set screws at the front of the base (A & D) will lift the front edge of the table.
- The table can be tilted towards a specific corner if needed, requiring adjustment of three set screws. For instance, to tilt the far-left corner of the table, adjust set screws D, then A & C, with screw B serving as the pivot point.

- Additionally, the table can be tilted forward or backward using the two Special Bolts Figs.(.). The combination of these six bolts and screws (A-F) provides a wide range of table positioning options to achieve alignment with the infeed table.

- After adjustments, lower the outfeed table and reassess flatness with the straight edge. Iterative adjustments may be necessary to achieve alignment. Once leveled, tighten the three hex bolts (#132) to secure the settings. Ensure the two Special Bolts (#18, b E and F) are firmly in contact with the table's underside.

6. Confirm that the two safety Table Locks (#104, G) engage properly when the table is lowered. These bolts (E, F) can be adjusted vertically using their threaded ends and then secured with attached Nuts (#106) Fig. (14).

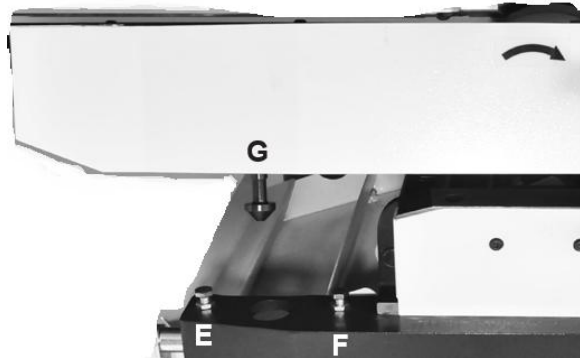


Figure 14.

7. Reinstall or readjust the fence and guard to the surface and secure them firmly.

With these adjustments completed, the jointer is ready for operation.

Adjusting the Infeed Table

The Infeed Table is pre-set by the factory to align with the cutterhead's knife inserts. Should an adjustment be required, the following steps are needed.

1. Raise the infeed table to its highest, 0", level and use a metal straight edge to check its level flatness with the outfeed table, see figure 11.
2. The jointer table, with the fence and cutterhead guard, needs to be lifted up and back into a vertical position. See page (),
3. steps 1 & 2, for full details on this process. The Dust Chute (#66) should be left in the down, jointer-use position so adjustments can be made.
4. With the table up, the Support Base (#120) for the infeed table is exposed. The base has three Hex Bolts (#132) and four Set Screws (A,B,C,D) that fasten the table to the cabinet. The set screws can be adjusted to slightly tilt

the table to align it with the infeed table. FIG. (15).

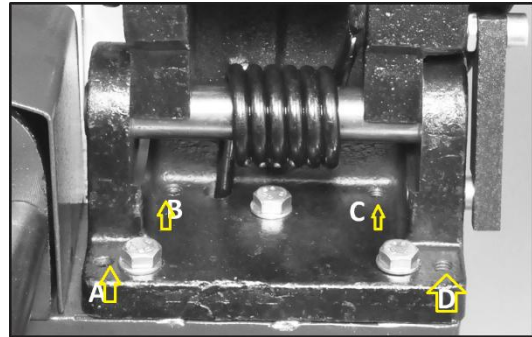


Figure 15.

5. Slightly loosen the three hex bolts so that the set screws can be adjusted. With small 1/8 or 1/4 turns of the set screws, tilt the table as needed. A clockwise turn will advance the screw; a counterclockwise turn will retract them from the base casting.

- The pair of 2 set screws to the far left will raise the left end of the table. FIG. 15, A & B.
- The pair of 2 set screws to the far right will raise the forward edge of the table, nearest the cutterhead. C & D.
- The pair of screws furthest back in the base will tilt the back of the table upward. B & C.
- The pair of 2 set screws at the front of the base will lift up the front edge of the table. A & D.

- The table can also be tilted down, or up, towards a specific corner should the situation arise. Three of the set screws would be adjusted for this. Example: To tilt the far-left corner of the table up, set screws D, then A & C would be turned. Screw B would be the pivot point.

4. The table can also be tilted forward or back with the two Special Bolts FIG 16 E & F. The combination of the six bolts and screws (A-F) provide a great range of table positioning to level it with the infeed table.

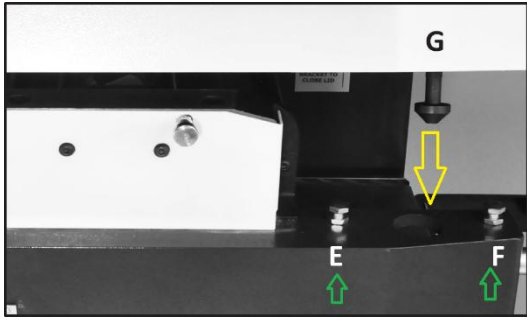


Figure 16.

5. Once adjustments are made, the infeed table should be checked for flatness with the outfeed table with a straight edge. FIG. 21. This may require a few attempts to get the tables in alignment. When the infeed table is flat to the outfeed table, the hex bolts can be tightened to lock the settings.

6. With the table lowered, make sure the two safety Table Locks (#104, G) will engage. These special bolts (E,F) can be adjusted up or down by their threaded ends, then secured with their attached Nuts (#106). FIG. (16).

Re-adjust, or install the fence and guard, then the machine is ready for use.

Planer Table Alignment

Upon receipt, the planer's table is meticulously set parallel to the cutterhead knives at the factory. However, upon installation in the workshop, it is imperative to verify the alignment to ensure no displacement during handling.

WARNING: When handling or working near the machine's bed, exercise caution to avoid potential personal injury from the sharp edges of the knife inserts.

1. Ensure the planer/jointer's switch is turned off and disconnect the plug from the power source.

2. Elevate the jointer table, along with the fence and cutterhead guard, into a vertical position as outlined on page (), steps 1 & 2. Pivot the Dust Chute (#66) onto the infeed table to facilitate adjustments Fig. (17).

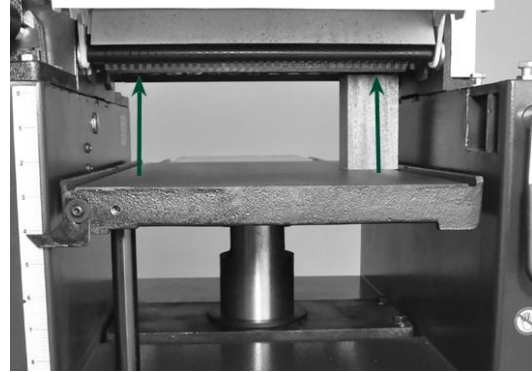


Figure 17.

NOTE: The cutterhead remains fixed, necessitating adjustments through the table's setting.

3. Confirm the planer table's alignment parallel to the cutterhead by measuring the distance from the table surface to the underside of the cutterhead. The measurement taken from the far-right side of the planer's table should match that from the far left.

4. Position a Gauge Block or another measuring tool onto the planer table directly beneath the cutterhead.

5. Utilizing the hand wheel, raise the table until the gauge block contacts either the cutterhead knife inserts or the solid body of the cutterhead cylinder.

6. Shift the gauge block to the opposite side of the table to ensure uniformity in measurement. If discrepancies arise, adjustments to the planer table are necessary to rectify the difference.

NOTE: Due to the helical design of the cutterhead, precision is crucial in ensuring measurements are taken consistently at the same spot on either end of the head. This may entail rotating the cutterhead to align the gauge block with either the knife inserts or the body, as previously employed during the initial measurement.

Adjusting the Planer Table

7. The planer table assembly is affixed to the cabinet using four Hex Bolts (#184, FIG. 26, A). Adjacent to these bolts are four Hex Socket Screws (#180, B), which are adjustable to elevate an end of the planer table to achieve parallelism with the cutterhead.
8. Slightly loosen the four hex bolts located at the corners of the base plate.

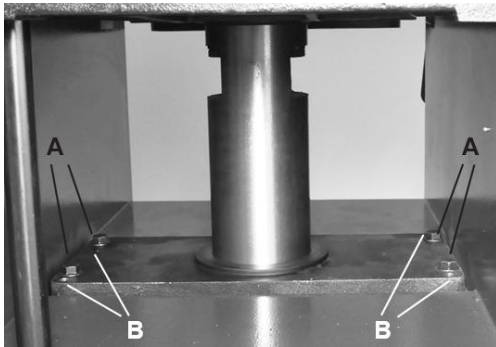


Figure 18.

9. Depending on the side of the planer table requiring adjustment, manipulate the hex screws on that side of the base to raise the base/table accordingly.
10. Continuously measure with the gauge block and iteratively adjust until the table achieves parallelism with the cutterhead.
11. Upon achieving parallel alignment between the table and cutterhead, securely tighten the four hex bolts to firmly secure the fasteners in place.
12. Remove the gauge block from the planer's mouth and meticulously inspect all components to ensure readiness for machine operation.

Adjusting the cutterhead

The Cutterhead, serving as the main component of the machine, is securely fastened to the cabinet and is non-adjustable. The factory presets all other parts, including rollers and tables, to align precisely with the cutterhead based on its position. However, in the event that any of the tables or rollers deviate from

parallelism with the cutterhead, they can be independently adjusted following the instructions outlined in this manual, see figure.



Figure 19.

Adjusting the Infeed/Outfeed Rollers

1. Ensure that the planer/jointer's switch is turned off and disconnect the plug from the power source.

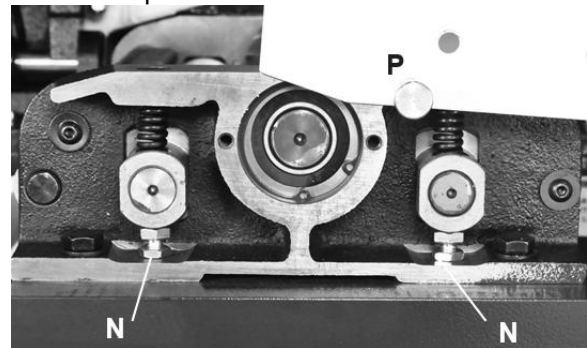


Figure 20

2. Elevate the jointer table, along with the fence and cutterhead guard, into a vertical position as detailed on page , steps 1 & 2.
3. With the jointer table elevated, remove the Front Guard (A) and Rear Guard (B) see figure 19 to access the bolts for adjusting the feed rollers' pressure figure 20

NOTE: The Front Guard, with the removal of its 2 screws (#52), can be rotated out of the way, leaving the dust collector's spring-loaded Locating Pin (#51, P) intact FIG. 20. The Rear Guard can be removed once the 2 locating screws are detached by lowering the jointer table and then removing the fence assembly.

6. Beneath the Cutter block Brackets, the Tightening Screws (N) secure the compression Springs onto the brass Shaft Sleeves. Utilize a wrench to adjust the feed rollers via the bottom Hex Bolts Fig. 20.

- Raising the hex bolts UP compresses the spring, increasing the downward pressure exerted by its roller on the lumber passing through the planer.

- Lowering the hex bolts DOWN reduces spring compression, decreasing the pressure exerted by its rollers on the lumber.

5. Once the desired pressure is achieved, secure the Bolts (N) in place by tightening the Nuts, reattach the guards, lower the jointer table with fence & guard, and the machine is ready for operation.

Tensioning the Drive Belts

Periodic checks and re-tightening of the cutterhead drive belt and the feed gear drive belt are essential maintenance tasks, especially considering that belts tend to stretch over time, particularly when new and during the breaking-in period.

THE MACHINE MUST NOT BE PLUGGED IN, AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ALL ADJUSTMENTS ARE COMPLETE.

To inspect, adjust, or change the drive belts, follow these steps:

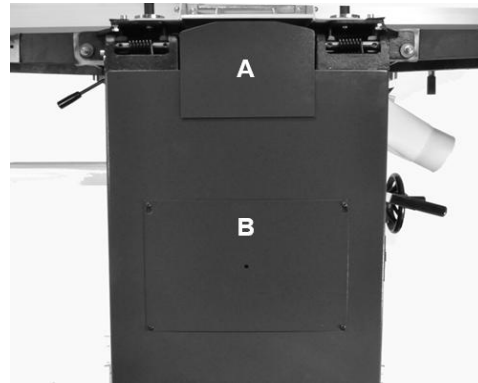


Figure 21

1. Ensure that the planer/jointer's switch is turned off and disconnect the plug from the power source.

2. Remove the fence assembly, the Rear Guard (#91-A), and the cabinet's rear Belt Cover Plate (#40- B) to expose the motor, pulleys, and belts Figure 21.

Both drive belts are situated behind the machine's rear cover and side panel Figure 21. (A & B).

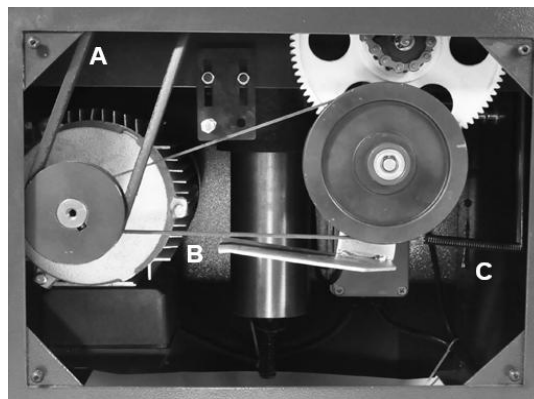


Figure 22

Tensioning the Drive Belt

5. Check the tension of the Cutterhead Drive V-Belt (#228, FIG. 22, A) by applying thumb pressure. The drive belt should not give more than 3/8" in the center.
6. Loosen the four Cap Nuts (#201, FIG. 24) located on the outside rear of the machine to release the tension on the motor. Adjust the motor position upwards to loosen the belt or downwards to increase tension.

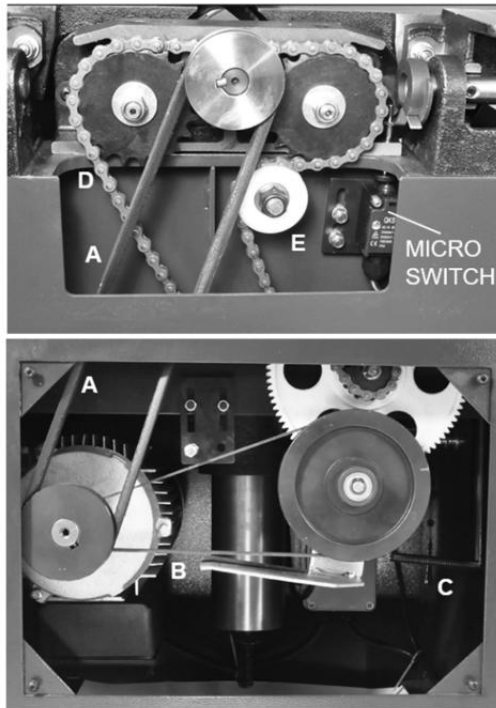


Figure 23.

5. Once the belt tension is correct, tighten the same motor mounting cap nuts that were loosened in step 4.

6. The tension of the Feed Roller V-Belt (#214, FIG. 21, B) is automatically regulated by the Spring (#229, C) and does not require manual adjustments.

7. The setting of the Feed Roller Chain (#227, FIG. 30, D) is preset at the factory and typically does not need adjustments. However, to modify the chain overlap, adjust the Pulley with Sleeves (#32, E) by moving it in or out using its center Bolt and Nut (#20 & 31).

Replacing the Drive Belt

1. To replace the Drive V-Belt (#228), follow the same steps as detailed in #3-5 above. Loosen the tension until the belt can be easily removed from the Motor Pulley (#208 - A) and Cutterhead Pulley (#94). Once removed, reverse the steps to install and re-tension the new belt on the pulleys.

2. To replace the Feed Roller V-Belt (#214), first remove the Drive Belt. With the motor loosened and lifted, there should be sufficient slack to install a new Feed Roller Belt. If needed, unhook

the tensioning Spring (#229) to allow the Handle & Bracket Assembly (#217) to swing freely. Reattach the spring once the new belt is installed. Then, reverse the steps to install the Drive Belt and re-tension it on the pulleys.

3. Once all work on the belts is complete, reattach the rear guard and belt cover plate securely using their respective screws.

Section 4: Operations

Before turning on the machine, it is imperative to review the safety precautions outlined on pages 3 to 6 of the manual. Ensure thorough understanding of the machine's features, adjustments, and capabilities as detailed throughout the manual. This comprehensive understanding is crucial for safe and effective operation of the machine.

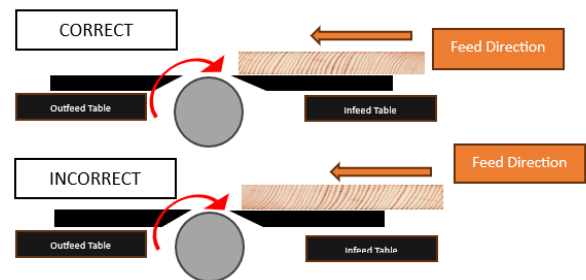


Figure 24.

Inspecting the fist workpiece

Overview

Stock Inspection & Requirements

When selecting stock for jointing or planing, adhere to the following guidelines:

- **Avoid Large or Loose Knots:** Do not process stock containing large or loose knots, as these could dislodge during cutting operations, resulting in operator injury or damage to the workpiece.
- **Grain Direction:** Do not joint or surface-plane against the grain direction, as this increases the risk of kickback and tear-out.
- **Cupped Side Down:** When jointing, place the cupped side of the

workpiece facing down to prevent rocking during the cut.

- **Cutting with the Grain:** Joint and surface-plane with the grain for a better finish and increased safety.
- **Wood Selection:** **Only cut natural wood with the machine**, avoiding materials such as MDF, particle board, plywood, laminates, metals, glass, stone, tile, products with lead-based paint, or those containing asbestos, as using the machine on these materials may lead to injury or machine damage. See figures 23, 25



for proper grain

orientation.

- **Glue Removal:** Scrape off all glue deposits from the workpiece before jointing or planing, as glue residues can impair cutterhead performance.
- **Foreign Objects:** Ensure the workpiece is free of foreign objects such as dirt, nails, staples, rocks, or other debris, which could damage the cutterhead or pose a fire hazard.

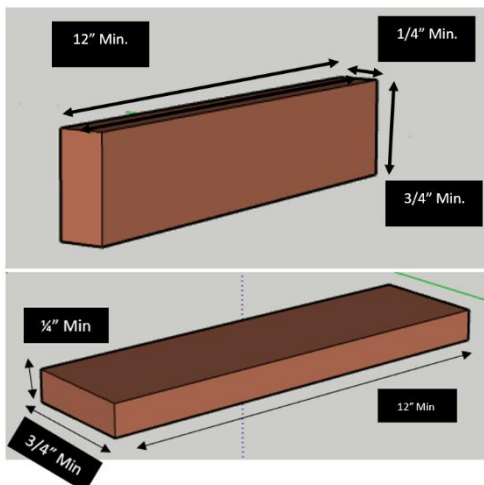


Figure 25

- **Wood Moisture Content:** Verify that all stock has an appropriate moisture content, as wood with moisture

levels exceeding 20% can accelerate wear on the cutters, resulting in subpar cutting.

- To ensure safe and effective machine operation, it is imperative that your workpiece meets or exceeds the minimum dimensions outlined below before proceeding with any machining operation. Failure to adhere to these specifications may lead to workpiece breakage or kickback during operation, posing a risk of injury to the operator and potential damage to the machine.

Please consult Figures 26 and 28 to verify that your workpiece dimensions follow the specified minimum requirements before commencing machine operations. This precautionary measure is vital for maintaining operational safety and the integrity of both the workpiece and the machine.

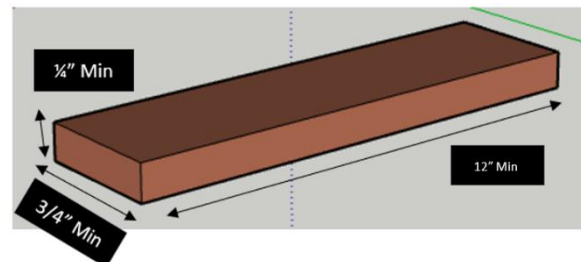


Figure 26.

Jointing Operation

The primary function of the jointer is to surface plane flat one side or edge of a board or workpiece. To effectively utilize the jointer, follow these steps:

1. Place the workpiece on top of the right, infeed table.

The underside of the workpiece will be cut by the rotating cutterhead inserts.

3. When jointing, feed the workpiece right-to-left over the cutterhead FIG.27.

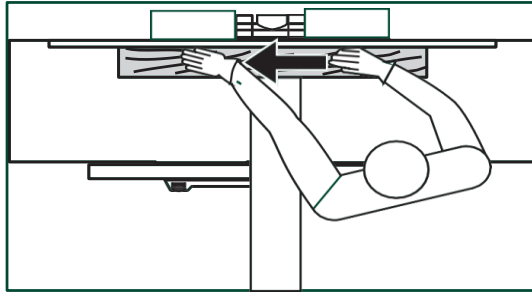


Figure 27.

PLEASE NOTE that the workpiece dimensions are very crucial for the safe operation of this machine please adhere to the below dimensions:

- Length: Use a push stick for boards shorter than 12"; for lumber over 60", utilize support rollers.
- Width: Maximum 12".
- Thickness: Minimum 1/4". Use push blocks for face planing thin material.

- Depth of Cut: Maximum 1/8". Multiple cuts of 1/16" or less produce better finish results and prolong the life of the cutterhead inserts.

4. Set the jointer fence position and angle as required.
5. Set the desired depth of cut/thickness.
6. Adjust the cutterhead guard for user protection (FIG. 42 and 44).
7. Release the Belt Lever for Planer Drive Rollers (#217) at the jointer outfeed end of the cabinet. This action transfers more power directly to the cutterhead.

8. Place the workpiece against the jointer fence for support during the cutting action.

9. Assume the proper operating position: Stand to the side of the infeed table with feet apart for stability throughout the cutting process FIG. (.). NOTE: When cutting narrow board edges or workpieces more than 3" thick, position the cutterhead guard close to the side against the workpiece (FIG.).

- For planing the face of a plank or workpieces up to 3" thick, lower the cutterhead guard to just above the workpiece. Adjust the guard to distances not exceeding the recommended dimensions (FIG. 42):

- Rear edge (A): Workpiece maximum 1/8" (3mm).

- Front edge (B): Workpiece maximum 3/32" (2mm).

10. Turn on the machine and place the workpiece on the infeed table. Feed the workpiece toward the cutterhead, applying downward pressure until the workpiece clears the cutterhead on the outfeed table side. Keep hands away from the cutterhead to prevent accidents.

- Run boards at different positions along the width of the cutterhead to utilize the full length of the cutting knives. Jointing in one area of the cutterhead will quickly dull the knives in that area.

Planing Operation

Thickness planing is employed to reduce a workpiece with one surface already planed to a desired thickness. Here's how to use the planer effectively:

1. Secure the jointer fence and cutterhead guard in place using their respective locking handles (#256, 259 & 375, FIG. ()), A).
2. Twist the two clamping handles (#12 & 39, FIG. 46, B) upwards and then pull them outward to release the jointer tables. Swing the table (C) and fence assemblies up and towards the back of the machine. Ensure that the table's Locking Block (#117, D) is engaged to maintain the table in the upward position.

NOTE: When closing or lowering the table, always remember to release the locking block to prevent damage to the machine.

3. Pivot the Dust Chute #66, FIG.(.), E) up and over the cutterhead where it will automatically lock in place with the Locking Pin (#51, F). Attach a 4" hose from your dust collector to the dust port before commencing any planing operations.

It is imperative to use a dust collection system with this planer to eliminate harmful airborne dust, prevent chip build-up that may jam the roller system in the cutterhead, and maintain a clean working area free of debris.

To utilize the planer effectively:



- Place the board with one surface already jointed flat downwards onto the planer's table.
- The board will be cut on its upper surface by the cutterhead as it passes through the planer.
- When planing, feed the workpiece left-to-right under the cutterhead FIG. (28).

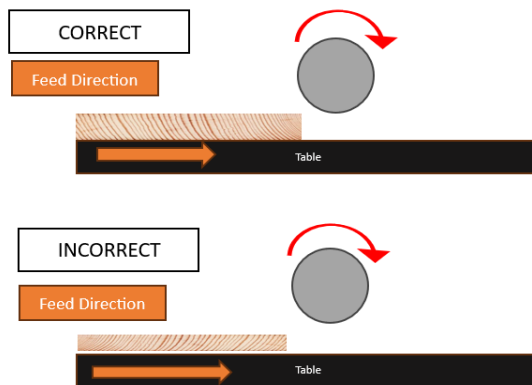


Figure 28.

NOTE: Workpiece dimensions for planing:

- Length: minimum 12"; for lumber over 60", utilize roller supports.
- Width: maximum 12".
- Thickness: minimum 1/4"; maximum 7-7/8".
- Depth of Cut: maximum 1/8". Multiple cuts of 1/16" or less produce better finish results.

NOTE: The Belt Lever for Planer Drive Rollers (#217, FIG. 29) must be set in the 'ENGAGE' position to activate the drive rollers.



Figure 29.

1. To feed the workpiece into the machine, assume a proper operating position (FIG. 47). Stand offset to one side of the feed opening to avoid any kick-back, should it occur. Do not push the lumber once the infeed roller has been engaged. Let the infeed roller move the workpiece into the planer at its own pace.

2. To remove the workpiece from the machine, position yourself offset to one side of the outfeed opening (FIG. 48). Do not pull the lumber as it exits the machine. Let the outfeed roller move the workpiece out of the planer at its own rate but support the lumber as it extends past the extension rollers, if needed.

3. Set the planing thickness by measuring your board's thickness and adjusting the planer accordingly, either to this measurement or 1/16" under this figure. It's crucial to avoid removing an excessive amount of stock (over 1/8") during the initial pass to prevent damage to the planer. Repeated passes through the planer will gradually achieve the final desired board thickness.

4. Feed boards slowly and directly into the planer. The infeed and outfeed rollers will automatically guide the boards through the planer.

- Ensure that workpieces are guided straight into and through the planer. The cutting action of the cutterhead may attempt to turn a board being surfaced, so slight control of the board may be necessary. Do not push the board forward; let the planer's rollers automatically move the board through the machine.

5. Remove the board from the planer. Refer to Step 2; do not pull the lumber as it exits the machine. Allow the outfeed roller to move the workpiece out of the planer at its own rate but support the lumber as it extends past the extension rollers, if needed.

- Ensure there are no loose knots, nails, staples, dirt, or foreign objects in the wood to be planed.

- Plane wood in the same direction as the grain, avoiding planing across the grain or end grain.

- Avoid planing boards shorter than 12"; shorter boards should be planed end to end with other boards to prevent kick-back and snipe.

- Provide additional support for boards longer than 60" to prevent tipping, which can cause snipe on the ends.

How to Square a Workpiece

Certainly! Here's a rewritten version of the points:

1. FIG. (30 -A) - Utilize the jointer to ensure that surface side 1 is flat.
2. (B) - Following the surfacing of side 1, rotate the workpiece by 90°, aligning side 1 against the fence. Proceed to flatten side 2 using the jointer. This action results in two perpendicular sides.

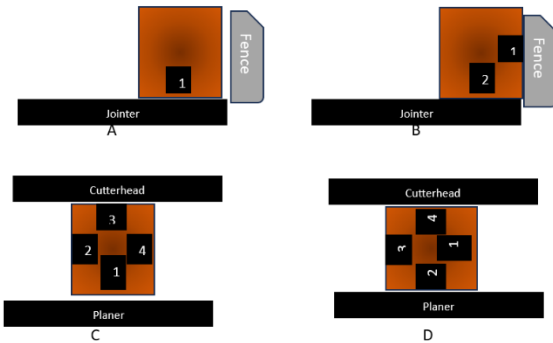


Figure 30.

3. (C) - Employ the planer to process the workpiece, positioning side 1 flat against the planer bed. Subsequently, side 3 can be machined to achieve parallelism with side 1.
4. (D) - Orient side 2ed flat against the planer bed to facilitate the planing of side 4, ensuring its flatness and parallel alignment with side 2.

Upon completion of these steps, the workpiece attains a square profile, featuring four flattened surfaces and four edges with perpendicular alignment.

- Utilize the full length of the cutting knives by running boards through the planer at different positions along the width of the bed. Planing only in the center or through one side of the planer will quickly dull the knives in that area.
- For thickness planing stock with non-parallel surfaces, use suitable feeding aids such as fitting templates.

Snipe

The term 'snipe' refers to the depression that may occur at the front or rear of a board during planing. It is caused by uneven pressure on the cutterhead when a board is fed into the planer or when exiting. Snipe can result in uneven surfaces and affect the overall quality of the finished board.

To avoid snipe, it's essential to keep your lumber firmly pressed down onto the planer bed at the beginning of the cut and also at the end of the cutting action as the lumber exits the planer. This ensures consistent pressure distribution across the board, minimizing the risk of snipe formation.

Section 5: Accessories

Mobility Kit: includes wheels, hardware, and the tow bar it helps with ease of moving the machine around the shop.



Figure 31.

Carbide Inserts for cutterhead: These inserts are made of carbide an extremely hard metal sharpened to a mirror finish sharp edge, they come in package of 10. Item number CXHCINS.



Figure 32.

Blade cleaners: we carry a selection of blade and bit cleaners and rust protectors, such as Boeshield Rust free spray item number B3708, Boeshield T9 Protectant and lubricant item number B3707, Trend Tool and Bit Cleaner item number B3229.

Please visit: www.busybeetools.com for further information and a wide selection of products.

Section 6: PPE and personal safety

At Busy Bee Tools we carry a wide range of PPE and personal safety gear, ranging from basic eye, ear and breathing protective gear all the way to the most advanced Bluetooth earmuffs and earbuds that you can connect your mobile device to while protecting your ears from loud noises. Visit our website for a wide range of PPE and safety gear.

Section 7: Maintenance

List of lubricants and grease Required:

- Regular machine grease for all gears and chains.
- Blade and bit cleaner.

Scheduling

Based on the provided guidelines, here is a daily and weekly list of tasks for maintaining a jointer/planer:

Daily

Pre-use Check:

- Inspect power cord and plug for wear or damage.
- Ensure all screws and hardware are tight.
- Clear the area of any obstructions.

Weekly Cleaning and Protecting

Cleaning:

- Regularly clean all parts with a soft cloth, brush, or compressed air.
- Wear proper eye protection if blowing sawdust.

Knife Inspection:

- Check knives for tightness, sharpness, and nicks.

Lubrication:

- Regularly lubricate bearings and chains with light motor oil.
- Keep drive belts free of oil and grease.

Column Maintenance:

- Clean planer bed columns to prevent wood chip buildup.

- Treat columns with dry lubricant spray.

Table Maintenance:

- Keep jointer and planer tables free of resin and rust.
- Clean with non-flammable solvent and apply dry lubricant spray or wax.
- Lower planer table to avoid contact with sharp knife inserts.

Feed Roller Cleaning:

- Clean metal feed rollers with soft rag and solvent if resin buildup occurs.
- Avoid applying solvents to rubber-coated rollers.
- Keep hands away from sharp cutterhead knife inserts.

- Do not lubricate rollers to ensure proper grip on lumber.

Anti-kickback Fingers:

- Clean anti-kickback fingers of dust or resin.
- Lubricate with dry lubricant only.

Belt Tension Check:

- Check belt tension after 3-5 hours of operation to prevent stretching.

Regular maintenance and checks are essential for ensuring the longevity, safe, and efficient operation of the jointer/planer combo machine.

Section 8: Wiring and Electrical Diagram

Wiring Safety Instructions

At Busy Bee Tools, we strive constantly to improve our machines and their performance. It's essential to take note of Busy Bee Tools advice regarding potential changes or updates to the electrical systems of your machine. Here are



some key steps to follow if you suspect differences between your machine and the information provided in the manual:

- 1- Check the Manufacture Date: As mentioned in the manual, verify the manufacture date of your machine, which can be found on the main machine label.
- 2- Compare the Manual and Your Machine: Carefully compare the information and wiring diagrams provided in the manual with the actual components and wiring of your machine.
- 3- Contact Technical Support: If you identify any differences or have concerns about the electrical systems of your machine, reach out to the manufacturer's Technical Support team. They can provide guidance and updated wiring diagrams if necessary.
- 4- Provide Serial Number:** Be prepared to provide the serial number of your machine when contacting Technical Support. This information helps them identify the specific model and configuration of your machine.
- 5- Do Not Make Unauthorized Changes: As a precaution, avoid making any unauthorized changes or modifications to the wiring of your machine until you have received guidance from Technical Support.
- 6- Prioritize Safety: Always prioritize safety when dealing with electrical systems. Ensure that the machine is disconnected from the power source before inspecting or making any changes.

By following these steps and seeking assistance from Busy Bee Tools Technical Support when needed, you can ensure that your machine operates safely and effectively, even if there have been updates or changes to its electrical systems since the manual was printed.

The warnings and guidelines provided in the manual are crucial for ensuring your safety and the proper functioning of your machine's electrical systems. Here's a summary of the key points to keep in mind:

- 1- Shock Hazard: Working on wiring connected to a power source can be extremely dangerous and may result in severe burns, electrocution, or even death. Always disconnect the power from the machine before servicing electrical components to prevent any electrical accidents.
- 2- Modifications: Avoid making unauthorized modifications to the wiring of your machine. Modifying the wiring beyond what is shown in the manufacturer's diagrams can lead to unpredictable and potentially hazardous results, including serious injury or fire. Additionally, the installation of unapproved aftermarket parts is discouraged.
- 3- Wire Connections: Ensure that all wire connections are tight and secure. Loose connections can pose a safety risk and may lead to electrical problems during machine operation. After any wiring task, double-check all connections to confirm they are properly tightened.
- 4- Circuit Requirements: Adhere to the circuit requirements outlined at the beginning of the manual when connecting your machine to a power source. This includes using the appropriate voltage, phase, and circuit amperage to ensure safe and reliable operation.
- 5- Wire/Component Damage: Damaged wires or components can increase the risk of personal injury, fire, or machine damage. If you identify any wires or components that are damaged while performing a wiring task, it is crucial to replace them promptly to ensure safety and prevent further issues.
- 6- Motor Wiring: The motor wiring diagrams provided in the manual may not exactly match your machine's configuration. If you find discrepancies, consult the wiring diagram inside the motor junction box for accurate information.
- 7- Capacitors/Inverters: Some capacitors and power inverters can store an electrical charge for a significant duration (up to 10 minutes) after being



Section 9: Troubleshooting

Trouble Shooting

Issue	CAUSE	SOLUTIONS
Machine will not start.	<ol style="list-style-type: none"> 1. No power 2. Fuse Burned 3. Main on/off switch or Micro switch is not functioning 4. Motor failure 	<ol style="list-style-type: none"> 1. Check power source, plug and wiring. 2. Check fuse, replace it if it is blown. 3. Check the position of the switches. Contact Busy Bee Tools for repair or replacement. 4. Inspect motor for failed components. Contact Busy Bee Tools for repair or replacement.
Circuit Breakers trip and /or Fuses are blown	<ol style="list-style-type: none"> 1. Wrong circuit size for the machine 2. Motor is overloaded under strain from taking too heavy of cut 3. Use of an extension cord 	<ol style="list-style-type: none"> 1. Check circuit/fuse rating and amps of the motor. Install the correct rated breaker/fuse. 2. Take lighter cuts in planing lumber. 3. DO NOT use an extension cord or use heavier gauge cord.
Machine bogs down in the cut	<ol style="list-style-type: none"> 1. Excessive depth of cut 2. Feed rate is too fast 3. Cutterhead inserts are dull 	<ol style="list-style-type: none"> 1. Reduce depth of cut. 2. Reduce feed rate. 3. Rotate or replace the cutterhead inserts..
Cutting vs. planer feed rate is not consistent	<ol style="list-style-type: none"> 1. Belts are loose 2. Chips and dust build-up on parts 	<ol style="list-style-type: none"> 1. Check the pulleys for damage and belts for tension & wear. 2. Unplug machine and clean all parts.
TROUBLESHOOTING THE JOINTER		
Jointer fence is not accurate at 90° or 45°	<ol style="list-style-type: none"> 1. Fence stops are not properly adjusted 2. Locking handles are loose 	<ol style="list-style-type: none"> 1. Re-adjust the fence stops. 2. Check all handles to make sure that they are properly tightened before starting the machine.
'Chatter' marks on lumber	<ol style="list-style-type: none"> 1. Feed rate is too fast 	<ol style="list-style-type: none"> 1. Slow the feed rate down.
Cutterhead slows down when jointing	<ol style="list-style-type: none"> 1. Feed rate is too fast 2. Downward pressure on the cutterhead knives is too great 3. Planer drive rollers are operating 	<ol style="list-style-type: none"> 1. Slow down feeding the wood over the cutterhead. 2. Apply less downward pressure 3. Release belt lever for the planer drive rollers
Small, raised lines are running along the surface	<ol style="list-style-type: none"> 1. Knives are nicked or broken 	<ol style="list-style-type: none"> 1. Rotate insert knives to new sharp edges.
Jointed stock is concave on the back end of the board	<ol style="list-style-type: none"> 1. Knives are set higher than the outfeed table 	<ol style="list-style-type: none"> 1. Raise the outfeed table level with the cutterhead and the inserts.
Jointed stock is concave on the front end of the board	<ol style="list-style-type: none"> 1. Outfeed table is set higher than the knives 	<ol style="list-style-type: none"> 1. Lower the outfeed table level with the cutterhead and the inserts.



Stock is concave in the middle of the board	1. Table is out of level	1. Raise the table ends.
Milled surface is torn - also called 'chip out' or 'tear out'	1. Cutting against the grain 2. Cut is too deep 3. Knives are dull	1. Cut with the grain. For figured woods, take shallow cuts to minimize tear out. 2. Reduce cutting depth to 1/16" or less. 3. Rotate insert knives to new sharp edges.
Milled surface grain is rough, raised, or fuzzy	1. Lumber has a high moisture content 2. Knives are dull	1. Reduce the moisture content by drying it, or switch to other properly seasoned lumber. 2. Rotate insert knives to new sharp edges.
Milled surface is glossy	1. Cutting depth is too shallow 2. Knives are dull 3. Feed rate is too slow	1. Increase depth of cut slightly. 2. Rotate insert knives to new sharp edges. 3. Increase feed rate.
TROUBLESHOOTING THE PLANER		
Poor feeding of lumber through the planer	1. Drive belt is worn or broken 2. Drive belt tension spring is broken 3. Lumber sticking on planer's table 4. Feed rollers not applying enough pressure on lumber	1. Check and replace as necessary. 2. Check tension and/or replace the spring. 3. Clean the table and apply silicone-based lubricant to reduce friction. 4. Adjust the feed roller pressure.
Not planing lumber to a uniform thickness	1. Planer table is not level to cutterhead	1. Adjust table and/or cutterhead as needed.
Board thickness does not match scale markings	1. Depth of cut scale not set correct	1. Adjust scale to match board thickness
Thin, elevated lines are running along the surface	1. Knives are nicked or broken	1. Rotate insert knives to new sharp edges.
Snipe on board ends (NOTE: Snipe can be reduced, but not fully eliminated)	1. Feed rollers not set properly 2. Lumber not supported when fed into or exiting the planer 3. Short boards not butted	1. Adjust feed roller height for applying pressure onto lumber to keep flat on table. 2. Support long boards with roller stands. 3. Run boards butt end to end through planer
Planed surface is torn - also called 'chip out' or 'tear out'	1. Cutting against the grain 2. Cut is too deep 3. Knives are dull	1. Cut with the grain. For figured woods, take shallow cuts to minimize tear out. 2. Reduce cutting depth to 1/16" or less. 3. Rotate insert knives to new sharp edges.
Planed surface grain is rough, raised, or fuzzy	1. Lumber has a high moisture content 2. Knives are dull	1. Reduce the moisture content by drying it, or switch to other properly seasoned lumber. 2. Rotate insert knives to new sharp edges.

Planned surface is shiny	<ol style="list-style-type: none"> 1. Cutting depth is too shallow 2. Knives are dull 3. Feed rate is too slow 	<ol style="list-style-type: none"> 1. Increase depth of cut slightly. 2. Rotate insert knives to new sharp edges. 3. Increase feed rate.
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More Troubleshooting

Troubleshooting Common Planing Issues

Listed below are common wood characteristics and associated problems that may arise during planing operations. Subsequent to each problem description, viable solutions are presented:

Chipped Grain:

Problem: Occurs typically when planing against the grain, processing lumber with knots, excessive cross grain, or using dull knives/inserts.

Solution: Decrease the depth of cut, reduce the feed rate, inspect lumber for grain patterns, and examine the condition of knives/inserts.

Fuzzy Grain:

Problem: Often a result of surfacing lumber with excessive moisture content or inherent to certain wood types like basswood. Dull knives/inserts may also contribute.

Solution: Check lumber moisture content, allow proper drying if moisture exceeds 20%, and assess the condition of knives/inserts.

Figure 43.

Snipe:

Problem: Typically observed when board ends exhibit more material removal than the rest of the board. Misalignment or inadequate support during machining can be causal factors.

Solution: Lift the workpiece slightly as it exits the planer to mitigate snipe. To prevent snipe altogether, plane lumber slightly longer than the intended work length and trim excess afterward.

Pitch & Glue-up:

Problem: Accumulated glue and resin on rollers and the cutterhead can lead to overheating, reduced cutting efficiency, scorched lumber, uneven insert marks, and machine chatter.

Solution: Thoroughly clean the rollers and cutterhead to remove glue and resin buildup.

Chip Marks or Indentations:

Problem: Wood chips are not efficiently expelled from the cutterhead, leading to chip indentation, or bruising on the wood surface.

Solution: Implement a proper dust collection system, ensure dry lumber, maintain sharp knives/inserts, and reduce the depth of cut to mitigate chip marks.

Wood Species Impact

The species of wood, in conjunction with its condition, significantly influences the depth of cut that the jointer/planer can effectively achieve per pass. Refer to the Janka Hardness Rating chart in Figure, where higher Janka numbers indicate harder wood. For optimal results, limit the material removal per pass, particularly with harder wood species, to preserve the quality of your machining operations.

Note: The Janka Hardness Rating quantifies the force (in pounds) required to embed a 0.444" steel ball into the wood's surface to a depth equivalent to half the ball's diameter. See the table below.

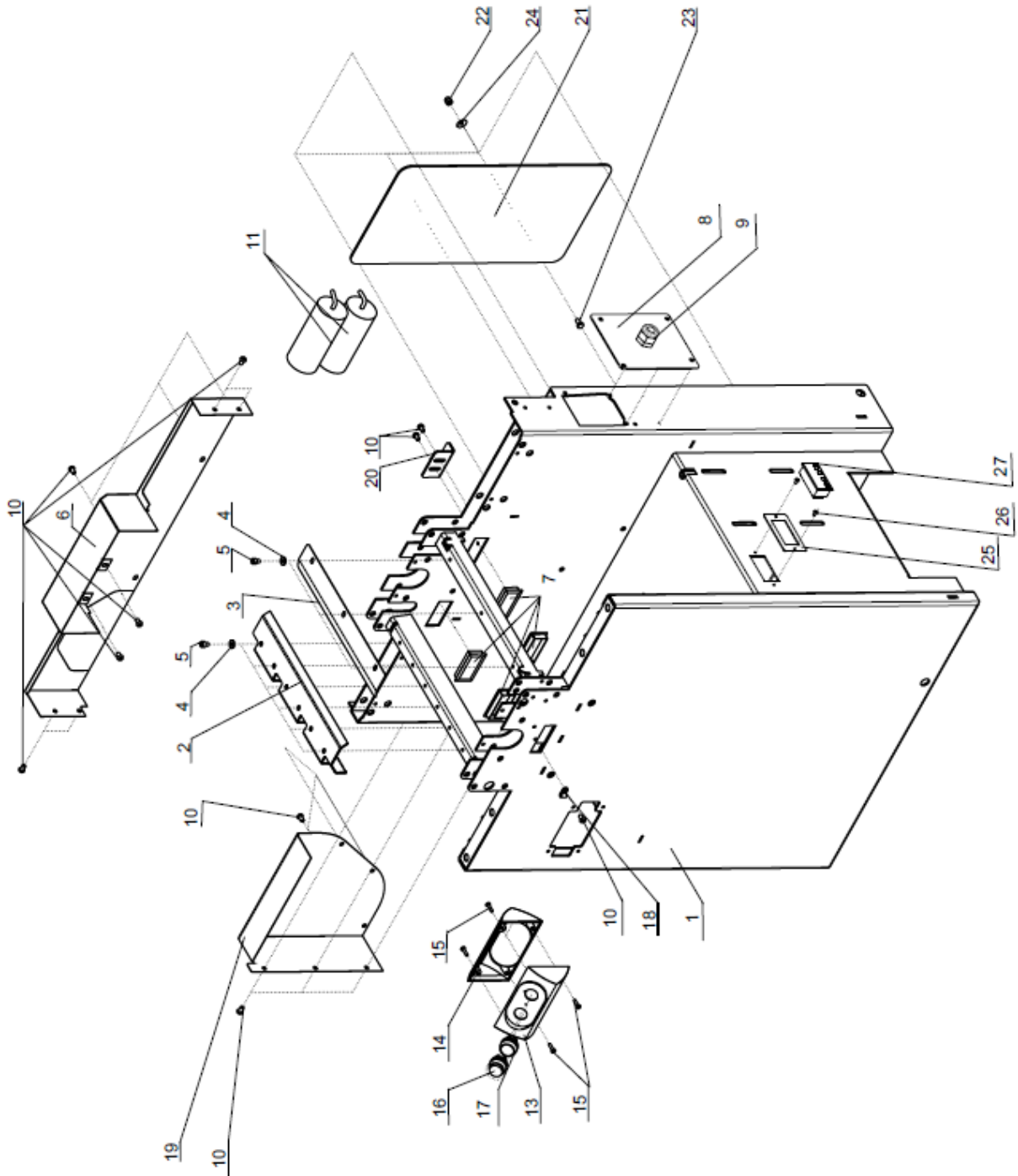
Wood Species	Pressure (in pounds)
Hickory, Pecan	1,820
Hard Maple	1,450
White Oak	1,360
Beech	1,300
Red Oak	1,290
Yellow Birch	1,260
Green Ash	1,200
Black Walnut	1,010
Soft Maple	950
Cherry	950
Hackberry	880
Gum	770
Elm	830
Sycamore	770
Alder	590
Yellow Poplar	540
Cottonwood	430
Basswood	410
Aspen	350



Section 10: Machine Diagrams and Parts

Machine Diagrams

Cabinet Assembly

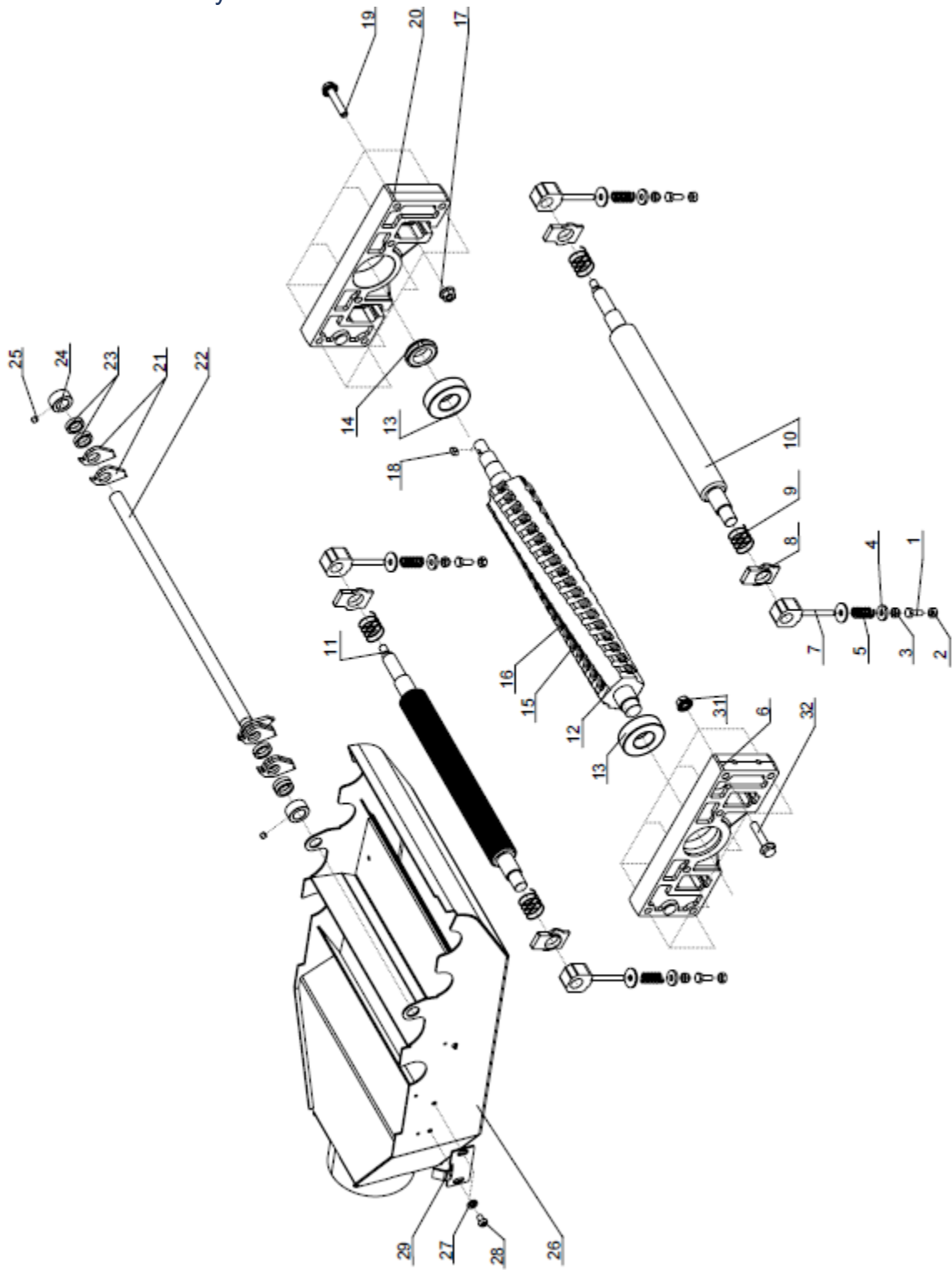


Cabinet Parts List

Ref. #	Parts Number	Description	QTY.	Mfg. Item
1	PBBJP16CA01	CABINET BODY	1	PT410B011000
2	PBBJP16CA02	REAR DEFLECTOR	1	FDPT1601010005
3	PBBJP16CA03	FRONT DEFLECTOR	1	FDPT1601010004
4	PBBJP16CA04	WASHER FLAT	12	WSH6GB97D1Z
5	PBBJP16CA05	BOLT	12	M6X10GB70D1Z
6	PBBJP16CA06	RIGHT GUARD	1	FDPT1202010007
7	PBBJP16CA07	PLASTIC PLUG	4	FDPT1202010001-001S
8	PBBJP16CA08	FIXED PLATE	1	PT410B010012
9	PBBJP16CA09	CABLE STRAIN RELIEF	1	JXSM0401010003
10	PBBJP16CA10	Screw	15	M6X8GB818Z
11A	PBBJP16CA11S	CAPACITOR START	1	UC-040-450V
11B	PBBJP16CA11R	CAPACITOR RUN	1	UC-040-450V
12	PBBJP16CA12	NUT HEX	2	M6GB6170B
13	PBBJP16CA13	UPPER SWITCH BOX	1	FDPT1202010002
14	PBBJP16CA14	LOWER SWITCH BOX	1	FDPT1202010011
15	PBBJP16CA15	SCREW	2	M4X30GB819Z
16	PBBJP16CA16	EMERGENCY STOP BUTTON	1	HY57B-02
17	PBBJP16CA17	ON SWITCH	1	HY57-5
18	PBBJP16CA18	CABLE CLAMP	1	1502014-02
19	PBBJP16CA19	RIGHT COVER PLATE	1	FDPT1202010006
20	PBBJP16CA20	SQUARE PLATE	1	JL44050012A
21	PBBJP16CA21	BACK MOTOR COVER	1	PT410B010013
22	PBBJP16CA22	NUT HEX	5	M6GB923Z
23	PBBJP16CA23	BOLT HEX	5	M6X12GB5789Z
24	PBBJP16CA24	RIBBER GASKET	5	WSH6GB96D1Z
25	PBBJP16CA25	MOUNTING PLATE	1	PT410B010014
26	PBBJP16CA26	SCREW	2	M4X8GB818B
27	PBBJP16CA27	DIGITAL DISPLAY	1	M506



Cutterhead Assembly

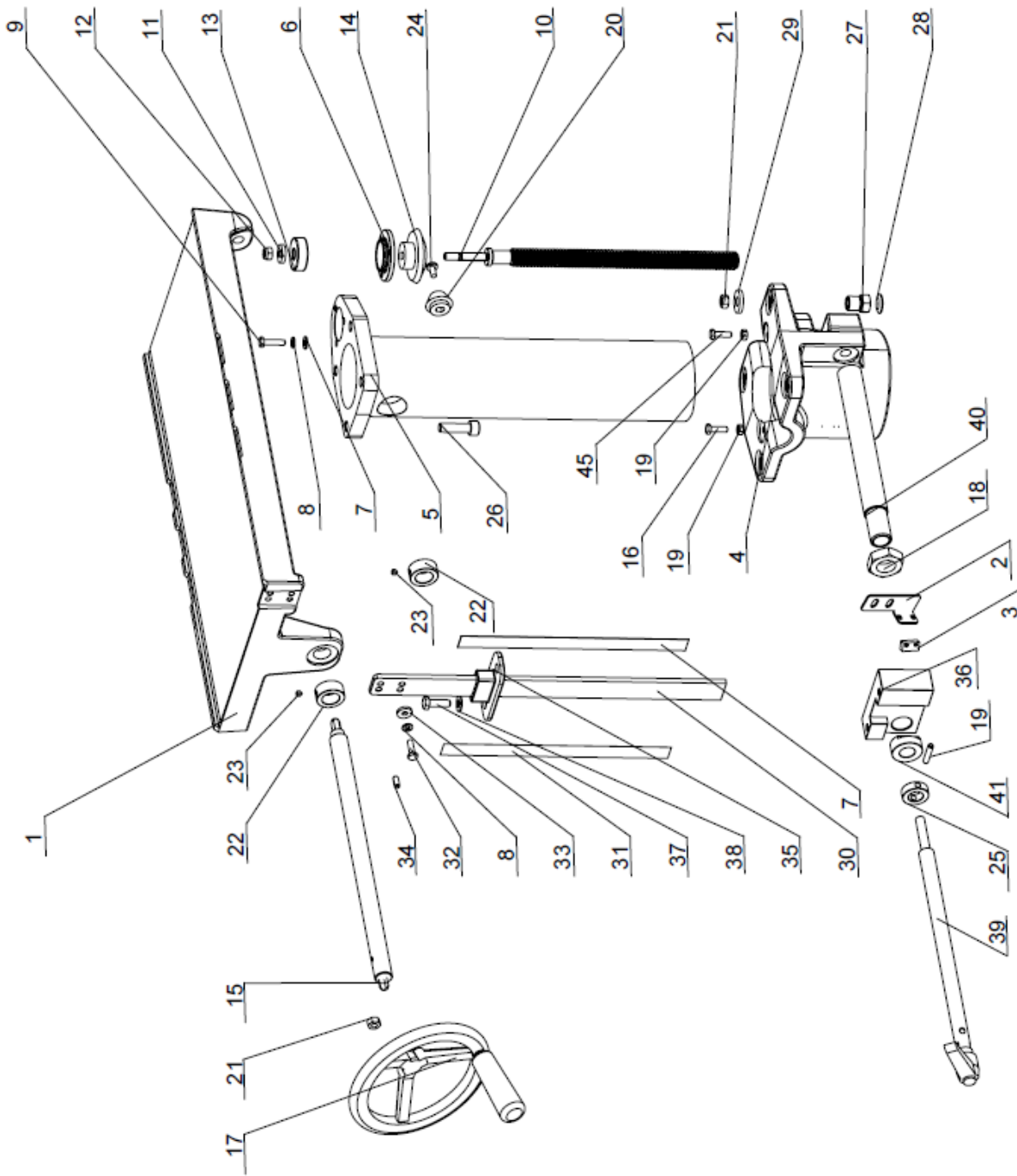


Cutterhead Assembly Parts List

Ref. #	Parts Number	Description	QTY.	Mfg. Item
1	PBBJP16CD01	BOLT HEX	4	FDPT1202050008
2	PBBJP16CD02	NUT HEX	4	M6GB6170Z
3	PBBJP16CD03	NUT HEX	4	M6GB889D1ZF
4	PBBJP16CD04	SHIM	8	WSH6GB96D1Z
5	PBBJP16CD05	COPRESSION SPRING	4	FDPT1202050007
6	PBBJP16CD06	Left knife holder	1	FDPT1202050003
7	PBBJP16CD07	Floating bearings	4	FDPT1202050006
8	PBBJP16CD08	Square plastic pad	4	JL44031005
9	PBBJP16CD09	Compression spring	4	JL44031006
10	PBBJP16CD10	Discharge shaft	1	FDPT1601050004
11	PBBJP16CD11	Feed shaft	1	FDPT1601050001
12	PBBJP16CD12	Spiral cutter shaft	1	PT410B052100
13	PBBJP16CD13	Bearing	2	BRG6205-2RSC3GB276IBC
14	PBBJP16CD14	Nut	1	JL44031106
15	PBBJP16CD15	Spiral knife	72	JL45021006
16	PBBJP16CD16	Screw	72	JL45021007
17	PBBJP16CD17	Nut M8-1.25	12	M8GB6177B10
18	PBBJP16CD18	Flat key	1	PLN5X5X10GB1096D1
19	PBBJP16CD19	Bolt M8-1.25X40MM	12	M8X40GB5789B12D9
20	PBBJP16CD20	Right knife holder	1	FDPT1202050005
21	PBBJP16CD21	Reverse Claw	72	JL44031202A
22	PBBJP16CD22	Reverse bar	1	FDPT1601050002
23	PBBJP16CD23	Anti reverse claw spacer	28	JL44031203
24	PBBJP16CD24	Anti reverse claw spacer	2	JL44031203A
25	PBBJP16CD25	Screw M6-1.00X6MM	2	M6X6GB77B12D9
26	PBBJP16CD26	Vacuum hood component	1	FDPT1601051000
27	PBBJP16CD27	Shim	2	WSH6GB97D1Z
28	PBBJP16CD28	Screw M6-1.00X12MM	2	M6X12GB70D2Z
29	PBBJP16CD29	Limit plate	1	FDPT1202051001



Planer Table Assembly

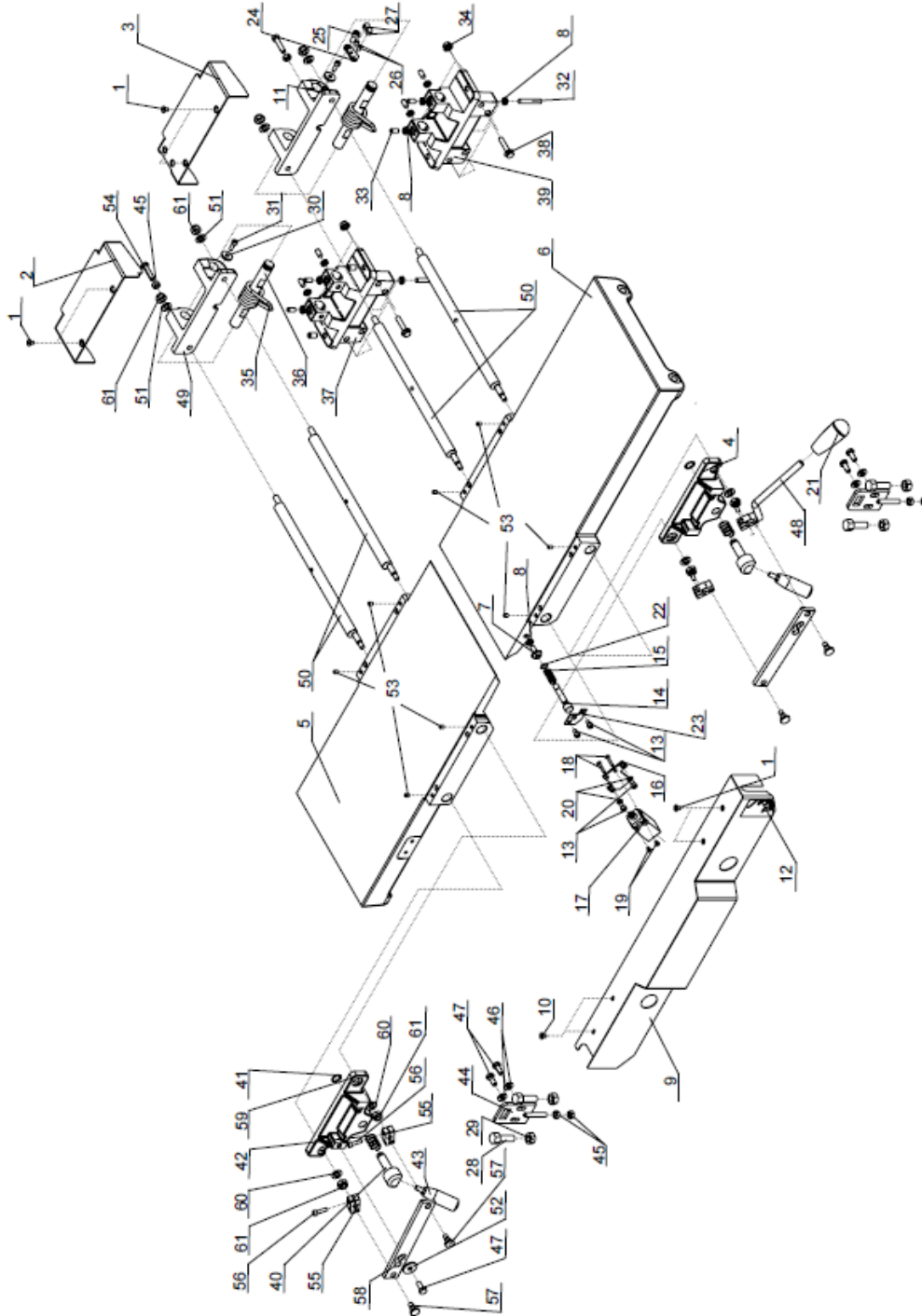


Planer Table Parts List

Ref. #	Parts Number	Description	QTY.	Mfg. Item
1	PBBJP16PT01	Press planer workbench	1	PT410B040001
2	PBBJP16PT02	Sensor mounting plate	1	PT410B040017
3	PBBJP16PT03	Read head	1	MG09L
4	PBBJP16PT04	Positioning sleeve	1	PT410B040002
5	PBBJP16PT05	Lifting sleeve	1	PT410B040003
6	PBBJP16PT06	Pad cover	1	FDPT1202040013
7	PBBJP16PT07	Magnetic ruler	1	XD-U-05-L260
8	PBBJP16PT08	Shim	5	WSH6GB93Z
9	PBBJP16PT09	Bolt M6-1.00X25MM	3	M6X25GB5783Z
10	PBBJP16PT10	Screw	1	FDPT1202040004
11	PBBJP16PT11	Shim	2	WSH8GB97D1Z
12	PBBJP16PT12	Nut M8-1.25	1	M8GB889D1Z
13	PBBJP16PT13	Bearing	1	BRG6301-2RSGB276
14	PBBJP16PT14	Large bevel gear	1	JL44013002
15	PBBJP16PT15	Lifting axis	1	PT410B040005
16	PBBJP16PT16	Bolt M6-1.00X20MM	2	M6X20GB5783Z
17	PBBJP16PT17	Handwheel	1	SGSL-D160-d12
18	PBBJP16PT18	Nut M24-3.00	1	M24X2GB6173Z
19	PBBJP16PT19	Spring pin	1	PIN6X30GB879D1B
20	PBBJP16PT20	Small bevel gear	1	JL44013005
21	PBBJP16PT21	Nut M8-1.25	4	M8GB6170Z
22	PBBJP16PT22	Small positioning sleeve	2	JL44013007
23	PBBJP16PT23	Screw M6-1.00X10MM	2	M6X10GB77B12D9
24	PBBJP16PT24	Screw M6-1.00X12MM	1	M6X12GB818Z
25	PBBJP16PT25	Retaining ring	1	FDPT1202040010
26	PBBJP16PT26	Screw M10-1.50X35MM	4	M10X35GB70D1Z
27	PBBJP16PT27	Nut	4	JL44012002
28	PBBJP16PT28	Shim	4	JL44010005
29	PBBJP16PT29	Shim	4	JL44010007
30	PBBJP16PT30	Guide plate	1	PT410B040011
31	PBBJP16PT31	Pressure planer scale	1	FDPT1202040016
32	PBBJP16PT32	Bolt M6-1.00X20MM	2	M6X20GB5783Z
33	PBBJP16PT33	Shim	2	WSH6GB97D1Z
34	PBBJP16PT34	Spring pin	2	PIN6X20GB879D1B
35	PBBJP16PT35	Ruler guide seat	1	JL44010002
36	PBBJP16PT36	Fixed block	1	PT410B040008
37	PBBJP16PT37	Bolt M8-1.25X25MM	2	M8X25GB5783Z
38	PBBJP16PT38	Shim	2	WSH8GB97D1Z
39	PBBJP16PT39	Locking rod	1	FDPT1202040007

Ref. #	Parts Number	Description	QTY.	Mfg. Item
40	PBBJP16PT40	Casing	1	FDPT1202040006
41	PBBJP16PT41	Limit sleeve	1	FDPT1202040009

Jointer Table Assembly



Jointer Table Assembly Parts List

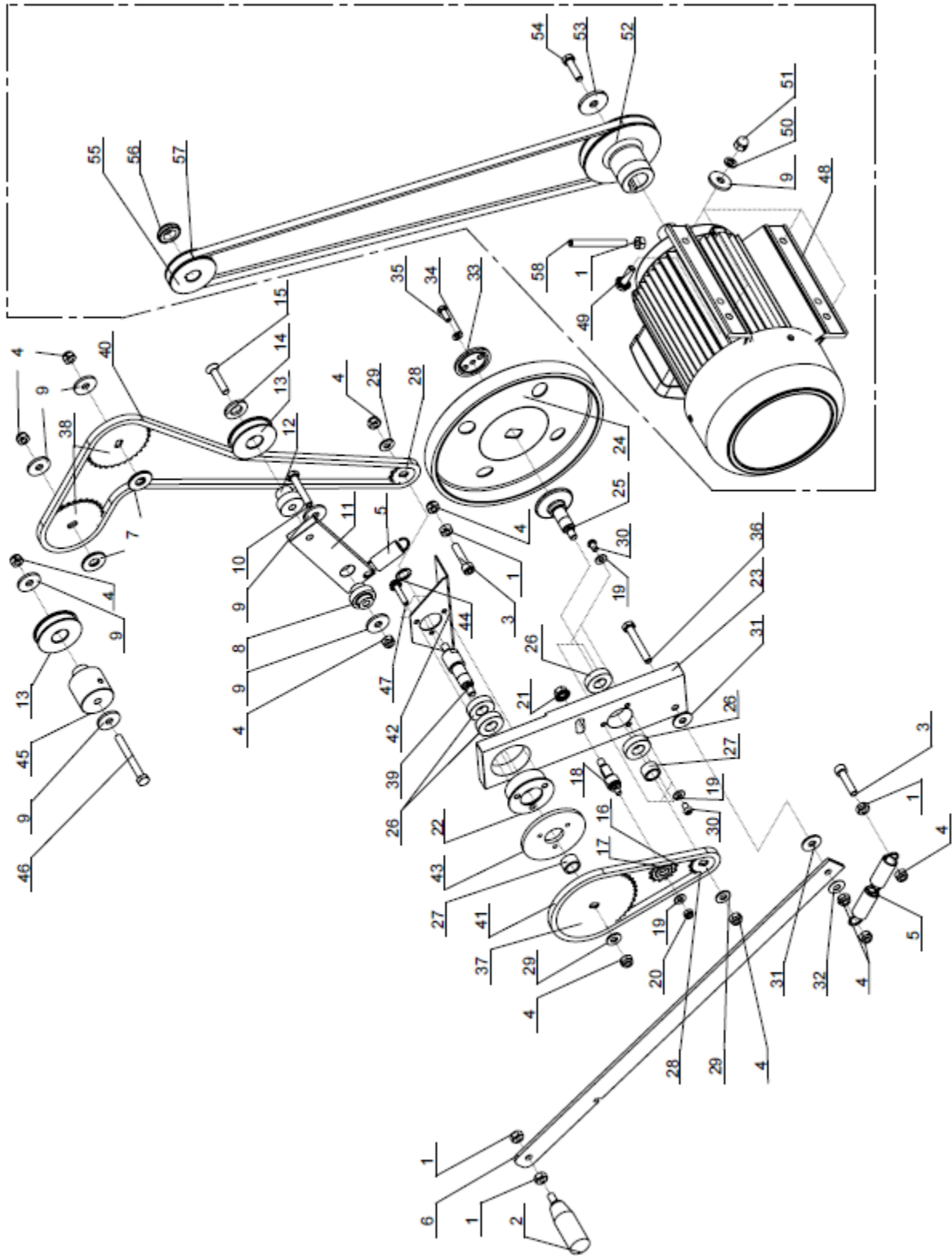
Ref. #	Parts Number	Description	QTY.	Mfg. Item
1	PBBJP16JT01	Screw M6-1.00X12MM	6	M6X12GB70D3Z
2	PBBJP16JT02	Right protective plate 2	1	FDPT1601032014
3	PBBJP16JT03	Right protective plate 1	1	FDPT1601031013
4	PBBJP16JT04	Front seat	1	PT410B031008
5	PBBJP16JT05	Rear workbench	1	PT410B032001
6	PBBJP16JT06	Front workbench	1	PT410B031001
7	PBBJP16JT07	Push rod	1	FDPT1202031003
8	PBBJP16JT08	Nut M12-1.75	13	M8GB6170Z
9	PBBJP16JT09	Upper protective cover	1	PT410B033000
10	PBBJP16JT10	Screw M6-1.00X12MM	2	M6X12GB70D2Z
11	PBBJP16JT11	Front rotating seat	1	PT410B031002
12	PBBJP16JT12	Planing ruler	1	FDPT1202031011
13	PBBJP16JT13	Screw M6-1.00X10MM	4	M6X10GB70D1Z
14	PBBJP16JT14	Compression rod	1	FDPT1202031004
15	PBBJP16JT15	Spring 1	1	FDPT1202031010
16	PBBJP16JT16	Fixed plate	1	FDPT1202031007
17	PBBJP16JT17	Safety switch QKS7-06	1	QKS7-06
18	PBBJP16JT18	Screw M4-0.70X30MM	2	M4X30GB819D1Z
19	PBBJP16JT19	Nut M4-0.70	2	M4GB6170Z
20	PBBJP16JT20	Shim	2	WSH6GB862D2B
21	PBBJP16JT21	Controller grip	1	FDPT1202031012
22	PBBJP16JT22	Retaining ring 10MM	1	CLP10GB894D1B
23	PBBJP16JT23	Connection plate	1	FDPT1202031006
24	PBBJP16JT24	Stop block	1	FDPT1202031005
25	PBBJP16JT25	Screw M8-1.25X16MM	1	M8X16GB70D1Z
26	PBBJP16JT26	Screw M6-1.00X10MM	2	M6X10GB77B
27	PBBJP16JT27	Nut M6-1.00	2	M6GB923Z
28	PBBJP16JT28	Bolt M12-1.75	4	FDPT1202030001
29	PBBJP16JT29	Nut M12-1.75	4	M12GB52Z
30	PBBJP16JT30	Shim	2	FDPT1202032010
31	PBBJP16JT31	Screw M6-1.00X16MM	2	M6X16GB70D2Z
32	PBBJP16JT32	Screw M8-1.25X50MM	6	M8X50GB77B12D9
33	PBBJP16JT33	Screw M8-1.25X18MM	8	M8X18GB77B12D9
34	PBBJP16JT34	Nut M8-1.25	8	M8GB6177B10
35	PBBJP16JT35	Torsion spring	4	FDPT1202032012
36	PBBJP16JT36	Rotating shaft	2	FDPT1601032006
37	PBBJP16JT37	Rear support	1	PT410B032003A
38	PBBJP16JT38	Bolt M8-1.25X40MM	8	M8X40GB5789B12D9
39	PBBJP16JT39	Front support	1	PT410B032003



Ref. #	Parts Number	Description	QTY.	Mfg. Item
40	PBBJP16JT40	Locking rod	2	FDPT1202032101
41	PBBJP16JT41	Retaining ring 15MM	2	CLP15GB894D1B
42	PBBJP16JT42	Spring	2	JXCM2501010003
43	PBBJP16JT43	Handle	2	FDPT1202032102
44	PBBJP16JT44	Locking plate component	2	FDPT1202032200
45	PBBJP16JT45	Nut M8-1.25	6	M8GB6172D1Z
46	PBBJP16JT46	Shim	4	WSH8GB97D1Z
47	PBBJP16JT47	Bolt M8-1.25X16MM	8	M8X16GB5783Z
48	PBBJP16JT48	Handle assembly	1	FDPT1202031100
49	PBBJP16JT49	Retro rotational transposition	1	PT410B032002
50	PBBJP16JT50	Eccentric shaft	4	FDPT1601032004
51	PBBJP16JT51	Shim	4	WSH10GB97D1Z
52	PBBJP16JT52	Shim	1	WSH8GB96D1Z
53	PBBJP16JT53	Screw M8-1.25X6MM	8	M8X6GB77B
54	PBBJP16JT54	Bolt M8-1.25X25MM	2	M8X25GB5783Z
55	PBBJP16JT55	Three consecutive blocks	3	FDPT1202031016
56	PBBJP16JT56	Screw M6-1.00X20MM	4	M6X20GB70B12D9
57	PBBJP16JT57	Bolt M12-1.75	4	FDPT1202032007
58	PBBJP16JT58	Connecting board two	1	FDPT1601032015
59	PBBJP16JT59	Rear seat	1	PT410B032009
60	PBBJP16JT60	Shim	4	WSH12GB97D1Z
61	PBBJP16JT61	Nut	4	M12GB889D1ZF



Drive Motor Assembly



Drive Motor Assembly Parts List

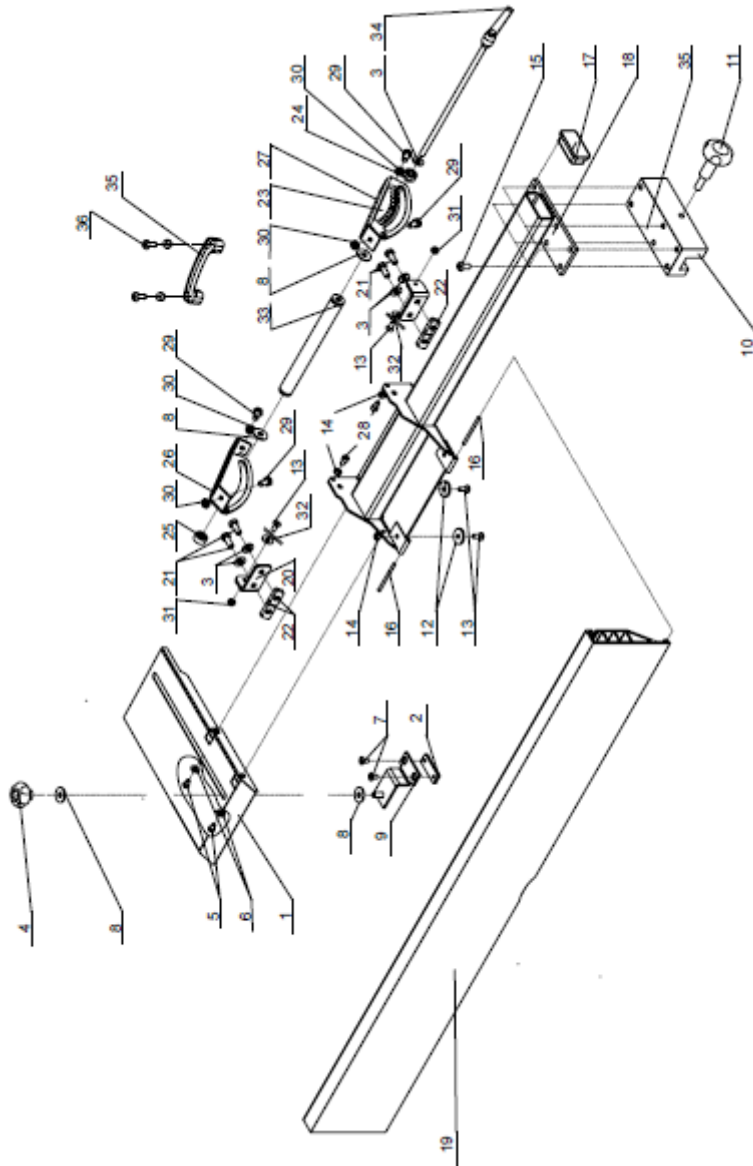
Ref. #	Parts Number	Description	QTY.	Mfg. Item
1	PBBJP16MA01	Nut M8-1.25	4	M8GB6172D1Z
2	PBBJP16MA02	Handle	1	FDPT1202032102
3	PBBJP16MA03	Bolt M8-1.25X35MM	2	M8X35GB70D1Z
4	PBBJP16MA04	Nut M8-1.5	4	M8GB889D1Z
5	PBBJP16MA05	Extension spring	1	JL44020011
6	PBBJP16MA06	Pull board	1	FDPT1202020002
7	PBBJP16MA07	Shim	2	FDPT1202020020
8	PBBJP16MA08	Partitioned apartment	1	FDPT1202020018
9	PBBJP16MA09	Shim	6	WSH8GB5287Z
10	PBBJP16MA10	Bolt M8-1.25X45MM	1	M8X45GB5783Z
11	PBBJP16MA11	Chain tensioning plate	1	FDPT1202020017
12	PBBJP16MA12	Chain tensioning shaft	1	FDPT1202020016
13	PBBJP16MA13	Tensioner pulley	1	JL44023003
14	PBBJP16MA14	Shim	1	WSH14GB97D1Z
15	PBBJP16MA15	Screw M8-1.25X40MM	1	M8X40GB70D3B
16	PBBJP16MA16	Chain	1	FDPT1202020004
17	PBBJP16MA17	Small sprocket	1	FDPT1202020019
18	PBBJP16MA18	Tighten the sprocket shaft	1	FDPT1202020015
19	PBBJP16MA19	Shim	3	WSH5GB96D1Z
20	PBBJP16MA20	Nut M6-1.00	1	M6GB889D1ZF
21	PBBJP16MA21	Nut M8-1.25	1	M8GB6177D1Z
22	PBBJP16MA22	Bushing	1	FDPT1202020008
23	PBBJP16MA23	Pallet	1	FDPT1202020007
24	PBBJP16MA24	Hanging rubber wheel	1	FDPT1202020001
25	PBBJP16MA25	Flange	1	FDPT1202020012
26	PBBJP16MA26	Bearing 6002ZZ	4	BRG6002-2RSGB276
27	PBBJP16MA27	Partitioned apartment	2	FDPT1202020011
28	PBBJP16MA28	Small sprocket	1	FDPT1202020003
29	PBBJP16MA29	Shim	3	WSH8GB97D1Z
30	PBBJP16MA30	Screw M6-1.00X10MM	6	M6X10GB70D2B
31	PBBJP16MA31	Shim	2	JL45060008
32	PBBJP16MA32	Shim	1	WSH8GB93Z
33	PBBJP16MA33	With a retaining ring	1	JL44020001
34	PBBJP16MA34	Shim	1	WSH6GB93Z
35	PBBJP16MA35	Bolt M6-1.00X16MM	1	M6X16GB5783Z
36	PBBJP16MA36	Bolt M8-1.25X60MM	1	M8X60GB5783Z
37	PBBJP16MA37	Large sprocket	1	FDPT1202020005
38	PBBJP16MA38	Large sprocket	2	JL44020006



Ref. #	Parts Number	Description	QTY.	Mfg. Item
39	PBBJP16MA39	Chain wheel shaft	1	FDPT1202020010
40	PBBJP16MA40	Long chain	1	FDPT1202020014
41	PBBJP16MA41	Chain	1	FDPT1202020004
42	PBBJP16MA42	Guard plate	1	FDPT1202020006
43	PBBJP16MA43	Pad	1	FDPT1202020009
44	PBBJP16MA44	Shim	1	WSH12GB848Z
45	PBBJP16MA45	Tension shaft	1	JL44020005
46	PBBJP16MA46	Bolt M8-1.25X70MM	1	M8X70GB5782B
47	PBBJP16MA47	Bolt M6-1.00X30MM	3	M6X30GB5789Z
48	PBBJP16MA48	Motor	1	YYKA900302
49	PBBJP16MA49	Bolt M8-1.25X25MM	4	M8X25GB5789Z
50	PBBJP16MA50	Screw	4	WSH8GB93Z
51	PBBJP16MA51	Nut	4	M8GB923Z
52	PBBJP16MA52	Motor pulley	1	FDPT1202020013
53	PBBJP16MA53	Shim	1	WSH8GB5287Z
54	PBBJP16MA54	Bolt M8-1.25X25MM	1	M8X25GB5783Z
55	PBBJP16MA55	Spindle pulley	1	JL44030002
56	PBBJP16MA56	Locknut	1	JL44030006
57	PBBJP16MA57	Toothed V-belt	1	JL44020009
58	PBBJP16MA58	Screw M8-1.25X40MM	1	M8X40GB77B



Fence Assembly



Fence Assembly Parts List

Ref. #	Parts Number	Description	QTY.	Mfg. Item
1	PBBJP16FA01	Blade shaft guard plate	1	FDPT1202060001
2	PBBJP16FA02	Backing board	1	FDPT1202060003
3	PBBJP16FA03	Shim	4	WSH8GB97D1Z
4	PBBJP16FA04	Handle	1	FDPT1202060024
5	PBBJP16FA05	Screw M6-1.00X10MM	2	M6X10GB70D1Z
6	PBBJP16FA06	Shim	8	WSH6GB97D1Z
7	PBBJP16FA07	Screw M6-1.00X12MM	2	M6X12GB70D3Z
8	PBBJP16FA08	Shim	2	FDPT1202060023
9	PBBJP16FA09	Protective plate support plate	1	FDPT1202060002

Ref. #	Parts Number	Description	QTY.	Mfg. Item
10	PBBJP16FA10	Sliding seat	1	FDPT1202060007
11	PBBJP16FA11	Handle	1	FDPT1202060008
12	PBBJP16FA12	Shim	2	FDPT1202060016
13	PBBJP16FA13	Screw M6-1.00X16MM	4	M6X16GB70D3Z
14	PBBJP16FA14	Nut	4	M6GB6170Z
15	PBBJP16FA15	Screw M8-1.25X16MM	6	M8X16GB70D2Z
16	PBBJP16FA16	Pin shaft	1	FDPT1202060005
17	PBBJP16FA17	Plug	1	FDPT1202060006
18	PBBJP16FA18	Support plate component	1	PT410B061000
19	PBBJP16FA19	Material baffle	1	FDPT1202060004
20	PBBJP16FA20	Limit up	2	FDPT1202060019
21	PBBJP16FA21	Bolt M8-1.25X20MM	4	M8X20GB5783Z
22	PBBJP16FA22	Limit plate	2	FDPT1202060025
23	PBBJP16FA23	Angle ruler	1	FDPT1202060020
24	PBBJP16FA24	Slotted sliding sleeve	1	FDPT1202060012
25	PBBJP16FA25	Sliding sleeve	1	FDPT1202060018
26	PBBJP16FA26	Rear angle plate	1	FDPT1202060017
27	PBBJP16FA27	Front angle plate	1	FDPT1202060013
28	PBBJP16FA28	Screw M6-1.00X10MM	2	M6X10GB70D1Z
29	PBBJP16FA29	Screw M8-1.25X16MM	6	M8X16GB70D2Z
30	PBBJP16FA30	Nut M8-1.25	4	M8GB6170Z
31	PBBJP16FA31	Nut M6-1.00	2	M6GB889D1Z
32	PBBJP16FA32	Shim	2	JL46090020
33	PBBJP16FA33	Long sleeve	1	FDPT1202060014
34	PBBJP16FA34	Lead screw	1	FDPT1202060015
35	PBBJP16FA35	Handle	1	JL45030030A
36	PBBJP16FA36	Screw M6-1.00X30MM	2	M6X30GB70D1Z





Busy Bee Tools

BUSY BEE TOOLS 2 YEARS LIMITED WARRANTY

Busy Bee Tools warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers **two years** for parts and 90 days for labor (unless specified otherwise), to the original purchaser from the date of purchase but does not apply to malfunctions arising directly or indirectly from misuse, abuse, improper installation or assembly, negligence, accidents, repairs or alterations or lack of maintenance.

Proof of purchase is necessary.

All warranty claims are subject to inspection of such products or part thereof and Busy Bee Tools reserves the right to inspect any returned item before a refund or replacement may be issued. This warranty shall not apply to consumable products such as blades, bits, belts, cutters, chisels, punches etc.

Busy Bee Tools shall in no event be liable for injuries, accidental or otherwise, death to persons or damage to property or for incidental contingent, special or consequential damages arising from the use of our products.

IF THE MACHINE IS ALTERED IN ANY WAY, THE WARRANTY SHALL BE NULL AND VOID. WARRANTY, RETURNS, REPAIRS AND REPLACEMENTS

To return, repair, or replace a Busy Bee Tools product, you must visit the appropriate Busy Bee Tools showroom or call 1-800-461-BUSY.

For replacement parts directly from Busy Bee Tools, for this machine, please call 1-800-461-BUSY (2879), and have your model number and part number & payment option ready.

- All returned merchandise will be subject to a minimum charge of 15% for re-stocking and handling with the following qualifications.
- Returns must be pre-authorized by us in writing.
- We do not accept collect shipments.
- Items returned for warranty purposes must be insured and shipped pre-paid to the nearest warehouse
- Returns must be accompanied by a copy of your original invoice as proof of purchase. Returns must be in an un-used condition and shipped in their original packaging a letter explaining your reason for the return. Incurred shipping and handling charges are not refundable.
- Busy Bee will repair or replace the item at our discretion and subject to our inspection.
- Repaired or replaced items will be returned to you pre-paid by our choice of carriers.
- Busy Bee reserves the right to refuse reimbursement or repairs or replacement if a third party without our prior authorization has carried out repairs to the item.
- Repairs made by Busy Bee Tools are warranted for 30 days on parts and labor.
- Any unforeseen repair charges will be reported to you for acceptance prior to making the repairs.
- The Busy Bee Parts & Service Departments are fully equipped to do repairs on all products purchased from us except for some products that require the return to their authorized repair depots. A Busy Bee representative will provide you with the necessary information to have this done.
- For faster service it is advisable to contact the nearest Busy Bee location for parts availability prior to bringing your product in for repair.

