



MODEL W1862/W1863 15" PLANERS



OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 11/20)

Phone: (360) 734-3482 • Online Technical Support: techsupport@woodstockint.com



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WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT

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WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

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

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

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



WARNING!

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

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

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

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INTRODUCTION

Machine Description

Models W1862 and W1863 are CSA-certified, 3 HP, 15" planers with the following differences:

- **Model W1862** has a 3-knife cutterhead, magnetic ON/OFF switch mounted to the cabinet stand, and roller extension tables.
- **Model W1863** has a helical cutterhead, pedestal-mounted control panel with magnetic ON/OFF switch, and cast-iron extension tables.

Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 Ext. 2 or send e-mail to: techsupport@woodstockint.com. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from <http://www.woodstockint.com/manuals>.

If you have comments about this manual, please contact us at:

Woodstock International, Inc.
Attn: Technical Documentation Manager
P.O. Box 2309
Bellingham, WA 98227
Email: manuals@woodstockint.com



MACHINE SPECIFICATIONS



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MODEL W1862 15" PLANER

Product Dimensions

Weight..... 445 lbs.
 Width (side-to-side) x Depth (front-to-back) x Height..... 32 x 48 x 44 in.
 Footprint (Length x Width)..... 21-1/2 x 21 in.

Shipping Dimensions

Type..... Wood Crate
 Content..... Machine
 Weight..... 517 lbs.
 Length x Width x Height..... 30 x 27 x 51 in.
 Must Ship Upright..... Yes

Electrical

Power Requirement..... 230V, Single-Phase, 60 Hz
 Full-Load Current Rating..... 12A
 Minimum Circuit Size..... 20A
 Connection Type..... Cord & Plug
 Power Cord Included..... Yes
 Power Cord Length..... 10 ft.
 Power Cord Gauge..... 12 AWG
 Plug Included..... Yes
 Included Plug Type..... 6-20
 Switch Type..... Magnetic Switch w/Thermal Overload Protection

Motors

Main

Horsepower..... 3 HP
 Phase..... Single-Phase
 Amps..... 12A
 Speed..... 3450 RPM
 Type..... TEFC Capacitor-Start Induction
 Power Transfer Triple V-Belt Drive
 Bearings..... Shielded & Permanently Lubricated
 Centrifugal Switch/Contacts Type..... External



Main Specifications

Main Specifications

Max. Cut Width.....	15 in.
Max. Cut Height.....	6 in.
Min. Stock Length.....	6 in.
Min. Stock Thickness.....	3/16 in.
Max. Stock Thickness.....	6 in.
Number of Cuts Per Inch.....	63, 78
Number of Cuts Per Minute.....	15,000
Cutterhead Speed.....	5000 RPM
Planing Feed Rate.....	16, 28 FPM
Max. Cut Depth Planing Full Width.....	3/32 in.
Max. Cut Depth Planing 6-Inch Wide Board.....	1/8 in.

Cutterhead Info

Cutterhead Type.....	3 Knife
Cutterhead Diameter	3 in.
Number of Knives.....	3
Knife Type.....	HSS, Single-Sided, Solid
Knife Size Length.....	15 in.
Knife Size Width.....	1 in.
Knife Size Thickness.....	1/8 in.
Knife Adjustment.....	Springs or Jack Screws

Table Info

Table/Headstock Movement.....	6 in.
Table Bed Size Length.....	20 in.
Table Bed Size Width.....	15 in.
Table Bed Size Thickness.....	2 in.
Number of Bed Rollers.....	2
Floor-to-Table Height.....	29 - 35 in.
Roller Ext. Table Size Length.....	15 in.
Roller Ext. Table Size Width.....	15 in.
Roller Ext. Table Size Thickness.....	1-1/2 in.

Construction

Table.....	Precision-Ground Cast Iron
Body.....	Cast Iron
Stand.....	Steel
Cutterhead Assembly.....	Steel
Infeed Roller.....	Serrated Steel
Outfeed Roller.....	Smooth Steel
Paint Type/Finish.....	Powder Coated

Other

Table/Headstock Locks.....	Yes
Measurement Scale.....	Inch & Metric
Number of Dust Ports.....	1
Dust Port Size.....	4 in.
Mobile Base.....	D2057A



MACHINE SPECIFICATIONS



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MODEL W1863 15" PLANER WITH HELICAL CUTTERHEAD

Product Dimensions

Weight..... 476 lbs.
 Width (side-to-side) x Depth (front-to-back) x Height..... 37 x 48 x 44 in.
 Footprint (Length x Width)..... 21-1/2 x 21 in.

Shipping Dimensions

Type..... Wood Crate
 Content..... Machine
 Weight..... 553 lbs.
 Length x Width x Height..... 29 x 36 x 52 in.
 Must Ship Upright..... Yes

Electrical

Power Requirement..... 230V, Single-Phase, 60 Hz
 Full-Load Current Rating..... 12A
 Minimum Circuit Size..... 20A
 Connection Type..... Cord & Plug
 Power Cord Included..... Yes
 Power Cord Length..... 10 ft.
 Power Cord Gauge..... 12 AWG
 Plug Included..... Yes
 Included Plug Type..... 6-20
 Switch Type..... Magnetic Switch w/Thermal Overload Protection

Motors

Main

Horsepower..... 3 HP
 Phase..... Single-Phase
 Amps..... 12A
 Speed..... 3450 RPM
 Type..... TEFC Capacitor-Start Induction
 Power Transfer Triple V-Belt Drive
 Bearings..... Shielded & Permanently Lubricated
 Centrifugal Switch/Contacts Type..... External



Main Specifications

Main Specifications

Max. Cut Width.....	15 in.
Max. Cut Height.....	6 in.
Min. Stock Length.....	6 in.
Min. Stock Thickness.....	3/16 in.
Max. Stock Thickness.....	6-1/8 in.
Number of Cuts Per Inch.....	83, 104
Number of Cuts Per Minute.....	20,000
Cutterhead Speed.....	5000 RPM
Planing Feed Rate.....	16, 20 FPM
Max. Cut Depth Planing Full Width.....	3/32 in.
Max. Cut Depth Planing 6-Inch Wide Board.....	1/8 in.

Cutterhead Info

Cutterhead Type.....	Helical
Cutterhead Diameter	3 in.
Number of Cutter Spirals.....	4
Number of Indexable Cutters.....	52
Cutter Insert Size Length.....	15 mm
Cutter Insert Size Width.....	15 mm
Cutter Insert Size Thickness.....	2.5 mm

Table Info

Table/Headstock Movement.....	6 in.
Table Bed Size Length.....	48 in.
Table Bed Size Width.....	15 in.
Table Bed Size Thickness.....	2 in.
Number of Bed Rollers.....	2
Floor-to-Table Height.....	29 - 35 in.

Construction

Table.....	Precision-Ground Cast Iron
Body.....	Cast Iron
Stand.....	Steel
Cutterhead Assembly.....	Steel
Infeed Roller.....	Serrated Steel
Outfeed Roller.....	Smooth Steel
Paint Type/Finish.....	Powder Coated

Other

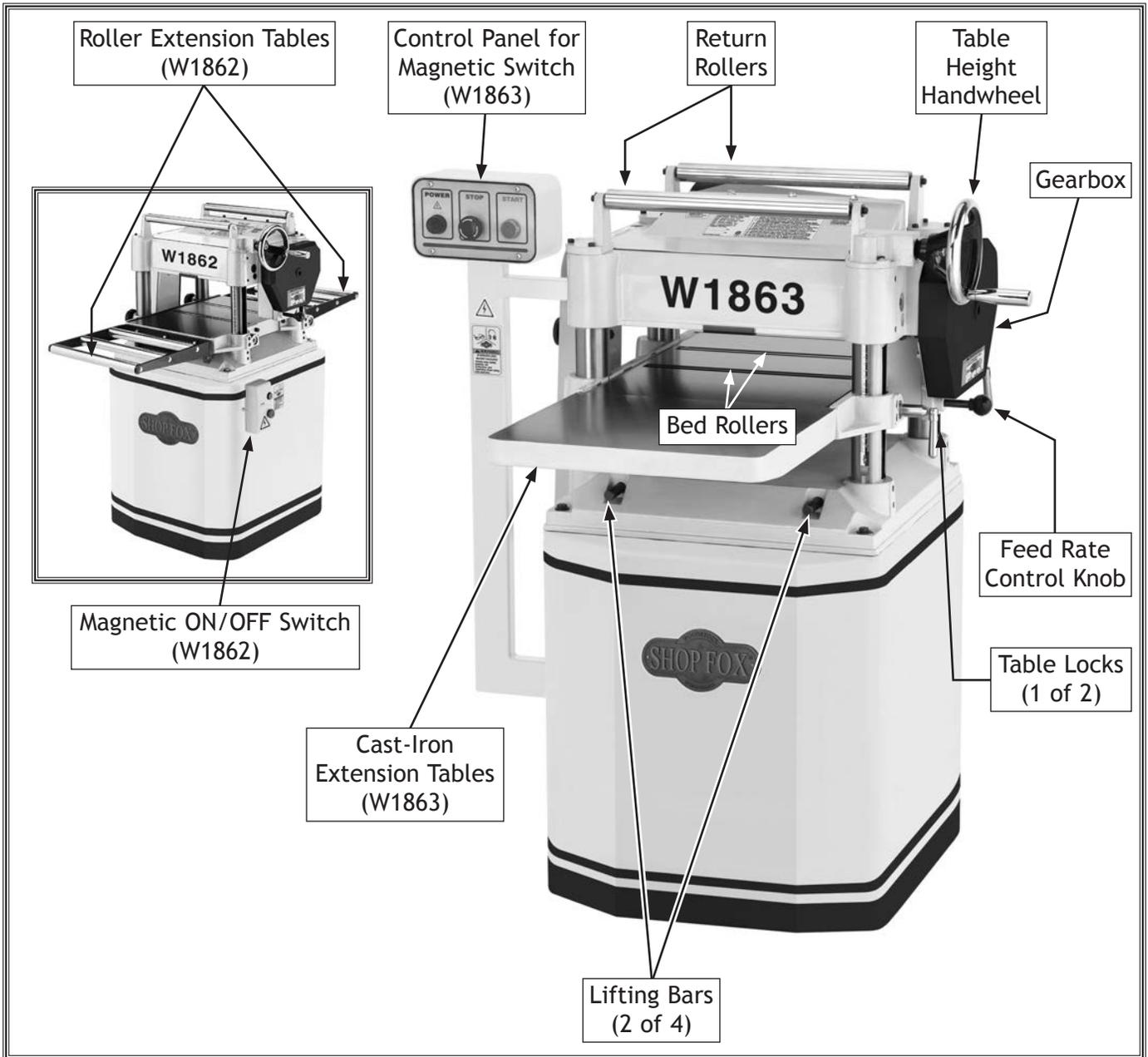
Table/Headstock Locks.....	Yes
Measurement Scale.....	Inch & Metric
Number of Dust Ports.....	1
Dust Port Size.....	4 in.
Mobile Base.....	D2057A

Other

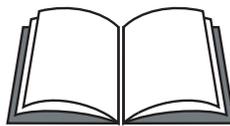
Country of Origin	Taiwan
Warranty	2 Years
Approximate Assembly & Setup Time	1 Hour
Serial Number Location	ID Label on Upper Cover
ISO 9001 Factory	Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



WARNING



To reduce your risk of serious injury or damage to the machine, read this entire manual **BEFORE** using machine.

Controls & Components

Refer to the **Figures 1-2** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.

- A. Control Panel for Magnetic Switch (W1863):**
- Green START button turns motor **ON**.
 - Power indicator light illuminates when motor is turned **ON**.
 - Red STOP button turns motor **OFF**; for safety purposes, this button remains depressed and prevents restarting until reset. Reset by rotating clockwise until it pops out.
- B. Table Height Handwheel:** Raises and lowers table to accommodate different workpiece thicknesses. One complete revolution of handwheel moves the table approximately 2mm (0.08").
- C. Table Locks:** Secure table height position so they don't shift during cutting operation.
- D. Depth Limiter:** Limits depth of cut to a maximum of 1/8" at full width.
- E. Feed Rate Control Knob:** Selects 28 FPM feed rate when pushed in and 16 FPM feed rate when pulled out.
- F. Magnetic ON/OFF Switch (W1862):**
- Green start button turns motor **ON**.
 - Red Stop button turns motor **OFF**; for safety purposes, this button remains depressed and prevents restarting until reset. Reset by rotating clockwise until it pops out.
- G. Return Rollers:** Assist sliding workpiece back to operator following planing operation.
- H. Dust Port:** 4" dust port connects to a dust-collection system to extract shavings and dust during operation.

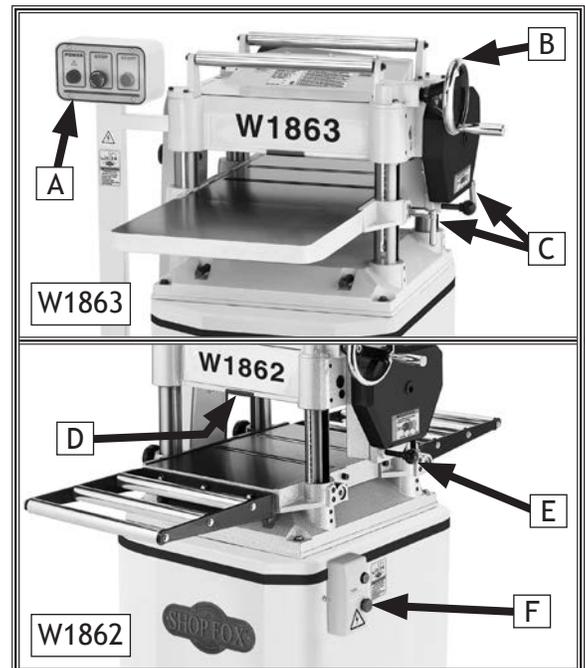
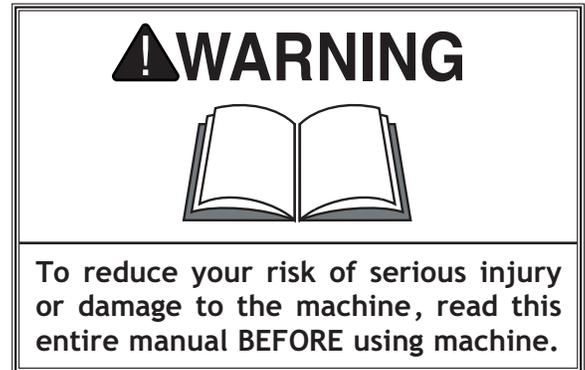


Figure 1. Table elevation and feed controls.

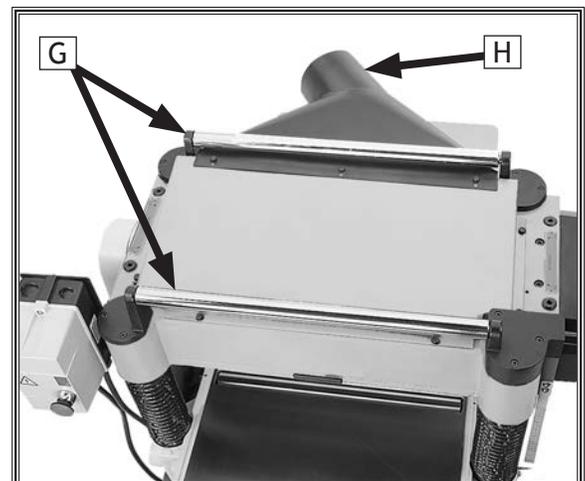


Figure 2. Example of return rollers and dust port.

Internal Components

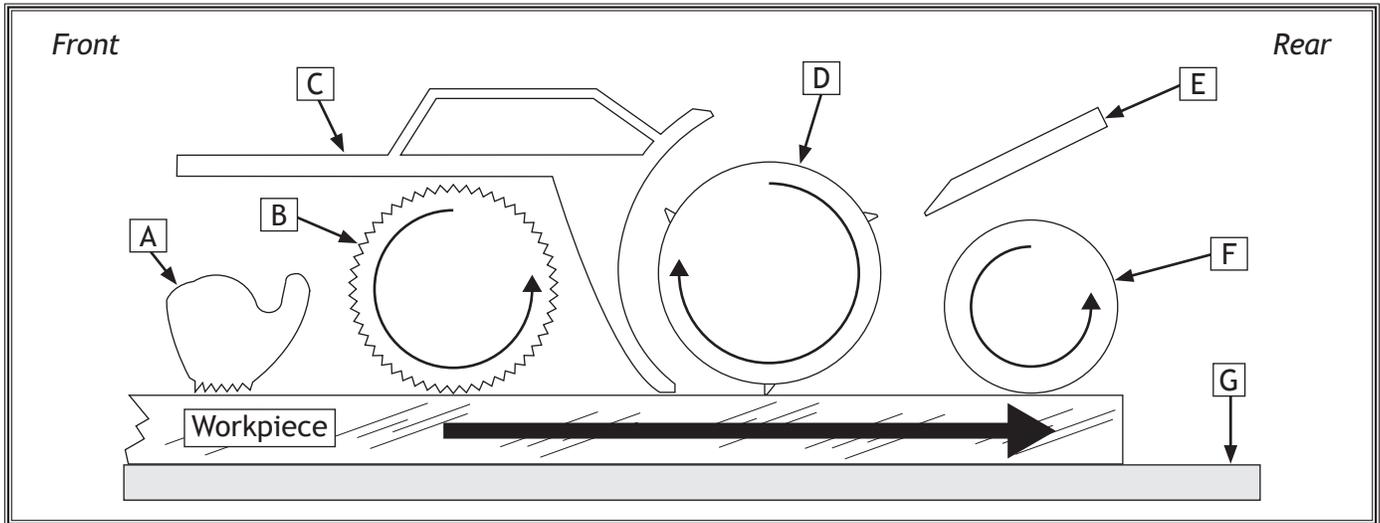


Figure 3. Workpiece path and major planing components (side cutaway view).

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>A. Anti-Kickback Fingers: Provide additional safety for the operator.</p> <p>B. Serrated Infeed Roller: Pulls the workpiece toward the cutterhead.</p> <p>C. Chip Breaker: Breaks off chips created by the cutterhead to prevent tear out and diverts the chips to the dust port.</p> <p>D. Cutterhead: Holds the knives/inserts that remove material from the workpiece.</p> | <p>E. Chip Deflector: Directs chips into the dust port.</p> <p>F. Outfeed Roller: Pulls the workpiece through the planer.</p> <p>G. Planer Table: Provides a smooth and level path for the workpiece as it moves through the planer.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

WARNING

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

SAFETY

For Your Own Safety, Read Manual Before Operating Machine

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



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



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



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment or a situation that may cause damage to the machinery.

Standard Machinery Safety Instructions

OWNER'S MANUAL. Read and understand this owner's manual **BEFORE** using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS. You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow an electrician or qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

DISCONNECT POWER FIRST. Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This eliminates the risk of injury from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

INTENDED USAGE. Only use machine for its intended purpose—never make modifications without prior approval from Woodstock International. Modifying machine or using it differently than intended will void the warranty and may result in malfunction or mechanical failure that leads to serious personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris—make sure they are properly installed, undamaged, and working correctly.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase risk of serious injury.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn machine **OFF** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

CHECK DAMAGED PARTS. Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside, resulting in a short. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine! Contact Technical Support at (360) 734-3482.

Additional Safety for Planers

Amputation, serious cuts, entanglement, or death can occur from contact with rotating cutterhead or other moving parts! Flying chips can cause eye injuries or blindness. Workpieces or knives thrown by cutterhead can strike nearby operator or bystanders with deadly force. To reduce risk of these hazards, operator and bystanders **MUST** completely heed hazards and warnings below.

KICKBACK. Know how to reduce the risk of kickback and kickback-related injuries. “Kickback” occurs during operation when the workpiece is ejected from the machine at high speed. Kickback is commonly caused by poor workpiece selection, unsafe feeding techniques, or improper machine setup/maintenance. Kickback injuries typically occur as follows: (1) operator/bystanders are struck by the workpiece, resulting in impact injuries (i.e., blindness, broken bones, bruises, death); (2) operator’s hands are pulled into blade, resulting in amputation or severe lacerations.

AVOID CONTACT WITH MOVING PARTS. Never remove guards/covers or reach inside the planer during operation or while connected to power. You could be seriously injured if you accidentally touch the spinning cutterhead or get entangled in moving parts. If a workpiece becomes stuck or sawdust removal is necessary, turn planer **OFF** and disconnect power before clearing.

DULL/DAMAGED KNIVES/INSERTS. Only use sharp, undamaged knives/inserts. Dull or damaged knives/inserts increase the risk of kickback.

INSPECTING STOCK. To reduce the risk of kickback injuries or machine damage, thoroughly inspect and prepare the workpiece before cutting. Verify workpiece is free of nails, staples, loose knots or foreign material. Workpieces with minor warping should be jointed first or planed with the cupped side facing the table.

BODY PLACEMENT. Stand to one side of planer during the entire operation to avoid getting hit if kickback occurs.

GRAIN DIRECTION. Planing across the grain is hard on the planer and may cause kickback. Plane in the same direction or at a slight angle with the wood grain.

PLANING CORRECT MATERIAL. Only plane natural wood stock with this planer. **DO NOT** plane MDF, OSB, plywood, laminates or other synthetic materials that can break up inside the planer and be ejected towards operator.

LOOKING INSIDE PLANER. Wood chips fly around inside the planer at a high rate of speed during operation. To avoid injury from flying material, **DO NOT** look inside planer during operation.

CUTTING LIMITATIONS. To reduce the risk of kickback hazards or damage to the machine, do not exceed the maximum depth of cut or minimum board length and thickness found in the **Data Sheet**. Only feed one board at a time.

INFEED ROLLER CLEARANCE. The infeed roller is designed to pull material into the spinning cutterhead. To reduce the risk of entanglement, keep hands, clothing, jewelry, and long hair away from the infeed roller during operation.

FEED WORKPIECE PROPERLY. To reduce the risk of kickback, never start planer with workpiece touching cutterhead. Allow cutterhead to reach full speed before feeding, and do not change feed speed during cutting operation.

WORKPIECE SUPPORT. To reduce the risk of kickback, always make sure workpiece can move completely across table without rocking or tipping. Use auxiliary support stands for long stock.

SECURE KNIVES/INSERTS. Loose knives or improperly set inserts can become dangerous projectiles or cause machine damage. Always verify knives/inserts are secure and properly adjusted before operation.

ELECTRICAL

Circuit Requirements

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician **MUST** install one before you can connect the machine to power.

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating at 230V 12 Amps

Circuit Requirements

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage 208V, 220V, 230V, 240V
Cycle 60 Hz
Phase 1-Phase
Power Supply Circuit 20 Amps
Plug/Receptacle NEMA 6-20
Cord "S"-Type, 3-Wire, 12 AWG, 300 VAC

⚠ WARNING

The machine must be properly set up before it is safe to operate. **DO NOT** connect this machine to the power source until instructed to do so later in this manual.

⚠ WARNING



Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

NOTICE

The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult with an electrician to ensure that the circuit is properly sized for safe operation.

ELECTRICAL

Grounding Requirements

This machine **MUST** be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire will increase the risk of electric shock. The wire with green insulation (with/without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

For 230V Connection

This machine is equipped with a power cord that has an equipment-grounding wire and NEMA 6-20 grounding plug. The plug must only be inserted into a matching receptacle (see Figure) that is properly installed and grounded in accordance with local codes and ordinances.

Extension Cords

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

- Minimum Gauge Size at 230V 12 AWG
- Maximum Length (Shorter is Better) 50 ft.

ELECTRICAL

⚠ WARNING

The machine must be properly set up before it is safe to operate. **DO NOT** connect this machine to the power source until instructed to do so later in this manual.

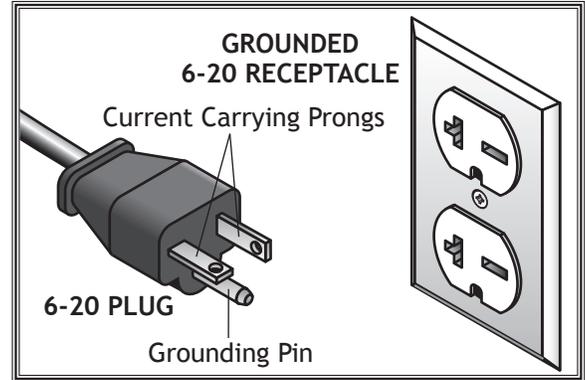


Figure 4. NEMA 6-20 plug & receptacle.

⚠ CAUTION

No adapter should be used with the required plug. If the plug does not fit the available receptacle or the machine must be reconnected to a different type of circuit, the reconnection must be made by an electrician or qualified service personnel and it must comply with all local codes and ordinances.

SETUP

Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

Items Needed for Setup

The following items are needed, but not included, to set up your machine.

Description	Qty
• Additional People.....	1
• Safety Glasses.....	1 Per Person
• Forklift (rated for at least 750 lbs.).....	1
• Cleaner/Degreaser	As Needed
• Disposable Shop Rags	As Needed
• Phillips Screwdriver #2	1
• Flat Head Screwdriver	1
• Wrench or Socket 12mm, 14mm	1 Ea.
• Hex Wrenches 3, 4, 5, 6, 8mm	1 Ea.
• Straightedge 4'	1
• Dust-Collection System	1
• Dust Hose 4" (length as needed).....	1
• Hose Clamps 4"	2
• Gearbox Oil.....	As Needed



⚠ WARNING

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



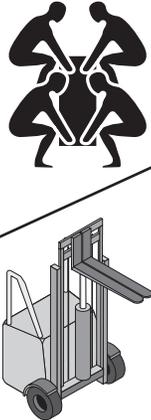
⚠ WARNING

Wear safety glasses during entire setup process!



⚠ WARNING

SUFFOCATION HAZARD!
Immediately discard all plastic bags and packing materials to eliminate choking/suffocation hazards for children and animals.



⚠ WARNING

HEAVY LIFT!
Straining or crushing injury may occur from improperly lifting the machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of machine.

SETUP

Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

Note: If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.

Box 1 (Figure 5)	Qty
A. Planer Unit (Not Shown).....	1
B. Dust Port.....	1
C. Cast-Iron Extension Tables (W1863)	2
D. Roller Extension Tables (W1862)	2
E. Table Elevation Handwheel	1

Tools and Hardware (Figure 6)

F. Flat Wrench 10/13mm	1
G. Open-End Wrench 12/14mm	1
H. Hex Wrenches 3, 4, 6mm	1 Ea.
I. Set Screws M8-1.25 x 12 (Ext. Tables)	6
J. Flange Bolts M6-1 x 12 (Dust Port)	6
K. Flat Washers 8mm (Ext. Tables).....	6
L. Key 4 x 4 x 10 (Handwheel).....	1
M. LOW/HIGH Direction Label (Handwheel)	1
N. Handwheel Handle (Handwheel).....	1
O. Hex Nut M10-1.25 (Handwheel)	1
P. Flat Washer 10mm (Handwheel)	1

W1862 Only (Figure 7)

Q. Hex Bolts M8-1.25 x 20 (Ext. Tables).....	6
R. Knife-Setting Jig	
– Knife-Setting Jig Foot	2
– Knife-Setting Jig Shaft	1
– E-Clip 9mm.....	4

W1863 Only (Figure 8)

S. Hex Bolts M8-1.25 x 25 (Ext. Tables).....	6
T. Flat Head Torx Screws #10-32 x 1/2".....	10
U. Indexable Carbide Inserts 15 x 15 x 2.5	5
V. T-Handle Torx Wrenches T-25.....	2

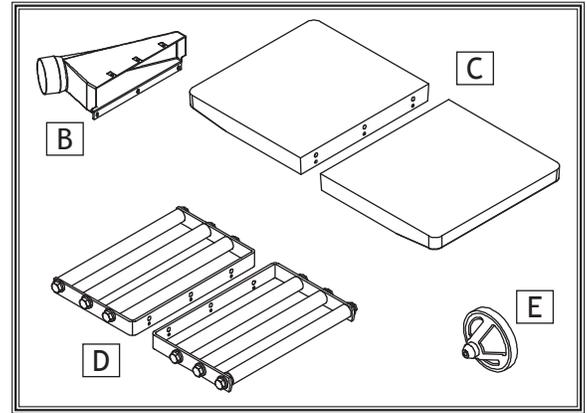


Figure 5. Box inventory.

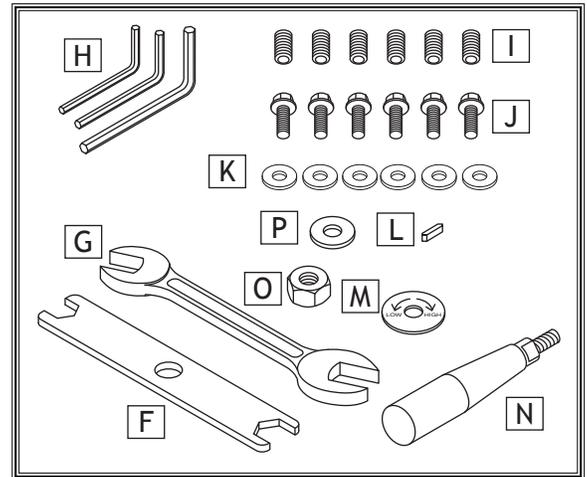


Figure 6. Tools and hardware.

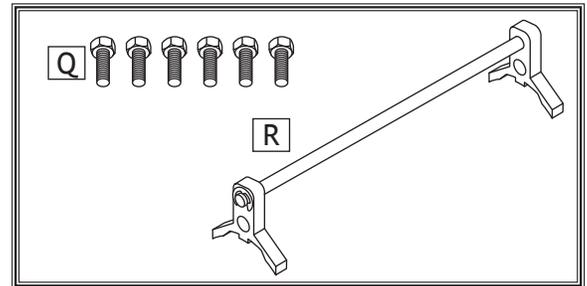


Figure 7. Tools and hardware (W1862 only).

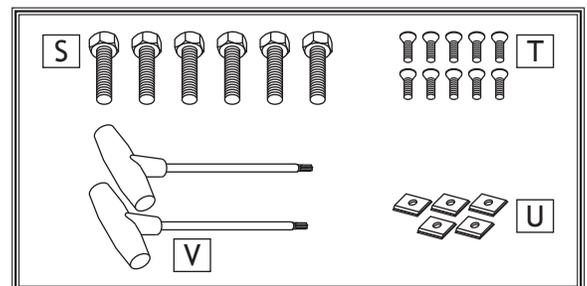


Figure 8. Tools and hardware (W1863 only).

Cleaning Machine

To prevent corrosion during shipment and storage of your machine, the factory has coated the bare metal surfaces of your machine with a heavy-duty rust prevention compound.

If you are unprepared or impatient, this compound can be difficult to remove. To ensure that the removal of this coating is as easy as possible, please gather the correct cleaner, lubricant, and tools listed below:

- Cleaner/degreaser designed to remove storage wax and grease
- Safety glasses & disposable gloves
- Solvent brush or paint brush
- Disposable Rags

To remove rust preventative coating, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Put on safety glasses and disposable gloves.
3. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5-10 minutes.
4. Wipe off surfaces. If your cleaner/degreaser is effective, the coating will wipe off easily.

Tip: *An easier way to clean off thick coats of rust preventative from flat surfaces is to use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or you may scratch your machine.)*

5. Repeat cleaning steps as necessary until all of the compound is removed.
6. To prevent rust on freshly cleaned surfaces, immediately coat with a quality metal protectant.

! WARNING	
	<p>Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery. Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.</p>

NOTICE
<p>In a pinch, automotive degreasers, mineral spirits or WD•40 can be used to remove rust preventative coating. Before using these products, though, test them on an inconspicuous area of your paint to make sure they will not damage it.</p>

SETUP

Machine Placement

Weight Load

Refer to the **Machine Specifications** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**

Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°-104°F; the relative humidity range exceeds 20-95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

SETUP

	<h3>⚠ CAUTION</h3> <p>Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.</p>
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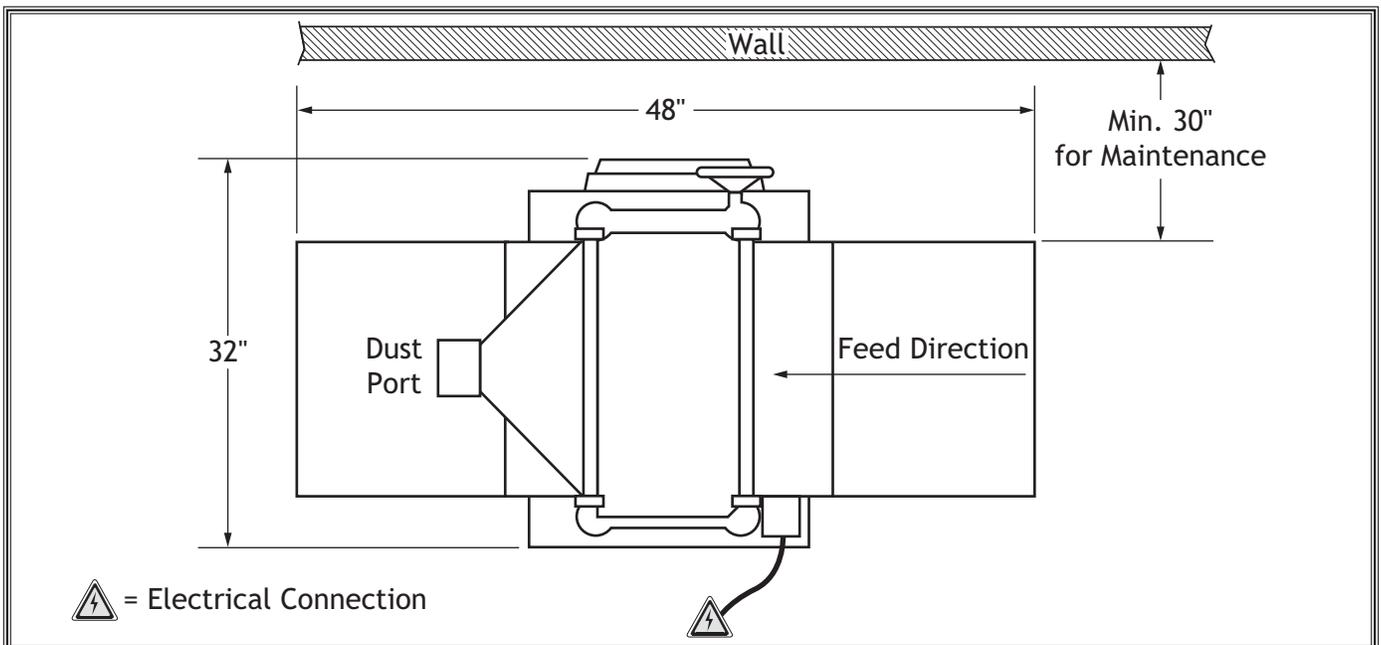


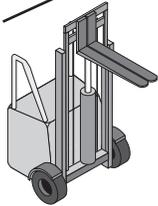
Figure 9. Working clearances.

Lifting & Moving

The planer is equipped with four lifting bars that extend in order to lift and place the planer.

To lift and place the planer, extend the lifting bars and use a forklift to lift the machine off the pallet, as shown in **Figure 10**, then set the planer down in a suitable location and return the lifting bars to their original position.

Tip: When positioning lift forks, place shop rags or cardboard between forks and cabinet stand to avoid scratching paint.

	<p>⚠ WARNING HEAVY LIFT! Straining or crushing injury may occur from improperly lifting the machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of machine.</p>
	

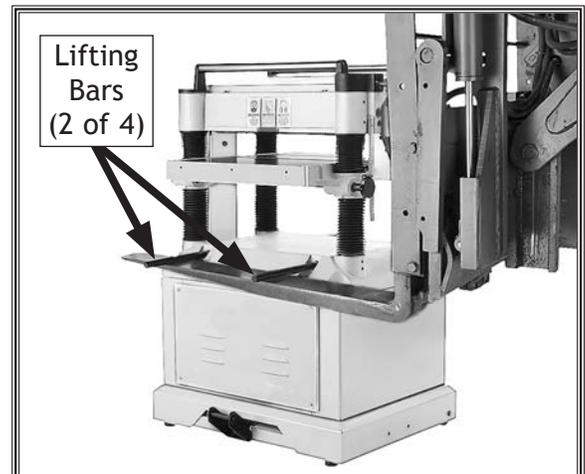


Figure 10. Example of lifting planer with forklift.

SETUP

Assembly

Before beginning the assembly process, refer to **Items Needed for Setup** and gather everything you need. Ensure all parts have been properly cleaned of any heavy-duty rust-preventative applied at the factory (if applicable). Be sure to complete all steps in the assembly procedure prior to performing the **Test Run** or connecting

To assemble planer, do these steps:

1. **W1863:** Attach each cast-iron extension table to planer table with (3) M8-1.25 x 25 hex bolts and (3) 8mm flat washers (see **Figure 11**). Do not fully tighten hex bolts at this time.

W1862: Attach each roller extension table to planer table with (3) M8-1.25 x 20 hex bolts and (3) 8mm flat washers (see **Figure 11**). Do not fully tighten hex bolts at this time.

2. Thread (3) M8-1.25 x 12 set screws into each extension table at locations shown in **Figure 11**.
3. Using a straightedge as a guide, rotate set screws until extension tables are aligned with main table, then fully tighten hex bolts installed during **Step 1**.

Note: *Bed rollers will give you a false reading with your straightedge if they are raised above table. Move them down or work around them when leveling extension wings (refer to **Bed Roller Height** on **Page 29** for details).*

4. Insert key into keyway on handwheel shaft on top of planer.
5. Line up notch in handwheel bore with key, then slide handwheel onto shaft.
6. Slide LOW/HIGH direction label onto handwheel shaft, and secure handwheel with 10mm flat washer and M10-1.25 hex nut (see **Figure 12**).
7. Thread handwheel handle into handwheel (see **Figure 12**), and tighten with wrench.
8. Attach dust port to planer with (6) M6-1 x 12 flange bolts (see **Figure 13**).

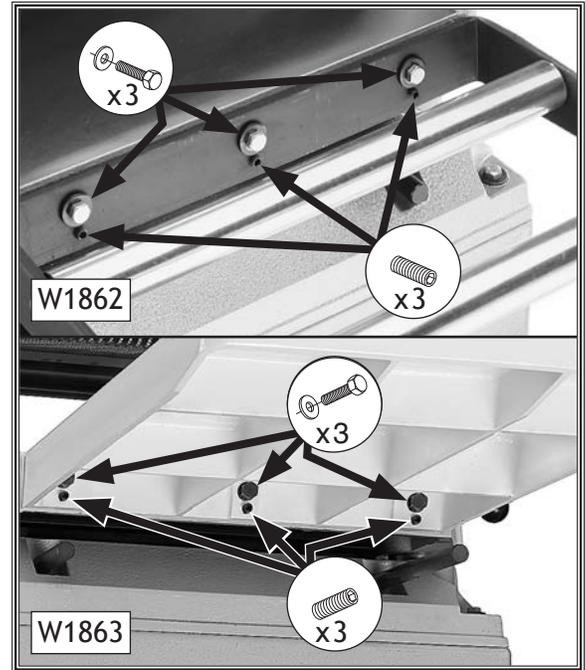


Figure 11. Extension table mounting locations.

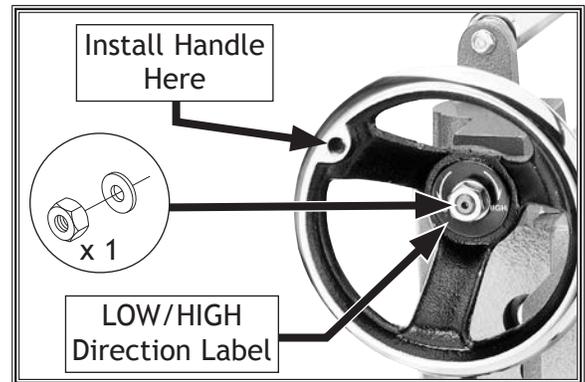


Figure 12. Table elevation handwheel installed.

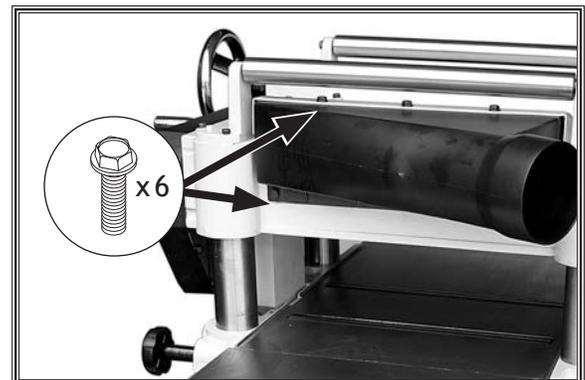


Figure 13. Dust port installed.

Dust Collection

Recommended CFM at Dust Port: 400 CFM

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

CAUTION

This machine creates substantial amounts of dust during operation. Breathing airborne dust on a regular basis can result in permanent respiratory illness. Reduce your risk by wearing a respirator and capturing the dust with a dust collection system.

To connect the machine to a dust-collection system, fit a 4" dust hose over the dust port, and secure in place with a hose clamp (see **Figure 14**). Tug the hose to make sure it does not come off.

Note: A tight fit is necessary for proper performance.

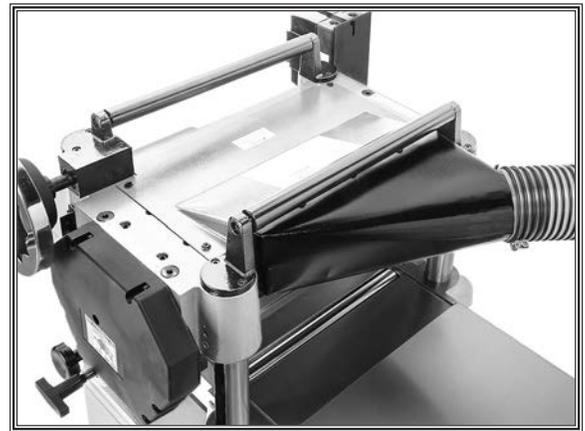


Figure 14. Dust hose connected to dust port.

Checking Gearbox Oil Level

Before starting your machine for the first time, check the gearbox oil level. The proper oil level is just even with the bottom of the fill hole. The gearbox uses ISO 320 gear oil. However, SAE 140 gear oil or SAE 85W-140 multi-weight gear oil may also be used as alternatives. DO NOT mix oil types.

Note: For easier access to the fill plug, remove the drive chain cover (see **Figure 15**).

To check gearbox oil level, do these steps:

1. Remove gearbox fill plug (see **Figure 15**).
2. Wipe clean the 6mm hex wrench that came with your machine, dip the short end of it inside fill hole, and then remove it.
 - If the end of the hex wrench is coated with oil, then the gearbox oil level is okay. Replace the fill plug and continue setup.
 - If the end of the hex wrench is not coated with oil, then you need to add more oil. Refer to **Gearbox Oil on Page 40** for instructions on how to do this.

Note: We recommend that you replace the gearbox oil after the first 20 hours of operation. This is a normal break-in procedure and will help maximize the service life of the machine by flushing away any particles from the break-in and manufacturing process.

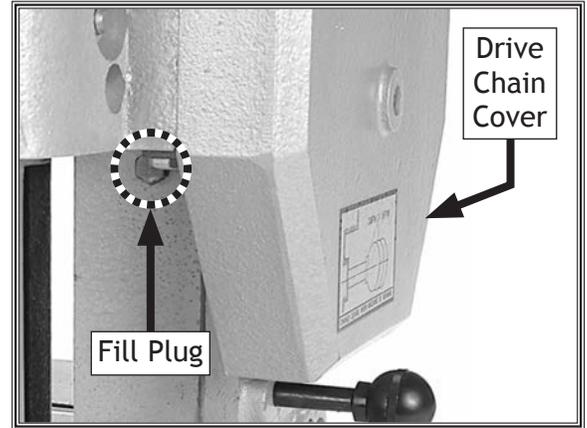


Figure 15. Location of gearbox fill plug.

Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning properly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem BEFORE operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the STOP/ reset button safety feature functions properly.

To test run machine, do these steps:

1. Clear all setup tools and loose objects away from machine.
2. Push STOP button in.
3. Connect machine to power supply.
4. Twist STOP button clockwise until it springs out (see **Figure 16**). This resets the switch so the machine can start.
5. Press START button to turn machine **ON**. Verify motor starts up and runs smoothly without any unusual problems or noises.
6. Press STOP button to turn machine **OFF**.
7. WITHOUT resetting STOP button, try to start machine by pressing the START button. The machine should not start.

- If the machine does not start, the STOP button safety feature is working correctly. Congratulations! Test Run is complete.
- If the machine does start with the STOP button pushed in, immediately disconnect power to the machine. The STOP button safety feature is not working correctly and must be replaced before further using the machine. Call Tech Support for help.

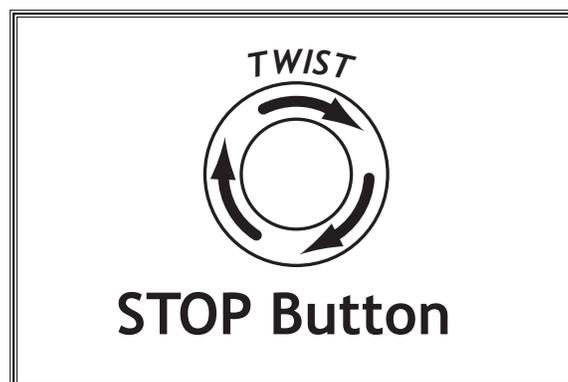
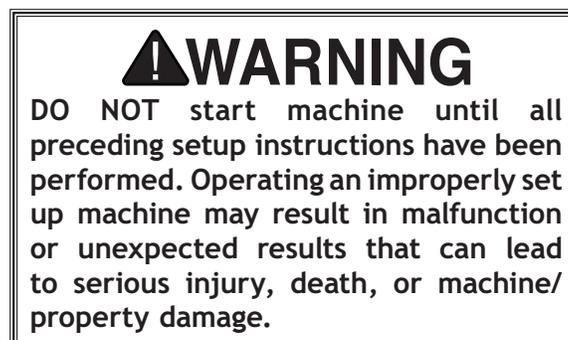
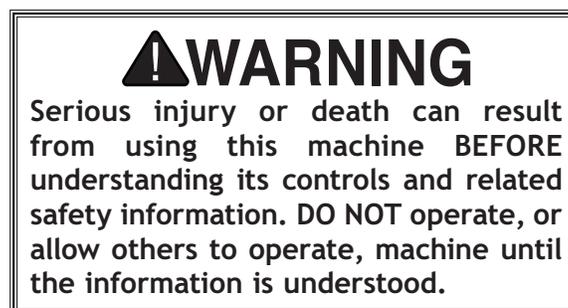


Figure 16. Resetting the switch.

Recommended Adjustments

The adjustments listed below have been performed at the factory. However, because of the many variables involved with shipping, we recommend that you verify the adjustments to ensure the best possible results from your new machine.

Step-by-step instructions for these adjustments can be found in the **SERVICE** section starting on **Page 41**.

Factory adjustments that should be verified:

- Tensioning/replacing V-belts (**Page 41**).
- Calibrating table elevation scale (**Page 49**).
- Pulley alignment (**Page 42**).

NOTICE

After approximately 16 hours of operation, V-belts will stretch and seat into pulley grooves and need to be properly tensioned to avoid severely reducing life of V-belts. Refer to Tensioning/Replacing V-Belts on Page 41 for detailed instructions.

OPERATIONS

Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual and seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.

To complete a typical operation, the operator does the following:

1. Examines workpiece to make sure it is suitable for planing.
2. Puts on safety glasses or face shield, a respirator, and hearing protection.
3. Places workpiece on table with flat side down and correctly adjusts table height for workpiece thickness and depth of cut.
 - If workpiece is bowed, operator surface planes workpiece on a jointer until one side is flat. Doing so ensures that it sits solidly on planer table during operation.
4. When all safety precautions have been taken, turns planer **ON**.
5. Stands to one side of planer path to reduce risk of kickback injuries, then feeds workpiece into planer until infeed roller grabs it.

Note: *Infeed and outfeed rollers control feed rate of workpiece as it passes through planer. Operator should not push or pull on workpiece.*

– If cut is too deep and bogs down planer, operator immediately reduces depth of cut.

! WARNING

To reduce your risk of serious injury or damage to the machine, read this entire manual **BEFORE** using machine.

! WARNING

Eye injuries, respiratory problems, or hearing loss can occur while operating this tool. Wear personal protective equipment to reduce your risk from these hazards.

NOTICE

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced operator of this type of machinery before performing unfamiliar operations. Above all, safety must come first!

6. Once workpiece is clear of outfeed roller and stops moving, operator removes workpiece from outfeed table and measures thickness. If further planing is required, operator raises table slightly ($\frac{1}{4}$ to $\frac{1}{2}$ turn of table height handwheel), then feeds workpiece into front of planer again.
7. Operator continues process until desired thickness is achieved, then turns machine **OFF**.

OPERATIONS

Workpiece Inspection

Some workpieces are not safe to use or may require modification before they are. **Before cutting, inspect all workpieces for the following:**

- **Material Type:** This machine is only intended for workpieces of natural wood fiber. Attempting to use workpieces of any other material that may break apart during operation could lead to serious personal injury and property damage.
- **Foreign Objects:** Inspect workpiece for defects and foreign objects (nails, staples, embedded gravel, etc.). If you have any question about the quality of your workpiece, DO NOT use it. Remember, wood stacked on a concrete floor can have small pieces of stone or concrete pressed into the surface.
- **Large/Loose Knots:** Loose knots can become dislodged during operation. Large knots can cause kickback and machine damage. Always use workpieces that do not have large/loose knots.
- **Wet or "Green" Stock:** Avoid using wood with a high water content. Wood with more than 20% moisture content or wood exposed to excessive moisture (such as rain or snow), will cut poorly and cause excessive wear to the machine. Excess moisture can also hasten rust and corrosion of the machine and/or individual components.
- **Excessive Warping:** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and often unpredictable when being cut. DO NOT use workpieces with these characteristics!
- **Minor Cupping:** Workpieces with slight cupping can be safely supported if the cupped side is facing the table. On the contrary, a workpiece supported on the bowed side will rock during operation and

Wood Types

The species of wood, as well as its condition, greatly affects the depth of cut the planer can effectively take with each pass.

The chart in the figure below shows the Janka Hardness Rating for a number of commonly used species. The larger the number, the harder the workpiece, and the less material should be removed in any one pass for good results.

Note: *The Janka Hardness Rating is expressed in pounds of force required to embed a 0.444" steel ball into the surface of the wood to a depth equal to half the ball's diameter.*

Species	Janka Hardness
Ebony	3220
Red Mahogany	2697
Rosewood	1780
Red Pine	1630
Sugar Maple	1450
White Oak	1360
White Ash	1320
American Beech	1300
Red Oak	1290
Black Walnut	1010
Teak	1000
Black Cherry	950
Cedar	900
Sycamore	770
Douglas Fir	660
Chestnut	540
Hemlock	500
White Pine	420
Basswood	410
Eastern White Pine	380
Balsa	100

Figure 17. Janka Hardness Rating for some common wood species.

Planing Tips

- Inspect your workpiece for twisting or cupping, and surface one face on a jointer if necessary before planing workpiece.
- Scrape off all glue when planing glued-up panels. Dried glue can quickly dull knives/inserts.
- DO NOT plane more than one piece at a time.
- Never remove more than the recommended amount of material on each pass. Only remove a small amount of material on each pass when planing wide or dense stock.
- Support the workpiece on both ends. Get assistance from another person if you are planing a long workpiece, or use roller stands to support the workpiece.
- Measure the workpiece thickness with calipers to get exact results.
- Carefully inspect all stock to make sure it is free of large knots or foreign objects that may damage your knives/inserts, cause kickback, or be ejected from the planer.
- When possible, plane equal amounts on each side of the board to reduce the chance of twisting or cupping.
- Use the entire width of the planer to wear knives/inserts evenly. With narrow workpieces, alternate between far left, far right, and the middle of the table. Your knives/inserts will remain sharp much longer.
- To avoid "chip marks," always plane WITH the grain direction of the wood. Never plane cross-grain or end-grain.
- Plane ONLY natural wood fiber. Do not plane wood composites or other materials that could break up in the planer and cause operator injury or damage to planer.
- Always flatten cupped or warped workpieces on a jointer before planing.

Cutting Problems

Below is a list of wood characteristics you may encounter when planing. The following descriptions of defects will give you some possible answers to problems you may encounter while planing different materials. Possible solutions follow the descriptions.

Chipped Grain

Problem: Usually a result of cutting against the grain, planing workpieces with knots or excessive amount of cross grain, or using dull knives/inserts.

Note: *Some amount of chipping is normal with highly figured wood.*

Solution: Decrease the depth of cut. Reduce the feed rate. Inspect your workpiece and determine if its grain pattern is causing the problem. If the workpiece does not show substantial crossgrain, inspect your knives/inserts.

Fuzzy Grain

Problem: Usually caused by surfacing workpieces with too high of a moisture content. Sometimes fuzzy grain is an unavoidable characteristic of some woods, such as basswood. Fuzzy grain can also be caused by dull knives/inserts.

Solution: Check the workpiece with a moisture meter. If moisture is greater than 20%, sticker the workpiece and allow it to dry. Otherwise, inspect the knife/insert condition.

Snipe

Problem: Occurs when board ends have more material removed than the rest of the board. Usually caused when the workpiece is not properly supported as it goes through the machine. In many cases, however, a small amount of snipe is inevitable.

Solution: Hold workpiece up slightly as it leaves the outfeed end of the planer. The best way to deal with snipe is by planing the workpiece longer than your intended work length and then cutting off the excess after planing is completed.

Chip Marks or Indentations

Problem: Chip indentation or chip bruising is the result of wood chips not being ejected from the machine. Instead they are carried around the cutterhead, deposited on the planed surface and crushed by the outfeed roller. Some causes of chip indentation are:

- Wood chips/sawdust not being properly expelled from the cutterhead.
- The type of workpiece being planed. Certain species of wood have a tendency to chip bruise.
- High moisture content (over 20%) or surface moisture (refer to **Workpiece Inspection**).
- Dull knives/inserts.
- Excessive depth of cut.

Solution:

- Use a proper dust-collection system; adjust chip deflector in or out as necessary.
- Workpiece must be completely dry, preferably kiln-dried (KD). Air-dried (AD) lumber must be seasoned properly and have no surface moisture. **DO NOT** surface partially-air-dried (PAD) workpiece.
- Make sure planer knives/inserts are sharp.

Pitch & Glue Buildup

Problem: Glue/resin buildup on the rollers and cutterhead will cause overheating by decreasing cutting sharpness while increasing drag in the feed mechanism. This can result in scorched workpieces, uneven knife/insert marks, and chatter.

Solution: Clean the rollers and cutterhead.

Rippled Cut

Problem: Regularly spaced indentations across face of workpiece are caused by excessive outfeed roller pressure or excessive feed rate.

Solution: Reduce outfeed roller pressure; reduce

Depth of Cut

Table Movement per Handwheel Revolution

One Full Revolution..... 2mm (0.08")

Material Thickness Range

Minimum-Maximum Stock Thickness $\frac{3}{16}$ "-6"

The depth of cut on a planer means the amount of material that is removed from the top of the workpiece as it passes underneath the cutterhead.

The depth of cut is set by adjusting the distance of the table below the cutterhead. This distance is the thickness of the workpiece minus the depth of cut. The planing depth of cut is controlled by using the table height handwheel on the right side of the machine. Rotating the handwheel clockwise raises the table.

Although the correct depth of cut varies according to wood hardness and workpiece width, we recommend the maximum depth of cut (per pass) be no more than $\frac{1}{16}$ ". A series of light cuts will give better end results and put less stress on the planer than trying to take off too much material in a single pass.

The depth of cut can be referenced directly from the inch/millimeter scale on the front of the planer, as shown.

Note: *The scale functions as a general guide only, and is not intended for low-tolerance, precision results.*

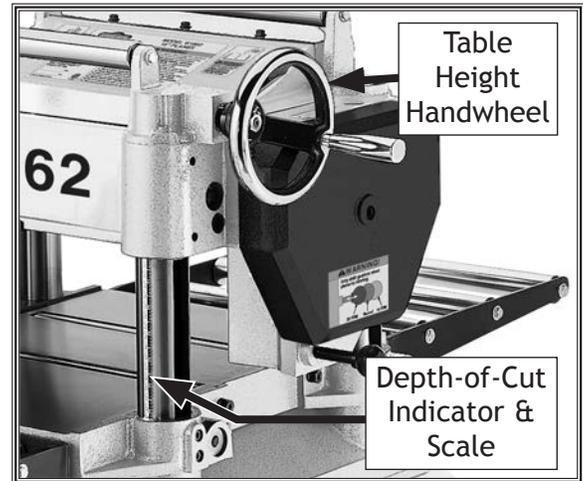


Figure 18. Location of depth-of-cut controls (W1862 shown).

Bed Roller Height

Bed Roller Height Range..... 0.002"-0.020"

The correct height of the bed rollers will vary, depending on the type of material you intend to plane. However, as a general rule, keep the bed roller height within 0.002"-0.020" above the table surface, as illustrated in Figure 19.

When planing rough stock, set the rollers high to keep the lumber from dragging along the bed. When planing milled lumber, set the rollers low to help minimize snipe.

To ensure accurate results and make the adjustment process quicker and easier, we recommend using a Rotacator (refer to Page 36) to gauge the bed roller height from the table surface. If a Rotacator is not available, a straightedge and feeler gauges can be used, but care must be taken to achieve accurate results.

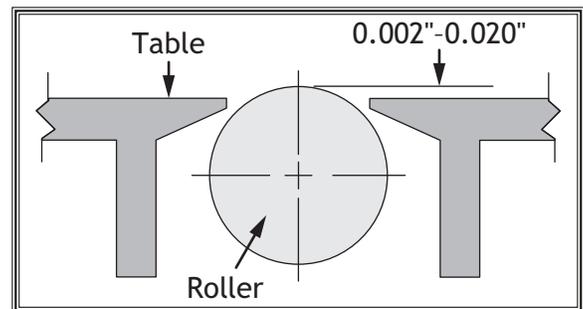


Figure 19. Recommended bed roller height above the table surface.

NOTICE

Bed rollers that are not adjusted to the correct height or out of alignment with each other can cause poor finishes, inconsistent planing thickness, and other undesirable results.

Items Needed	Qty
Hex Wrench 3mm	1
Open-End Wrench 12mm.....	1
Straightedge 36"	1
Feeler Gauge Set	1
Rotacator (optional, Page 36).....	1

To adjust bed rollers, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Completely lower table to give yourself enough room to work.
3. Loosen set screws (see **Figure 20**) above each of four roller adjustment cams (there are two on each side of planer).
4. Rotate eccentric adjustment cams to raise or lower bed rollers to desired height above table surface.
5. Verify both sides of each roller are at the same height, then re-tighten set screws to secure in place.
6. Re-check roller heights to make sure they did not change while being secured.
 - If roller heights are not correct, repeat this procedure until they are.

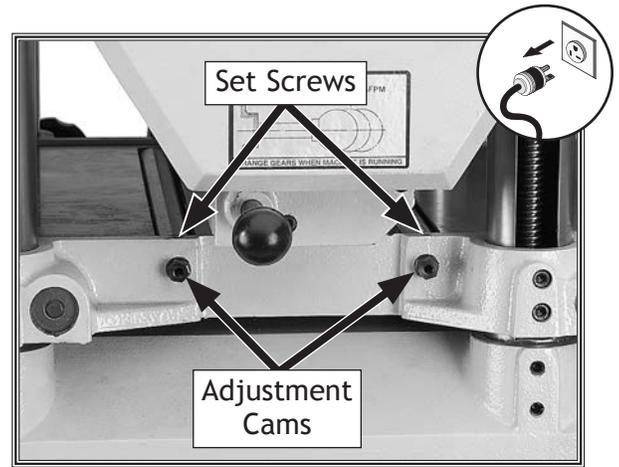


Figure 20. Bed roller height controls.

Setting Feed Rate

High Feed Rate 28 FPM
 Low Feed Rate 16 FPM

The infeed and outfeed rollers move the workpiece through the planer while keeping it flat and providing a consistent rate of movement. The speed that these rollers move the workpiece through the planer is the feed rate.

Generally, low feed rates are used for dimensioning, while higher feed rates are used for finishing.

The figure below illustrates the three different positions of the feed rate control knob:

- Push knob in to use high feed rate.
- Pull the knob out to use the low feed rate.
- Move knob to center position to place gearbox in neutral.

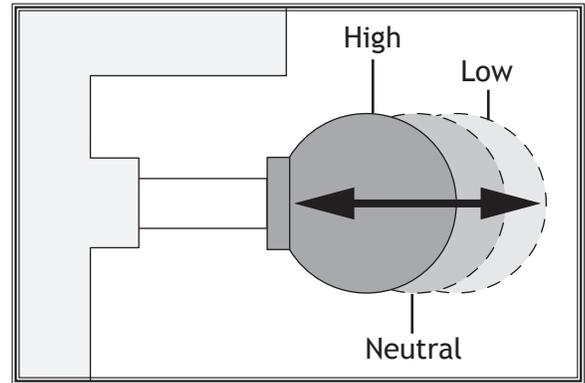
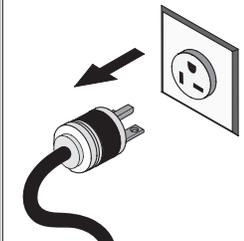


Figure 21. Feed rate control knob positions.

NOTICE

Only change the feed rate when the planer is running, but **DO NOT** attempt to change the feed rate during any cutting operations or damage to the gearbox will result.

Adjusting/Replacing Knives (W1862)



! WARNING

To reduce risk of shock or accidental startup, always disconnect machine from power before adjustments, maintenance, or service.

Setting the height of the knives correctly is crucial to the proper operation of your planer and is very important in keeping the knives sharp. If one knife protrudes higher than the others, it will do the majority of the work, dull much faster, and produce poor cutting results.

The knife-setting jig included with this planer is designed to set the knives at a uniform distance of 0.070" above the cutterhead surface.

Note: If you need to replace or sharpen a knife, you can remove the knife from the cutterhead during **Step 4** of the following procedure. Thoroughly clean out any debris from the knife slots before replacing the knives.

! CAUTION

Cutterhead knives are extremely sharp. Contact with knives can result in severe cuts. Take great caution whenever working with or around cutterhead knives. Wear heavy leather gloves to reduce risk of severe cuts.

NOTICE

To maintain accurate and consistent planing results, we do not recommend sharpening knives yourself. Instead, just replace dull knives or have them professionally sharpened.

OPERATIONS

Items Needed	Qty
Phillips Screwdriver #2.....	1
Wrench or Socket 12mm, 13mm.....	1 Ea.
Hex Wrench 3mm	1
Knife-Setting Jig	1
Heavy Leather Gloves	1 Pair

To adjust height of knives, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove dust hood and top cover to expose cutterhead.
3. Put on heavy leather gloves.
4. Remove belt cover, then rotate cutterhead pulley to provide access to one of the knives.

Note: The cutterhead for Model W1862 ships with both springs and jack screws to adjust the knife height (see **Figure 22**)—which one you use is up to your personal preference. However, if you use the springs, you must first remove the jack screws from the cutterhead before proceeding.

- The advantage of using springs is that springs maintain a constant upward pressure on the knives while using the knife-setting jig during **Step 6**.
- The advantage of using jack screws is that once you set the proper height of the screws, they should require little to no adjustment when replacing the knives.

5. Loosen cutterhead gib bolts until knife is completely loose.
 - If you are replacing the knives, remove the old knife and install the new one, making sure the beveled edge of the new knife is facing the correct direction.
6. Position knife-setting jig over knife so that knife edge is directly under center pad, as shown in **Figure 23** to right.

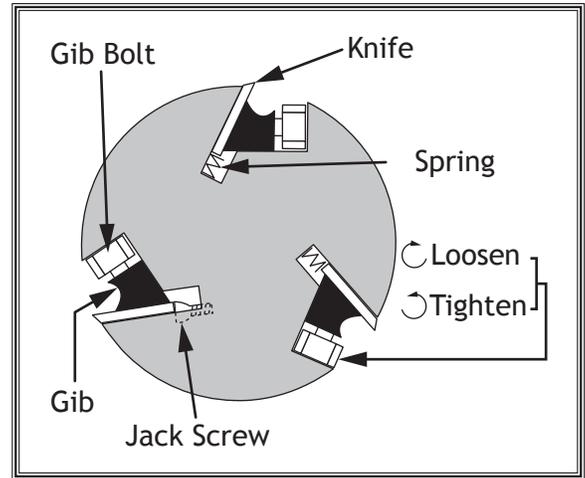


Figure 22. W1862 cutterhead components.

OPERATIONS

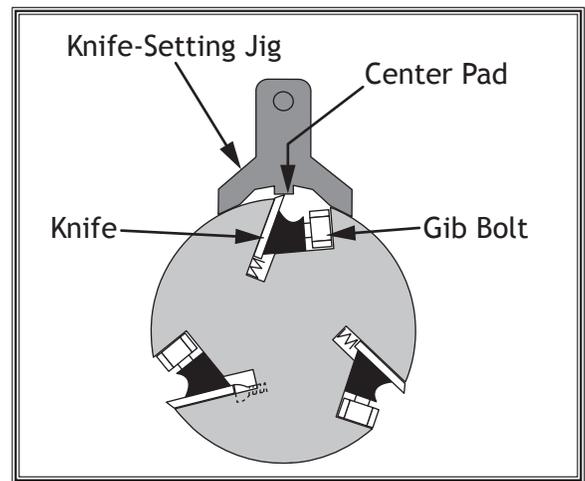


Figure 23. Knife-setting jig correctly positioned over knife.

- Jack Screws:** Insert hex wrench into access holes in cutterhead (see **Figure 24**), and rotate jack screws to raise or lower knife until it barely touches center pad of knife-setting jig with all legs of jig still firmly on cutterhead, then snug gib bolts enough to hold knife in place without fully tightening gib bolts (see **Figure 25**).

Springs: Insert hex wrench into access holes in cutterhead (see **Figure 24**), and remove jack screws. Push down on knife jig until all legs of jig are firmly on cutterhead and knife just touches center pad of jig, then tighten gib bolts enough to hold knife in place without fully tightening gib bolts (see **Figure 25**).

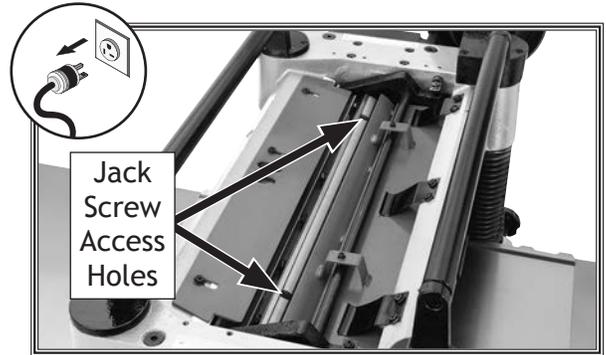


Figure 24. Jack screw access holes in cutterhead.

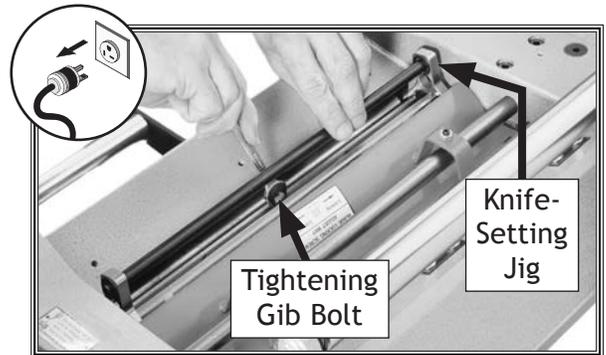


Figure 25. Using knife-setting jig to set knife height.

- Incrementally snug gib bolts in an even manner, starting at middle and working your way to ends by alternating left and right, as illustrated in **Figure 26**.
- Repeat **Step 8**, snugging gib bolts a little more.
- Repeat **Step 8**, this time fully tightening all gib bolts.
- Repeat **Steps 4-8** for remaining knives.

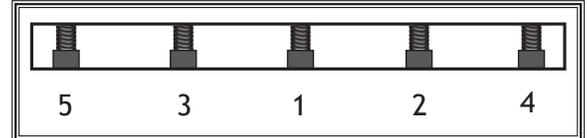
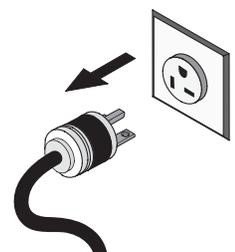


Figure 26. Gib bolt tightening sequence.

Rotating/Replacing Cutterhead Inserts (W1863)



⚠ WARNING
To reduce risk of shock or accidental startup, always disconnect machine from power before adjustments, maintenance, or service.

The helical cutterhead is equipped with indexable carbide inserts that can each be rotated to reveal one of four cutting edges. If one edge of the insert becomes dull or damaged, simply rotate it 90° to reveal a fresh cutting edge, as described on **Page 35**.

Items Needed	Qty
Phillips Screwdriver #2.....	1
Wrench or Socket 12mm, 13mm.....	1
Torque Wrench	1
T-25 Torx Bit	1
Heavy Leather Gloves	1 Pair
Light Machine Oil	As Needed

OPERATIONS

To rotate or replace a helical cutterhead insert, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove dust port, top cover, and belt cover.
3. Put on heavy leather gloves to protect your fingers and hands.
4. Remove any sawdust or debris from head of insert, Torx screw, and surrounding area (see **Figure 27**).
5. Remove Torx screw and insert, then clean all dust and debris from both parts and cutterhead pocket.

Note: *Proper cleaning of insert, Torx screw, and cutterhead pocket is critical to achieving a smooth finish. Dirt or dust trapped between insert and cutterhead will raise insert, and make marks on your workpiece when planing.*

Tip: *Use low-pressure compressed air or a vacuum nozzle to clean out cutterhead pocket.*

⚠ CAUTION

The carbide inserts are very sharp and can quickly cut your hands. ALWAYS use caution and heavy leather gloves when handling these parts to reduce the risk of personal injury.

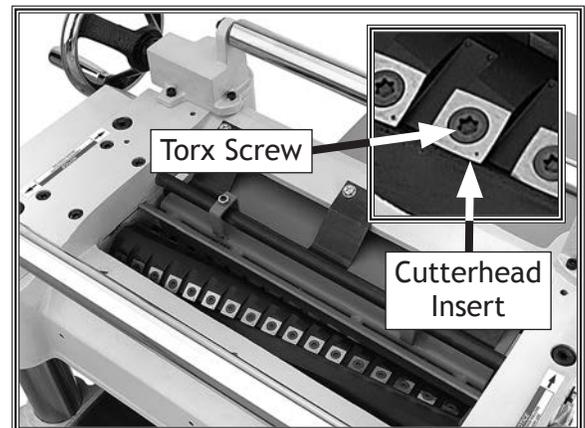


Figure 27. W1863 cutterhead inserts and Torx screws.

6. Rotate insert 90° and install so that a fresh cutting edge faces outward (see **Figure 28**).
 - When all four insert cutting edges have been used, replace insert with a new one. Always position new insert reference dot in same position to aid in rotational sequencing.

7. Lubricate Torx screw threads with a very small amount of light machine oil, wipe excess off, and torque screw to 50-55 inch/pounds.

Note: *If too much oil is applied to the threads, excess oil will attempt to squeeze out of the threaded hole and raise insert during installation, bringing it out of height alignment.*

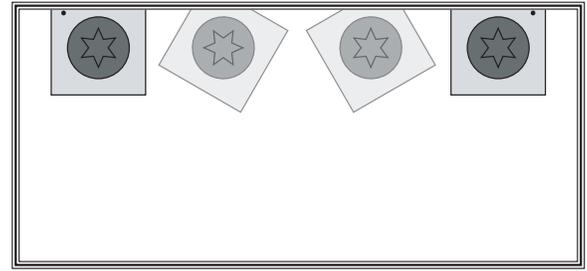


Figure 28. Insert rotating sequence.

ACCESSORIES

Planer Accessories

The following planer accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

W1218A—Rotacator™ Precision Planer Tool

The Rotacator is a dial indicator on a magnetic base, designed for quickly and accurately setting the critical tolerances needed when making planer adjustments. Perfect for adjusting infeed/outfeed rollers, pressure bars, chip breakers, and bed rollers. Also a great setup tool for other machines! Accurate to 0.001". Indicator rotates 360°.

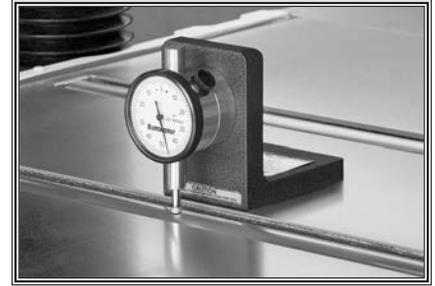


Figure 29. W1218A Rotacator™ Precision Planer Tool.

D4112—Fractional Digital Caliper 6"

Large LCD readout converts to decimal inch, fractional inch, and millimeters, with the push of a button. Measure internal and external dimensions, depth, steps, and differential measurements. Features thumb roll and stainless steel construction. Range: 0-6", 0-150mm. Resolution: 0.0005", 0.01mm, 1/128".

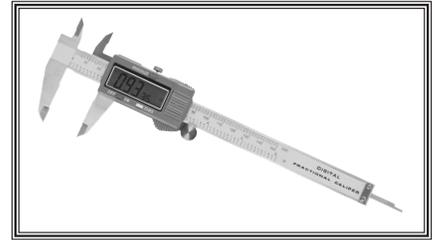


Figure 30. Model D4112 Fractional Digital Caliper 6".

D2273—Single Roller Stand

Large diameter ball bearing roller stand features smooth operation for a variety of processing and work support applications. Heavy pedestal base is stable and secure.

D2274—5-Roller Stand

For greater work stability and support, this 5 roller stand features large diameter, ball bearing rollers mounted on a sturdy adjustable pedestal base.



Figure 31. Models D2273 and D2274 Roller Stands.

SB1365—South Bend Way Oil-ISO 68

Engineered for the high pressure exerted on horizontal or vertical ways and slides. Protects against rust and corrosion. Ensures stick-free, smooth motion which maximizes finishes and extends the life of your machine. Won't gum up! 12 oz. AMGA#2 (ISO 68 Equivalent).



Figure 32. SB1365 Way Oil.

For W1862:

D3301—15" Planer Knives, Set of 3

These planer knives are made from high-speed steel and fit Model W1862 15" Planer. Set of 3.

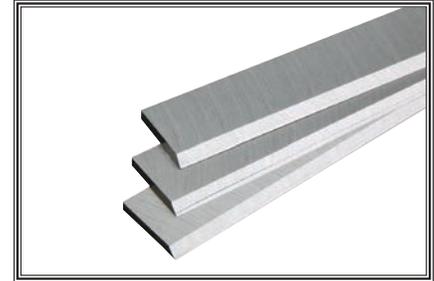


Figure 33. D3301 15" Planer Knives.

For W1863:

D4297—Indexable Carbide Inserts, 10 Pack

These Indexable Carbide Inserts are designed for use in helical and spiral cutterhead systems and made to last up to 10 times longer than a set of HSS steel inserts. Made of solid carbide. Size: 15 x 15 x 2.5mm.

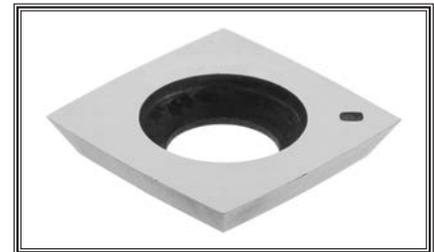


Figure 34. D4297 Indexable Carbide Inserts.

MAINTENANCE



Schedule

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

Note: *This maintenance schedule is based on average daily usage. Adjust the maintenance schedule to match your usage, to keep your planer running smoothly, and to protect your investment.*

Ongoing

- Clean machine and protect unpainted cast-iron surfaces.
- Lubricate feed roller bushings (Page 39).
- Tighten loose mounting bolts.
- Check/sharpen/replace damaged or worn knives/inserts (Page 31).
- Check/repair/replace worn/damaged wires.
- Resolve any other unsafe condition.

Every 40 Hours of Operation

- Clean cutterhead and, for W1863, check knife height (Page 31).
- Lubricate table columns and leadscrews (Page 39).

Every 160 Hours of Operation

- Check/tension/replace V-belts (Page 41).
- Clean/vacuum dust buildup from inside cabinet and off motor.
- Lubricate table height worm gear (Page 39).
- Lubricate table height chain and sprockets (Page 39).
- Lubricate drive chain and sprockets (Page 40).

Yearly

- Change gearbox oil (Page 40).

Cleaning & Protecting

Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin-dissolving cleaner to remove it.

Protect the unpainted cast-iron table by wiping it clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep your table rust-free with regular applications of quality lubricants.

Lubrication

NOTICE

Failure to follow reasonable lubrication practices as instructed in this manual for your machine could lead to premature failure of components and void the warranty.

This planer features bearings that are lubricated and sealed at the factory. These bearing do not require any further attention unless they need to be replaced. If a bearing fails, your planer will probably develop a noticeable rumble or vibration, which will increase when the machine is under a load. The bearings are standard sizes and can be replaced through Woodstock International.

Follow the maintenance schedule on this page and the procedures beginning on Page 39 to properly lubricate the other planer components, which are essential for long life and trouble-free operation of your planer.

Feed Roller Bushings

Oil Type.....SB1365 or ISO-68 Equivalent
Oil Amount 2-3 Drops
FrequencyEvery 8 Hours of Operation

The infeed and outfeed rollers rotate inside bushing blocks on both ends of the rollers. Add 2-3 drops of ISO 68 machine oil to the center hole of the four feed roller tension adjustment bolts on top of the head casting, as shown in **Figure 35**.



Figure 35. Lubrication locations for feed roller bushings.

Columns & Leadscrews

Oil Type.....SB1365 or ISO-68 Equivalent
Oil Amount Thin Coat
Grease Type.....NLGI#2 Equivalent
Frequency Every 40 Hours of Operation

The table rides on the columns and is moved by the rotation of the leadscrews inside the columns. Loosen the dust sleeve (see **Figure 36**) to access the columns and leadscrews. Apply a thin coat of ISO 68 machine oil to the outside surface of the columns and brush on a light application of multi-purpose grease to the leadscrew threads. Move the table up and down to distribute the lubricant.

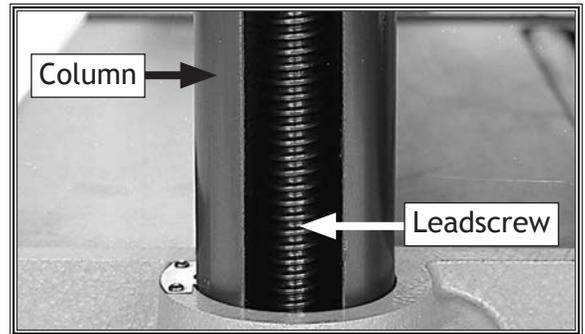


Figure 36. Location of column and leadscrew.

Table Height Worm Gear

Grease Type.....NLGI#2 Equivalent
Frequency Every 160 Hours of Operation

Remove the three cap screws that secure the worm gear housing (see **Figure 37**), then lift the housing and handwheel assembly off the machine. Clean away any debris from the housing and gears, then brush on a moderate amount of multi-purpose grease to the gear teeth.

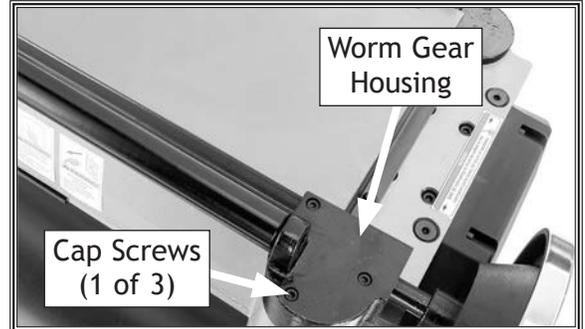


Figure 37. Example of table height worm gear housing.

Table Height Chain & Sprockets

Grease Type.....NLGI#2 Equivalent
Frequency Every 160 Hours of Operation

The table leadscrews are synchronized by the table height chain and sprockets located underneath the planer base (see **Figure 38**). Use shop rags and mineral spirits to clean away debris and grime, then brush on a light coat of multi-purpose grease to the chain and sprockets.

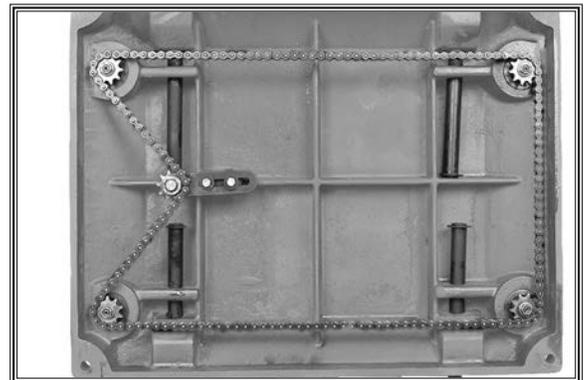


Figure 38. Table height chain and sprockets as viewed from underneath the base.

Drive Chain & Sprockets

Grease Type..... Synthetic Grease
 Frequency..... Every 160 Hours of Operation

The infeed and outfeed rollers receive the transferred power from the cutterhead through the drive chain system on the right side of the machine, as shown in **Figure 39**.

Remove the table height handwheel and the safety covers attached to the inside of the drive chain cover, then remove the cover to access these parts.

Use shop rags and mineral spirits to clean away any debris and grime, then brush on a light coat of multi-purpose grease to the chain and sprockets.

Gearbox Oil

Oil Type..... ISO-320
 Oil Amount..... 20 Oz.
 Frequency..... After First 20 Hours, Then Yearly

Note: We recommend that you replace the gearbox oil after the first 20 hours of operation. This is a normal break-in procedure and will help maximize the service life of the machine by flushing away any particles from the break-in and manufacturing process.

Although it is not necessary to remove the drive chain cover to access the fill and drain plugs, it is more convenient to do so (see **Figures 40-41**). Replace the gearbox oil with ISO 320 or equivalent oil until it just reaches the fill plug.

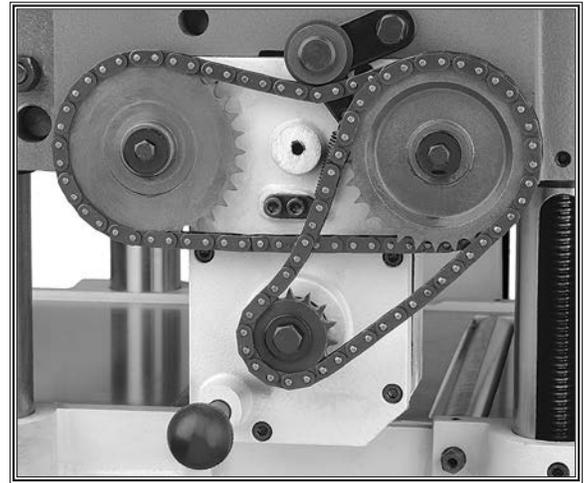


Figure 39. Example of drive chains and sprockets for infeed and outfeed rollers.

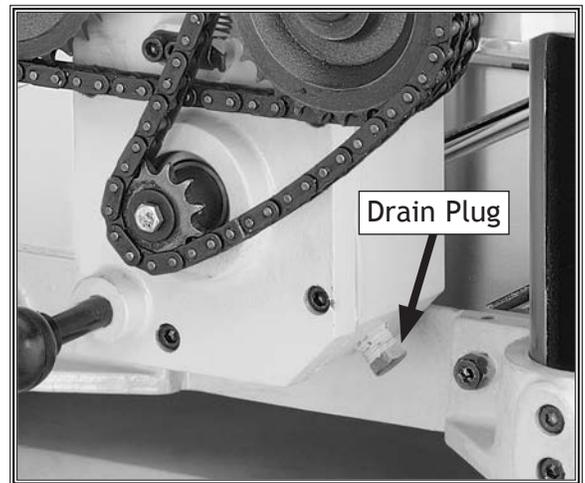


Figure 40. Example of gearbox drain plug.

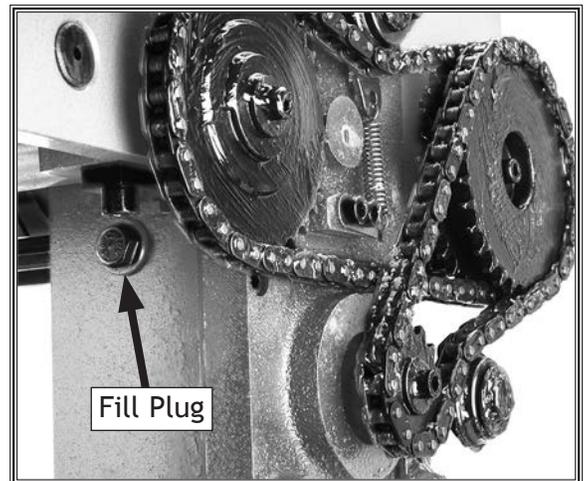


Figure 41. Example of gearbox fill plug.

SERVICE

General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: techsupport@woodstockint.com.

Tensioning/Replacing V-Belts

Three V-belts transfer power from the motor to the cutterhead, and then to the infeed and outfeed rollers with the use of the drive chain system. To ensure efficient transfer of power to these systems, make sure the V-belts are always properly tensioned and in good condition.

If the V-belts are worn, cracked, or damaged, replace them. Always replace the V-belts with a matched set of three, or belt tension may not be even among the belts, causing premature belt failure.

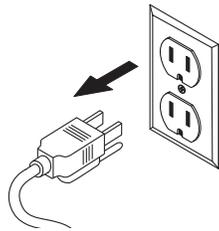
Items Needed	Qty
Phillips Screwdriver #2.....	1
Open-End Wrench 16mm.....	1

To tension/replace V-belts, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove V-belt cover from left side of machine to expose belts, as shown in Figure 42.

Note: A collection of black belt dust at the bottom of the belt cover is normal during the life of the belts.

⚠ WARNING



MAKE SURE that your machine is unplugged during all service procedures! If this warning is ignored, serious personal injury may occur.

NOTICE

After approximately 16 hours of operation, V-belts will stretch and seat into pulley grooves and need to be properly tensioned to avoid severely reducing life of V-belts.

⚠ CAUTION

V-belts and pulleys will be hot after operation. Allow them to cool before handling.

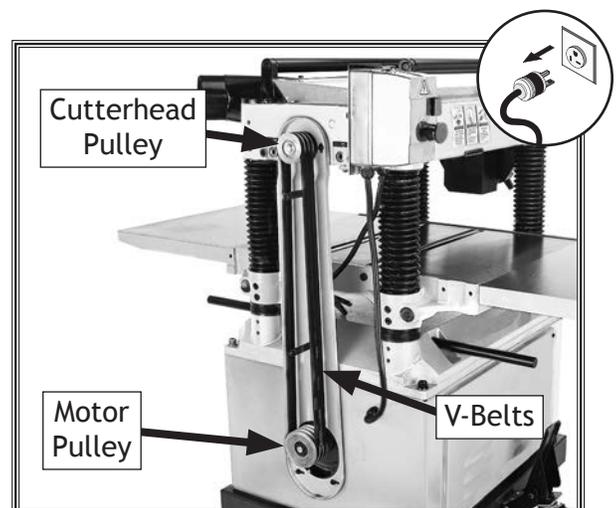


Figure 42. Example of belt cover removed to expose V-belts and pulleys.

3. Remove front cabinet cover to access motor, as shown in **Figure 43**.
4. If V-belts need to be replaced, raise motor to release belt tension (see **Step 5** for instructions), roll belts off pulleys, then replace with a matched set of 3.
5. To adjust V-belt tension, loosen top motor mount hex nut (see **Figure 43**), then adjust bottom hex nut to raise or lower motor.

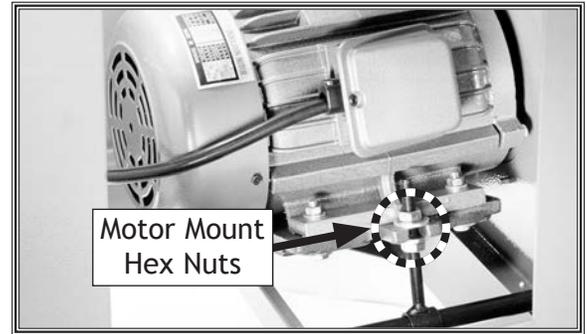


Figure 43. Example of front cabinet cover removed to access motor.

Note: V-belts are correctly tensioned when there is approximately $\frac{3}{4}$ " deflection when moderate pressure is applied to belts midway between pulleys, as illustrated in **Figure 44**.

6. After V-belts are correctly tensioned, tighten top motor mount hex nut, then re-install cabinet cover and belt cover.

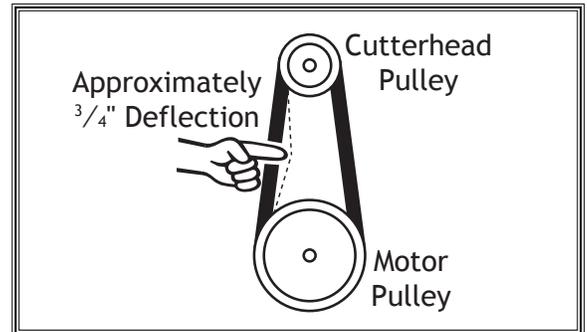


Figure 44. Belt deflection when V-belts are correctly tensioned.

Pulley Alignment

Pulley alignment prevents premature V-belt wear and unnecessary load on the motor. The pulleys are aligned when they are parallel and in the same plane as each other.

Items Needed	Qty
Straightedge 3'	1
Wrench or Socket 14mm, 17mm.....	2 Ea.

To check/re-align pulleys, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove belt cover, then use straightedge to check pulley alignment, as shown in **Figure 45**.
 - If pulleys *are* parallel and in the same plane, no adjustment is necessary. Re-install belt cover.
 - If pulleys are *not* parallel or in the same plane, remove motor access panel, then proceed to **Step 3**.

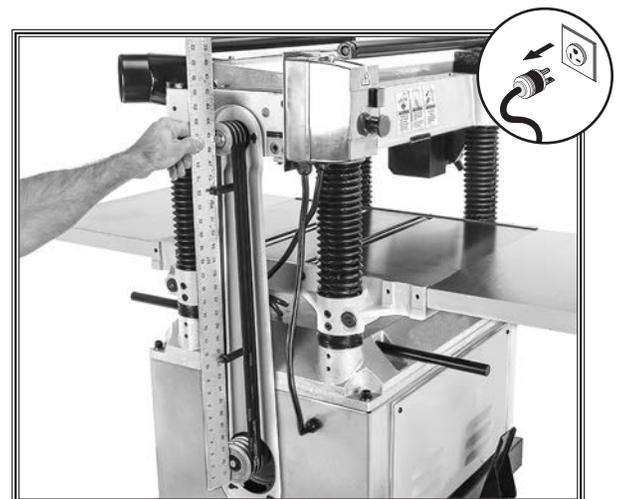


Figure 45. Example of checking pulley alignment.

3. Loosen four motor mount bolts, shift motor until pulleys are aligned, then re-tighten motor mount bolts.
4. Re-check pulleys and repeat **Step 3** as necessary until pulleys are aligned, then re-tighten all fasteners, and replace belt cover and motor access panel.

Feed Rollers & Chip Breaker Heights

It is essential that the feed rollers and chip breaker are set at the correct distance below the cutterhead knives at BDC (bottom dead center) to ensure that the workpiece moves through the planer evenly and the correct distance from the cutterhead knives.

To ensure accurate results and make the adjustment process quicker and easier, we recommend using a Rotacator for these adjustments (refer to **Accessories**).

If a Rotacator is not available, a 6' 2x4 cut into two even sized pieces and a feeler gauge set can be used, but care must be taken when jointing the wood to achieve accurate results.

Dist. Below Knife/Insert at BDC (Figure 46)

A. Infeed Roller	0.040"
B. Chip Breaker	0.040"
C. Outfeed Roller	0.020"

Using a Rotacator

Items Needed	Qty
Phillips Screwdriver #2	1
Hex Wrenches 3mm, 5mm	1 Ea.
Wrench or Socket 10mm	1 Ea.
Rotacator (see Page 36)	1

To use a Rotacator, do these steps:

1. **DISCONNECT MACHINE FROM POWER!**
2. Make sure knives are set to correct height (refer to **Adjusting/Replacing Knives** on **Page 31** for detailed instructions). If machine is helical cutterhead, make sure all inserts are properly installed (refer to **Rotating/Replacing Cutterhead Inserts** on **Page 33** for detailed instructions).

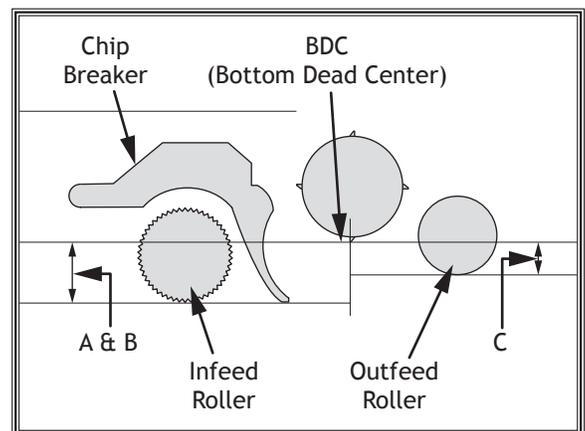


Figure 46. Planer component recommended clearances (illustration is not to scale).

3. Lower table at least 4" below head casting, then lock it in place.
4. Remove dust port, top cover, belt cover, and drive chain cover.
5. Using your Rotacator, find bottom dead center (BDC) of any knife/insert edge by slowly rocking cutterhead pulley back and forth, then set Rotacator dial to "0" (see **Figure 47**).
6. Move feed speed knob to neutral position to allow infeed roller to freely rotate.
7. Keeping Rotacator dial at "0", position it under right-hand side of infeed roller and find BDC of a serrated edge by rocking infeed roller back and forth.
8. Loosen jam nuts and use set screws on each side of feed roller (see **Figure 48**) to adjust height of infeed roller bushing block until Rotacator dial shows 0.040", which is the recommended distance for infeed roller below cutterhead.
9. Repeat **Steps 7-8** on left side of infeed roller.
10. Re-check both sides of infeed roller and, if necessary, make further adjustments until infeed roller height from side-to-side is 0.040" below BDC of cutterhead knife, then retighten both jam nuts.
11. Keeping same "0" reference on Rotacator dial from **Step 5**, repeat **Steps 7-10** for outfeed roller, but adjust it until it is 0.020" below BDC of cutterhead knife.
12. Using same "0" reference on Rotacator dial from **Step 5**, perform similar steps as described previously to adjust height of chip breaker to its recommended specification given at beginning of this subsection. The adjustment controls are shown in **Figure 49**.
13. Re-install belt cover, top cover, drive chain cover, and dust port.

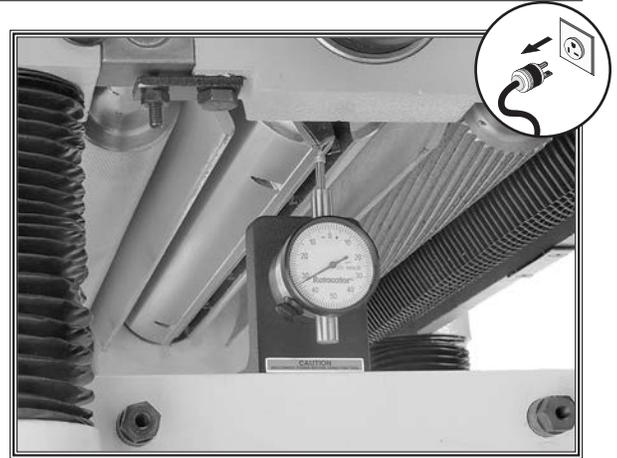


Figure 47. Example of using a Rotacator to find BDC.

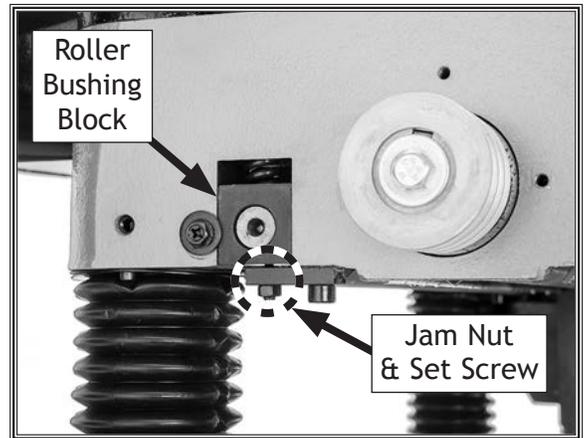


Figure 48. Example of infeed roller bushing block and height adjustment controls.

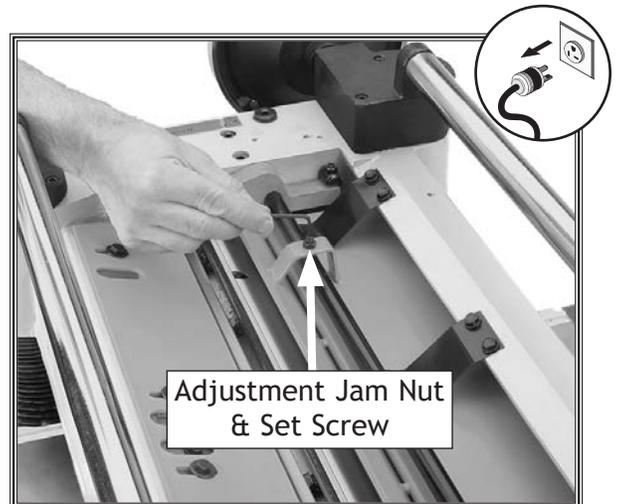


Figure 49. Example of adjusting chip breaker height.

Using Wood Blocks

Items Needed	Qty
Phillips Screwdriver #2.....	1
Hex Wrench 3mm, 5mm.....	1
Wrench or Socket 10mm.....	1
2x4 6' Long.....	1
Feeler Gauge Set.....	1

To use wood blocks, do these steps:

1. Build wood blocks by cutting a straight 6-foot-long 2x4 in half.

Note: Having the wood blocks at an even height is critical to the accuracy of your overall adjustments. For best results, make the 2x4 square with a jointer and table saw before cutting it in half.

2. **W1862 Only:** Make sure knives are set to correct height (refer to **Adjusting/Replacing Knives** on **Page 31** for detailed instructions).
3. **DISCONNECT MACHINE FROM POWER!**
4. Lower bed rollers below table surface (refer to **Bed Roller Height** on **Page 29** for detailed instructions).
5. Place wood blocks along sides of table, as illustrated in **Figure 50**.
6. Remove dust port, top cover, belt cover, and drive chain cover.
7. Raise table until wood blocks get close to cutterhead.
8. Use belt to rotate cutterhead and continue raising table until blocks just barely touch cutterhead knife/insert at its lowest point of rotation (BDC).
9. Lock table in place. Upward pressure of wood blocks will be holding infeed and outfeed rollers, chip breaker, and pressure bar at same level as knife/insert at BDC.

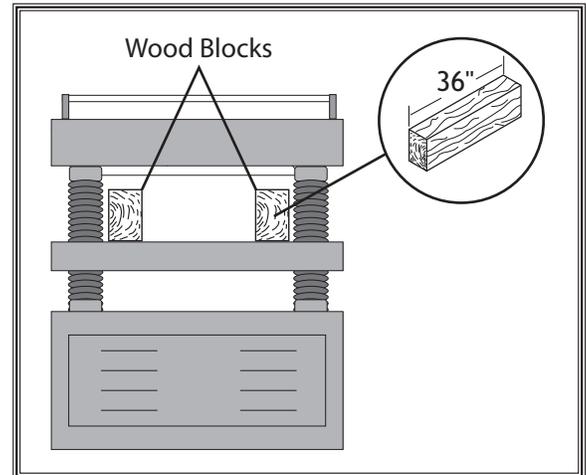


Figure 50. Wood blocks properly positioned on the planer table.

10. Loosen jam nuts and set screws on each side of infeed roller (see **Figure 51**).
11. Using a feeler gauge, adjust set screw so it is 0.040" from roller bushing block (see **Figure 51**), then tighten jam nut. Repeat on other side of infeed roller.
12. Repeat **Steps 10-11** with outfeed roller, only adjust the gaps to 0.020".

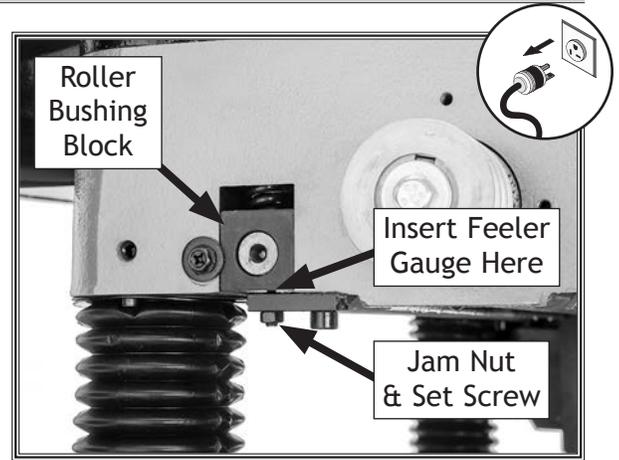


Figure 51. Example of feeler gauge location for adjusting infeed roller height when using wood blocks (one of two locations shown).

13. Loosen jam nuts and set screws on each side of chip breaker (see **Figure 52**).
14. Using a feeler gauge, adjust set screw so it is 0.040" from cross bar (see **Figure 52**), then tighten jam nut. Repeat on other side of chip breaker.
15. Re-install belt cover, top cover, drive chain cover, and dust port.

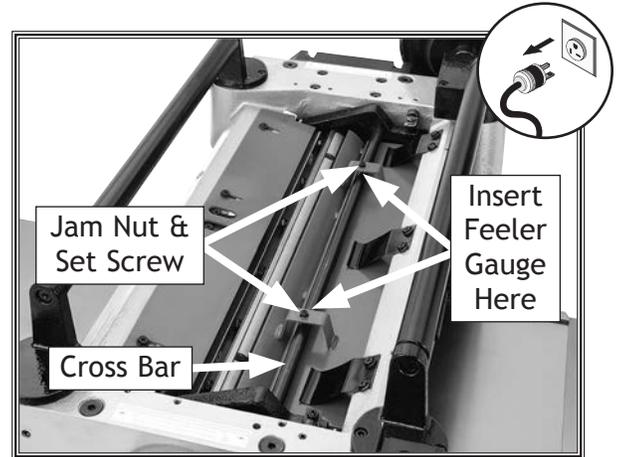


Figure 52. Example of feeler gauge locations for adjusting chip breaker height when using wood blocks.

Adjusting Roller Spring Tension

The infeed and outfeed rollers keep the workpiece moving through the planer. Springs exert downward pressure on the feed rollers while allowing them to raise with an uneven workpiece surface. Proper spring tension is crucial to keep the workpiece moving through the planer during operation.

The ideal feed-roller spring tension varies depending upon the type of wood you plane. When adjusting spring tension, keep the following in mind:

- If you are planing milled lumber with a consistent surface, use less spring tension to reduce the risk of marring the workpiece.
- If you are planing rough lumber with inconsistent surfaces, use greater spring tension to keep the stock moving through the planer.
- If the workpiece consistently stops feeding during operation, the spring tension may need to be increased.

Items Needed	Qty
Hex Wrench 5mm	1

To adjust feed-roller spring tension, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Rotate tension screws (shown to the right) clockwise to increase tension or counterclockwise to decrease tension.

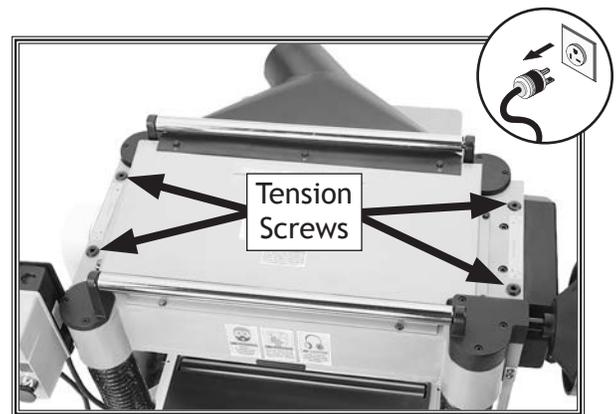


Figure 53. Example of roller spring tension adjustment screws.

Positioning Chip Deflector

Chip Deflector Gap Setting

If Planer Used w/Dust Collector.....	1/4"
If Planer Used w/o Dust Collector	1/16"

When properly distanced from the cutterhead, the chip deflector directs the chips into the dust hood, and keeps them from falling onto the outfeed roller and being pressed into the workpiece.

Items Needed	Qty
Wrench or Socket 10mm.....	1
Hex Wrench 5mm	1

To adjust chip deflector gap, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove dust hood, top cover, and belt cover.
3. Use cutterhead pulley to rotate cutterhead until a knife/insert reaches closest distance to chip deflector (see **Figure** to the right), then measure distance between knife/insert and chip deflector.
4. If distance measured in **Step 3** is *not* equal to correct chip deflector gap setting, then loosen flange bolts (see **Figure 54**) that secure chip deflector and adjust gap to correct setting.
5. Re-tighten flange bolts, then replace belt cover, top cover, and dust port.

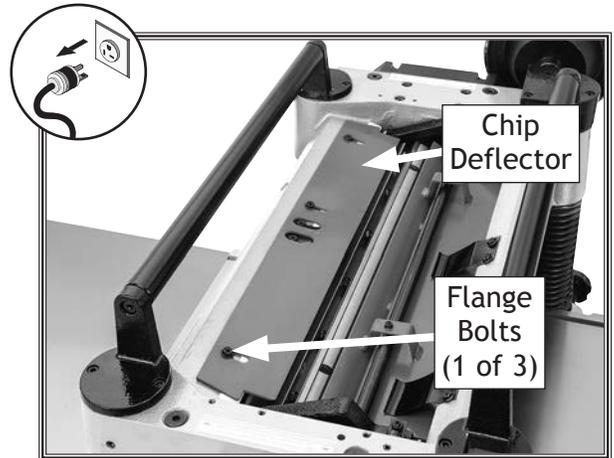


Figure 54. Example of chip deflector and mounting hardware.

Calibrating Table Elevation Scale

Although correctly set at the factory, the table elevation scale can be adjusted for accuracy if necessary.

Items Needed	Qty
Phillips Screwdriver #2.....	1
Scrap Piece of Stock.....	1
Calipers.....	1

To calibrate table elevation scale, do these steps:

1. Plane a scrap piece of stock until it is flat and of even thickness along its length.

Note: Turn board over between each pass.
2. Use calipers to measure board thickness.
3. If there is a discrepancy between board thickness and reading on table elevation scale, loosen the screw shown in **Figure 55**, adjust scale as necessary, then re-tighten screw.

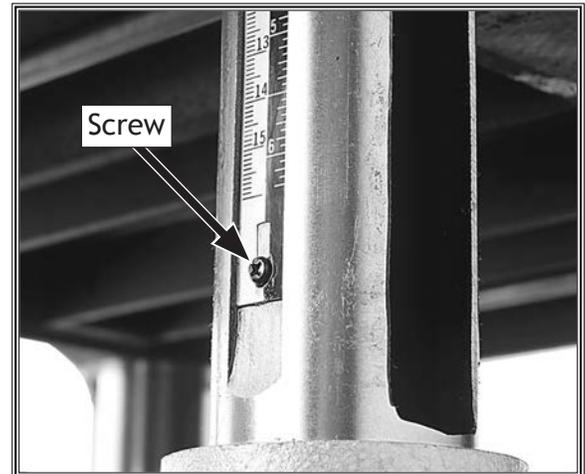


Figure 55. Location of adjustment screw for table elevation scale.

Checking Anti-Kickback Fingers

The anti-kickback fingers are an important safety feature of your planer. The fingers hang from a rod suspended across the head casting and in front of the infeed roller, as shown. This design allows the workpiece to easily enter the planer but reduces the risk of kickback by digging into the workpiece if it moves backward.

Check the anti-kickback fingers regularly to ensure they swing freely and easily. If the fingers do not swing freely and easily, first clean them with a wood-resin solvent, then inspect them for damage. If any of the fingers are damaged, the device must be replaced before using the machine.

Do not apply oil or other lubricants to the anti-kickback fingers that will attract dust and restrict free movement of the fingers.

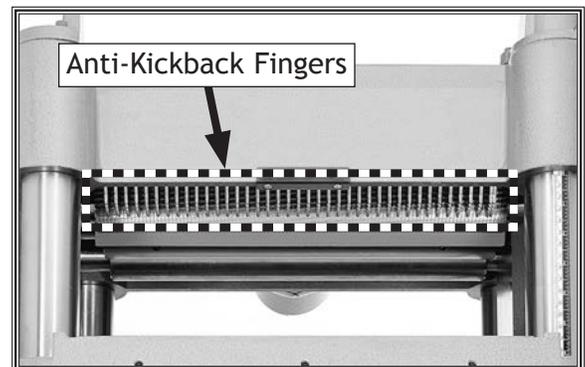


Figure 56. Anti-kickback fingers.

⚠ WARNING

Proper operation of anti-kickback fingers is critical for safe operation of this planer. **DO NOT** operate planer if anti-kickback fingers are not operating correctly. Failure to heed this warning could result in serious personal injury.

SERVICE

Tensioning Table Height Chain

The table height chain transfers movement from the elevation handwheel to the columns that control table height. The chain drive can be adjusted to remove slack if the chain stretches over time or is loosened during table leveling procedures.

Items Needed	Qty
Phillips Screwdriver #2.....	1
Wrench or Socket 12mm.....	1

To adjust table height chain tension, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove motor access panel to access table height chain shown in **Figure 57**.
3. Loosen the two chain tension lock bolts, then push idler sprocket against chain with moderate pressure to eliminate slack in chain. While maintaining pressure on idler sprocket, re-tighten lock bolts (see **Figure 57**).
4. Clean and lubricate chain and sprockets (refer to **Table Height Chain & Sprockets** on **Page 39** for detailed instructions), then re-install motor access panel.

NOTICE

DO NOT let chain fall off sprockets. It can be very difficult to return chain to its proper location on sprockets without changing table adjustments.

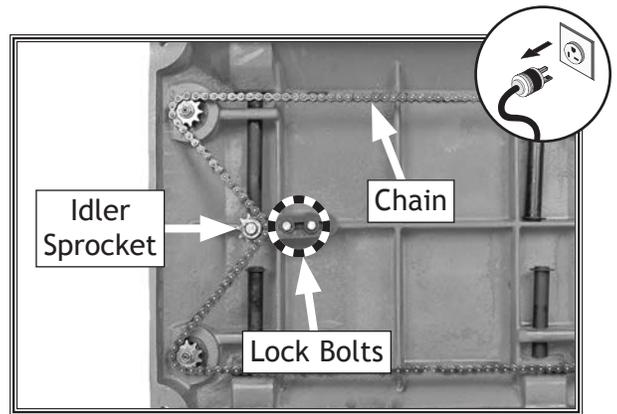


Figure 57. Table height chain adjustment (shown without stand for purpose of illustration).

Adjusting Table Parallelism

Maximum Allowable Tolerances:

Cutterhead/Table Side-to-Side	0.002"
Head Casting/Table Front/Back	0.020"

Table parallelism is critical to the operation of the machine. As such, it is essential that the table is parallel with the cutterhead (within 0.002") from side-to-side, as illustrated in **Figure 58**.

How the table sits in relation to the head casting from front-to-back is also important (see **Figure 59**). Because the feed rollers, pressure bar, and chip breaker will be adjusted off the table position, the tolerances on the front-to-back positioning are not as critical as the cutterhead/table side-to-side positioning. Therefore, the maximum allowable tolerance for the front-to-back parallelism is not more than 0.020".

Table Parallelism Inspection

Use your Rotacator to inspect the table parallelism. If you do not have a Rotacator, a wood block and feeler gauges may be used, but extra care must be taken to ensure accuracy. If the table is not within the maximum allowable tolerances, it must be adjusted.

Table Parallelism Adjustments

The table is adjusted by turning the chain sprockets underneath the table for movements over 0.008" or by adjusting how the table is mounted on the columns for movements under 0.008".

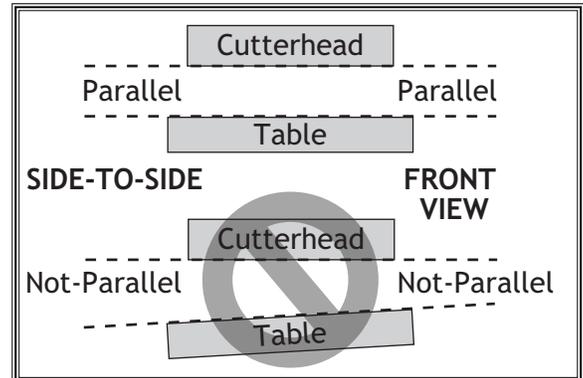


Figure 58. Side-to-side parallelism of table and cutterhead.

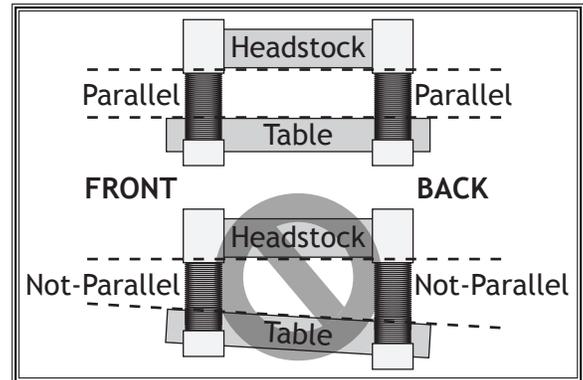


Figure 59. Front-to-back parallelism of table and cutterhead.

NOTICE

When making adjustments, tighten fasteners after each step to ensure the accuracy of your tests. When adjusting the chain sprockets, keep in mind that if the chain becomes too loose, it will fall off of all the sprockets, and returning it to its proper location can be extremely difficult.

To adjust table parallelism, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove cabinet panel and locate chain on underside of table.
3. Loosen idler sprocket (see **Chain Tension** instructions on **Page 50**).
4. Move chain away from sprocket you want to adjust so only that sprocket can be rotated independent of chain.

Note: If the left side of the table is too high, the left two sprockets will need to be adjusted. Each tooth on the sprocket represents .008" of vertical movement as the cogs are turned. Make sure, as you turn the sprockets, to keep an accurate tooth count to ensure that the table is adjusted equally.

5. Mark location of one tooth of sprocket that you are adjusting.
6. Carefully rotate sprocket (clockwise to lower table; counterclockwise to raise table) just enough to position next tooth at marked location, then fit chain around sprocket again.
7. Repeat **Steps 4-6** with each sprocket that needs to be adjusted until table-to-cutterhead clearance is within 0.008" from one side to the other.
8. Make sure chain is properly fitted on sprockets, then re-tighten idler sprocket and lock bolts.
9. If necessary, micro-adjust table position by loosening cap screws shown in **Figure 60** and raising or lowering table until it is properly aligned with cutterhead.

Note: This process may require adjusting the columns on both the left and right hand sides until you find the correct combination.

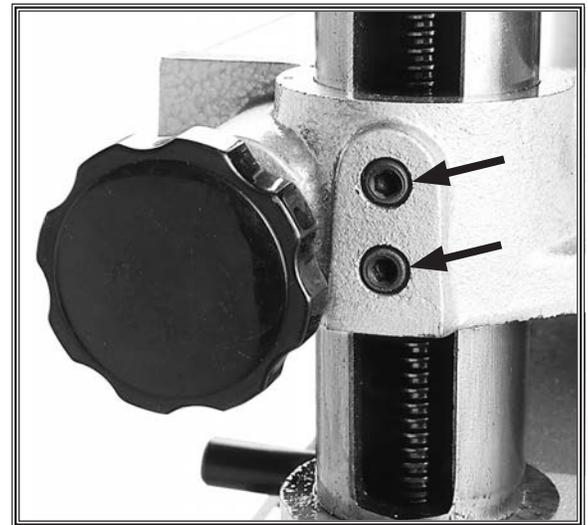
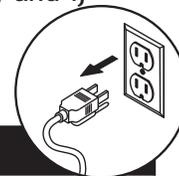


Figure 60. Location of table micro-adjustment screws (one side shown only).

Troubleshooting

The following troubleshooting tables cover common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Technical Support.

Note: Before contacting Tech Support, find the machine serial number and manufacture date, and if available, your original purchase receipt. This information is required to properly assist you.



Motor and Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start, or power supply breaker trips immediately after startup.	<ol style="list-style-type: none"> 1. Stop button depressed/at fault. 2. Incorrect power supply voltage or circuit size. 3. Thermal overload relay has tripped. 4. Power supply circuit breaker tripped or fuse blown. 5. Motor wires connected incorrectly. 6. Wiring open/has high resistance. 7. Start button switch at fault. 8. Centrifugal switch/contact points at fault. 9. Start capacitor at fault. 10. Thermal overload relay has tripped. 11. Contactor not energized; has poor contacts. 12. Motor at fault. 	<ol style="list-style-type: none"> 1. Rotate button head to reset; replace if at fault. 2. Ensure correct power supply voltage and circuit size. 3. Reset; adjust trip load dial if necessary; replace. 4. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse. 5. Correct motor wiring connections. 6. Check/fix broken, disconnected, or corroded wires. 7. Replace switch. 8. Adjust/replace centrifugal switch/contact points if available. 9. Test/replace if at fault. 10. Reset; adjust trip load dial if necessary; replace. 11. Test all legs for power/replace. 12. Test/repair/replace.
Machine stalls or is underpowered.	<ol style="list-style-type: none"> 1. Machine undersized for task. 2. Workpiece not suitable for machine. 3. Motor overheated, causing thermal overload to trip. 4. Belt(s) slipping; oil/grease on belt(s). 5. Dull knives/inserts. 6. Dust-collection problem causing internal components to clog up with shavings. 7. Motor wired incorrectly. 8. Centrifugal switch/contact points at fault. 9. Run capacitor at fault. 10. Pulley slipping on shaft. 11. Contactor not energized/has poor contacts. 12. Motor bearings at fault. 	<ol style="list-style-type: none"> 1. Reduce feed rate/depth of cut. 2. Only cut wood/ensure moisture is below 20%. 3. Allow motor to cool, reset overload if necessary, and reduce depth of cut. 4. Clean/tension/replace belt(s) (Page 41); align pulleys (Page 42). 5. Sharpen/replace knives (Page 31), or replace inserts (Page 34). 6. Clear blockages in dust chute/ducting, ensure dust collector is operating efficiently. 7. Wire motor correctly. 8. Adjust/replace centrifugal switch/contact points if available. 9. Test/repair/replace. 10. Tighten loose pulley; replace pulley/shaft if damaged. 11. Test all legs for power/replace. 12. Test/repair/replace.
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> 1. Motor or component loose. 2. V-belt(s) worn, loose, or slapping cover. 3. Pulley loose. 4. Bed rollers protruding unevenly. 5. Plastic chip deflector hitting knives. 6. Motor fan rubbing on fan cover. 7. Knives/gibs at fault. 8. Cutterhead bearings at fault. 9. Motor bearings at fault. 	<ol style="list-style-type: none"> 1. Inspect/tighten loose bolts/nuts; replace damaged components. 2. Tension/replace belts as a matched set (Page 41). 3. Re-align/replace shaft, pulley set screw, and key. 4. Adjust bed rollers (Page 29). 5. Adjust chip deflector (Page 48); replace if necessary. 6. Fix/replace fan cover; replace loose/damaged fan. 7. Sharpen/replace knives; set knife alignment/height correctly (Page 31). 8. Replace bearing(s). 9. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Machine Operation

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<p>Excessive snipe (gouge in end of board that is uneven with rest of cut).</p> <p>Note: A small amount of snipe is inevitable with all types of planers. The key is minimizing it as much as possible.</p>	<ol style="list-style-type: none"> One or both of bed rollers are set too high. Outfeed extension slopes down or is not level with main table. Chip breaker set too low. Workpiece is not supported as it leaves planer. Some snipe is inevitable. 	<ol style="list-style-type: none"> Lower bed rollers (Page 29). Shim outfeed extension wing level with main table. Raise height of chip breaker (Page 43). Hold workpiece up slightly as it leaves outfeed end of planer. Plane lumber longer than your intended workpiece length, then cut off excess after planing complete.
<p>Workpiece stops/slow in middle of cut.</p>	<ol style="list-style-type: none"> Taking too heavy of a cut. One or both of bed rollers are set too low or too high. Chip breaker or pressure bar set too low. Feed rollers set too low or too high. Pitch and glue buildup on planer components. 	<ol style="list-style-type: none"> Take a lighter cut. Adjust bed rollers (Page 29). Raise height of chip breaker or pressure bar (Page 43). Adjust feed rollers (Page 43). Clean internal cutterhead components with a pitch/resin-dissolving solvent.
<p>Chipping (consistent pattern).</p>	<ol style="list-style-type: none"> Knots or conflicting grain direction in wood. Taking too deep of a cut. Feeding workpiece too fast. Mis-adjusted chip breaker. Nicked or chipped knife/insert. 	<ol style="list-style-type: none"> Inspect workpiece for knots and grain direction; only use clean stock, and cut WITH the grain. Take a smaller depth of cut. (Reduce cutting depth when planing hard woods.) Slow down feed rate. Adjust both sides of chip breaker to correct height. Replace affected knife (Page 31), or have it sharpened; rotate/replace insert (Page 34).
<p>Chipping/indentation in workpiece surface (inconsistent pattern).</p>	<ol style="list-style-type: none"> Chips aren't being properly expelled from cutterhead. Chip breaker not set correctly. 	<ol style="list-style-type: none"> Use a proper dust-collection system. Correctly adjust chip breaker (Page 43).
<p>Fuzzy grain.</p>	<ol style="list-style-type: none"> Wood may have high moisture content or surface wetness. Dull knives/inserts. 	<ol style="list-style-type: none"> Check moisture content is below 20% and allow to dry if moisture is too high. Replace knives (Page 31) or have them professionally sharpened; rotate/replace inserts (Page 34).
<p>Long lines or ridges that run along length of board.</p>	<ol style="list-style-type: none"> Nicked or chipped knife/inserts. 	<ol style="list-style-type: none"> Replace knives (Page 31) or have them professionally sharpened; rotate/replace inserts (Page 34).
<p>Uneven cutting marks, wavy surface, or chatter marks across face of board.</p>	<ol style="list-style-type: none"> Feeding workpiece too fast. Chip breaker or pressure bar set unevenly or not low enough. Knives not installed evenly/inserts not properly installed. Worn cutterhead bearings. 	<ol style="list-style-type: none"> Slow down feed rate. Adjust height of chip breaker (Page 43). Adjust knives with knife gauge (Page 31); remove inserts, properly clean mounting pocket and re-install (Page 34). Replace cutterhead bearings.
<p>Glossy surface.</p>	<ol style="list-style-type: none"> Knives/inserts are dull. Feeding workpiece too slow. Cutting depth too shallow. 	<ol style="list-style-type: none"> Replace knives (Page 31) or have them professionally sharpened; rotate/replace inserts (Page 34). Increase feed rate. Increase depth of cut.
<p>If workpiece twists in machine.</p>	<ol style="list-style-type: none"> Feed rollers not parallel with table. 	<ol style="list-style-type: none"> Adjust feed rollers (Page 43).

Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (360) 734-3482 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.

WARNING

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

QUALIFIED ELECTRICIAN. Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

MODIFICATIONS. Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

CIRCUIT REQUIREMENTS. You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

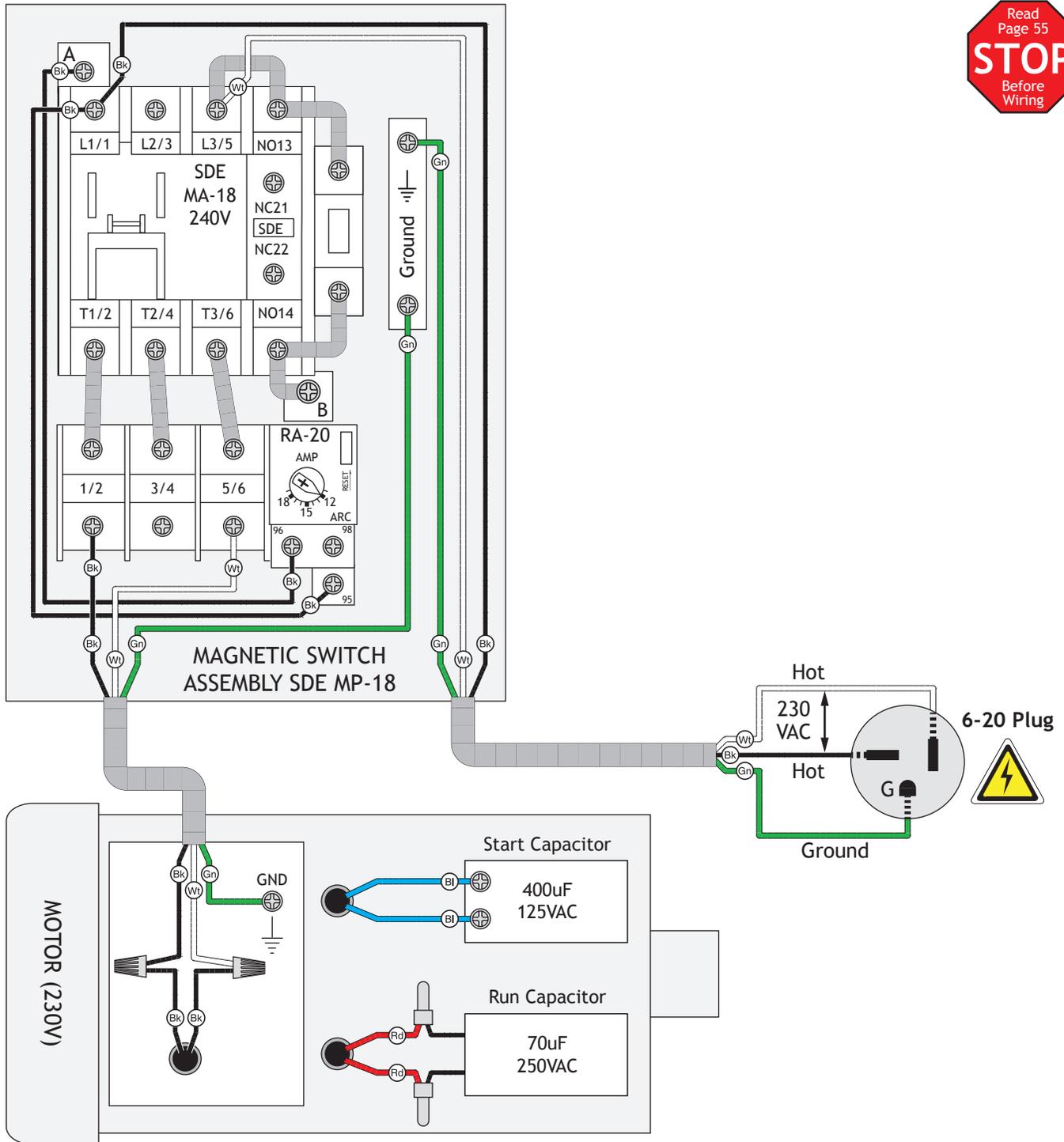
NOTICE

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.shopfox.biz.

WIRING DIAGRAM COLOR KEY

BLACK	BLUE	YELLOW	LIGHT BLUE
WHITE	BROWN	YELLOW GREEN	BLUE WHITE
GREEN	GRAY	PURPLE	TURQUOISE
RED	ORANGE	PINK	

W1862 Wiring Diagram



SERVICE

NOTICE
This motor wiring diagram is current at the time of printing; however, always use the diagram on the inside of the junction box cover when rewiring your motor!

W1862 Electrical Components

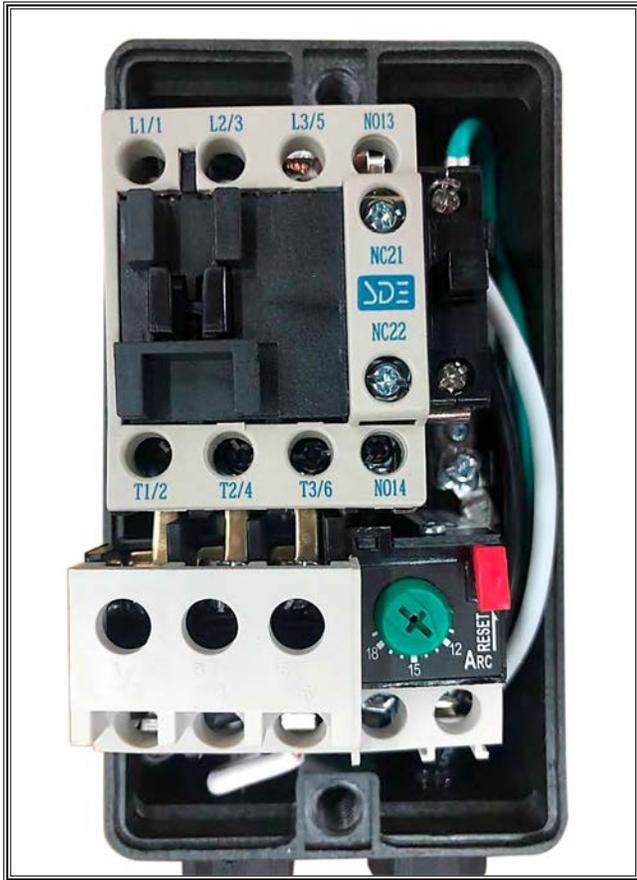


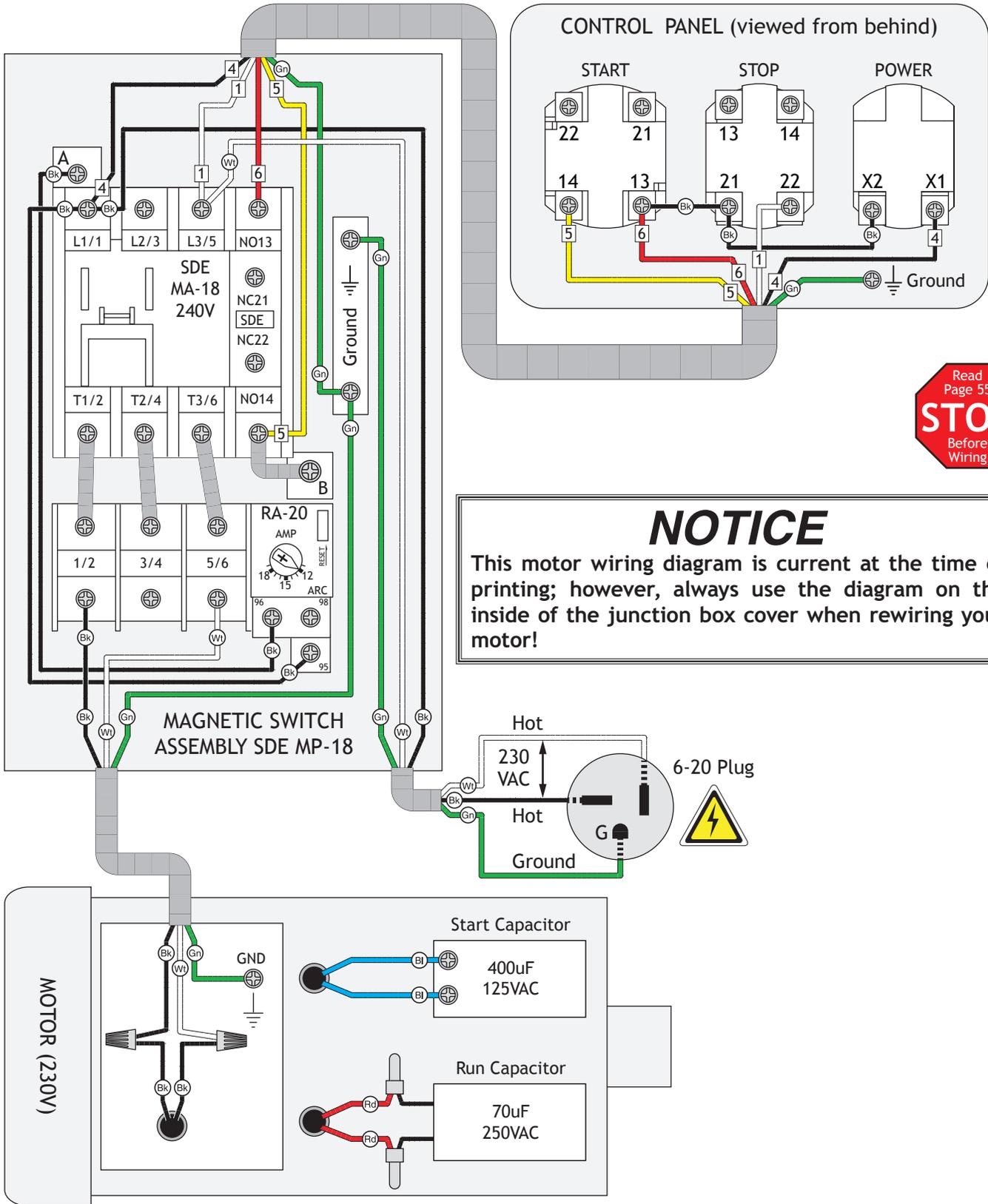
Figure 61. W1862 magnetic switch with cover removed.



Figure 62. W1862 motor junction box.



W1863 Wiring Diagram



Read Page 55
STOP
Before Wiring

NOTICE
This motor wiring diagram is current at the time of printing; however, always use the diagram on the inside of the junction box cover when rewiring your motor!

SERVICE

W1863 Electrical Components



Figure 63. W1863 magnetic switch with cover removed.

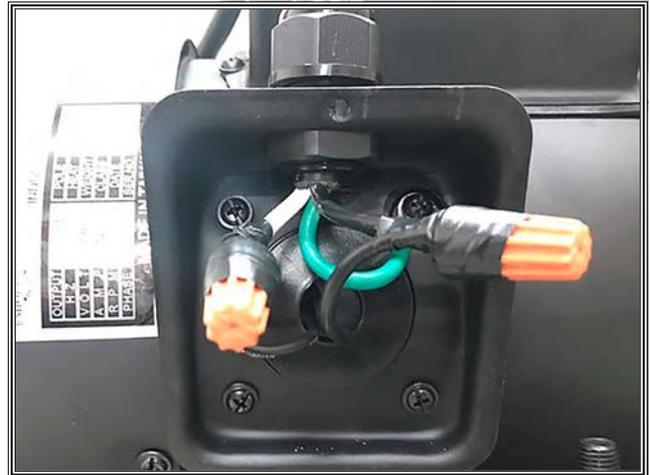


Figure 64. W1863 motor junction box.

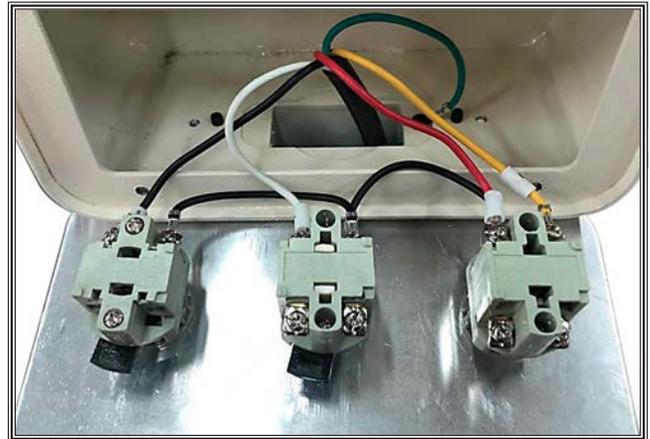


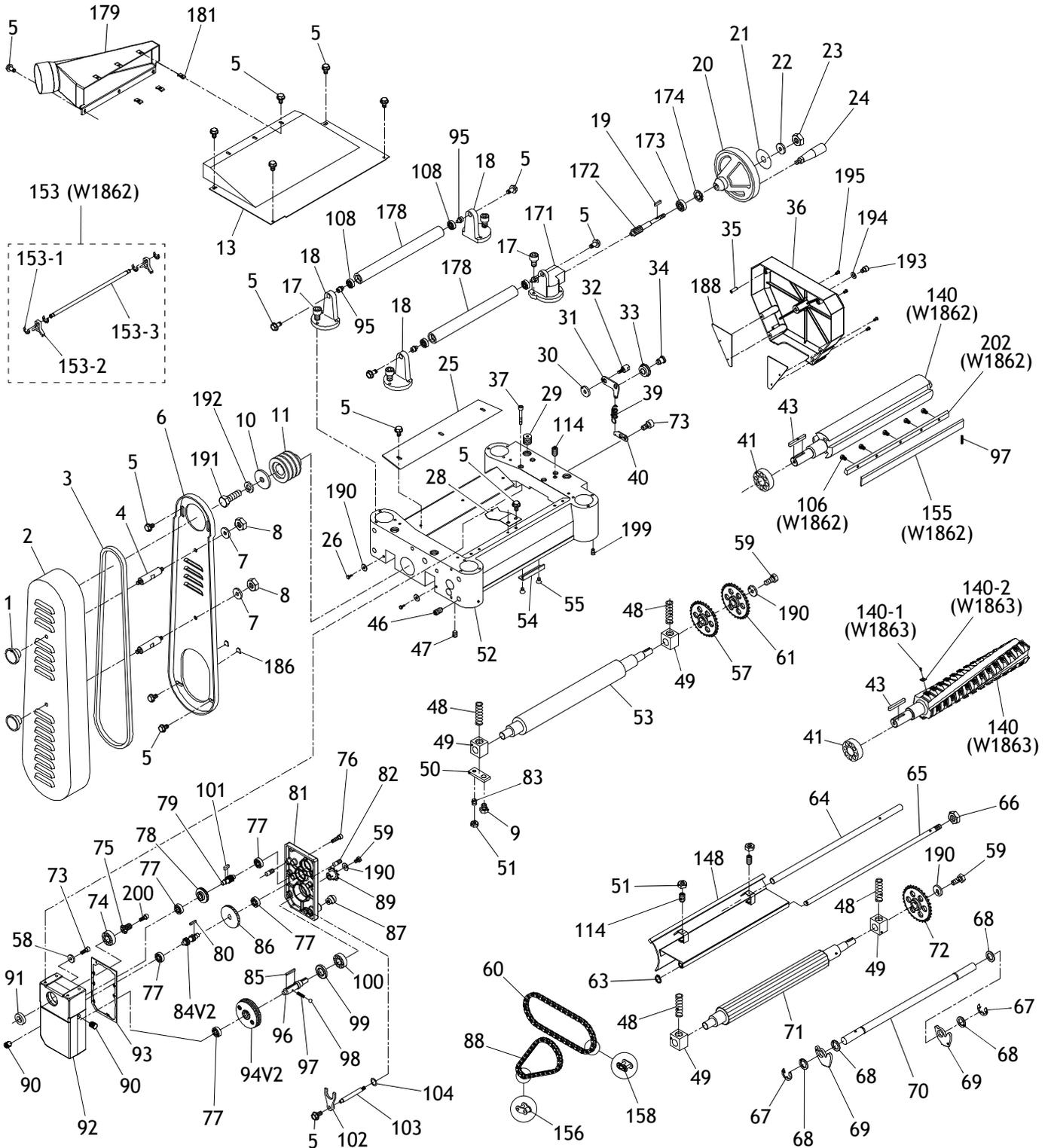
Figure 65. W1863 control panel.

SERVICE



PARTS

Main



PARTS



Main Parts List

REF PART #	DESCRIPTION
1	X1862001 KNOB 5/16-18, D1-3/4, ROUND
2	X1862002 PULLEY/BELT COVER
3	X1862003 V-BELT M58 3L580
4	X1862004 STANDOFF-HEX MM 5/16-18 X 3/8, 3
5	X1862005 FLANGE BOLT M6-1 X 12
6	X1862006 PULLEY GUARD
7	X1862007 FLAT WASHER 5/16
8	X1862008 HEX NUT 5/16-18
9	X1862009 HEX BOLT M8-1.25 X 20
10	X1862010 FENDER WASHER 8 X 30 X 4MM
11	X1862011 CUTTERHEAD PULLEY
13	X1862013 UPPER COVER
17	X1862017 CAP SCREW M6-1 X 20
18	X1862018 RETURN ROLLER BRACKET
19	X1862019 KEY 4 X 4 X 10
20	X1862020 HANDWHEEL TYPE-3 151D X 10B-K X 3/8-16
21	X1862021 HANDWHEEL DIRECTION LABEL
22	X1862022 FLAT WASHER 10MM
23	X1862023 HEX NUT M10-1.25
24	X1862024 REVOLVING HANDLE 1 X 3-9/16, 3/8-16 X 1/2
25	X1862025 CHIP DEFLECTOR
26	X1862026 HEX BOLT M6-1 X 12
28	X1862028 FLAT SPRING 84 X 46 X 0.6MM
29	X1862029 TENSIONING SET SCREW M22-1.5 X 20
30	X1862030 SPACER 8.2 X 22 X 3MM
31	X1862031 CHAIN TENSIONER
32	X1862032 SHOULDER BOLT M8-1.25 X 14, 4 X 12
33	X1862033 IDLER WHEEL
34	X1862034 IDLER SHAFT
35	X1862035 ROLL PIN 6 X 20
36	X1862036 DRIVE CHAIN COVER
37	X1862037 CAP SCREW M8-1.25 X 50
39	X1862039 EXTENSION SPRING 1 X 8.5 X 33
40	X1862040 SPRING BRACKET
41	X1862041 BALL BEARING 6205-2RS
43	X1862043 KEY 8 X 8 X 36
46	X1862046 SET SCREW M10-1.5 X 12
47	X1862047 SET SCREW M8-1.25 X 10
48	X1862048 COMPRESSION SPRING 3.5 X 19.7 X 70
49	X1862049 BUSHING BLOCK
50	X1862050 BUSHING BLOCK PLATE
51	X1862051 HEX NUT M6-1
52	X1862052 HEAD CASTING
53	X1862053 OUTFEED ROLLER

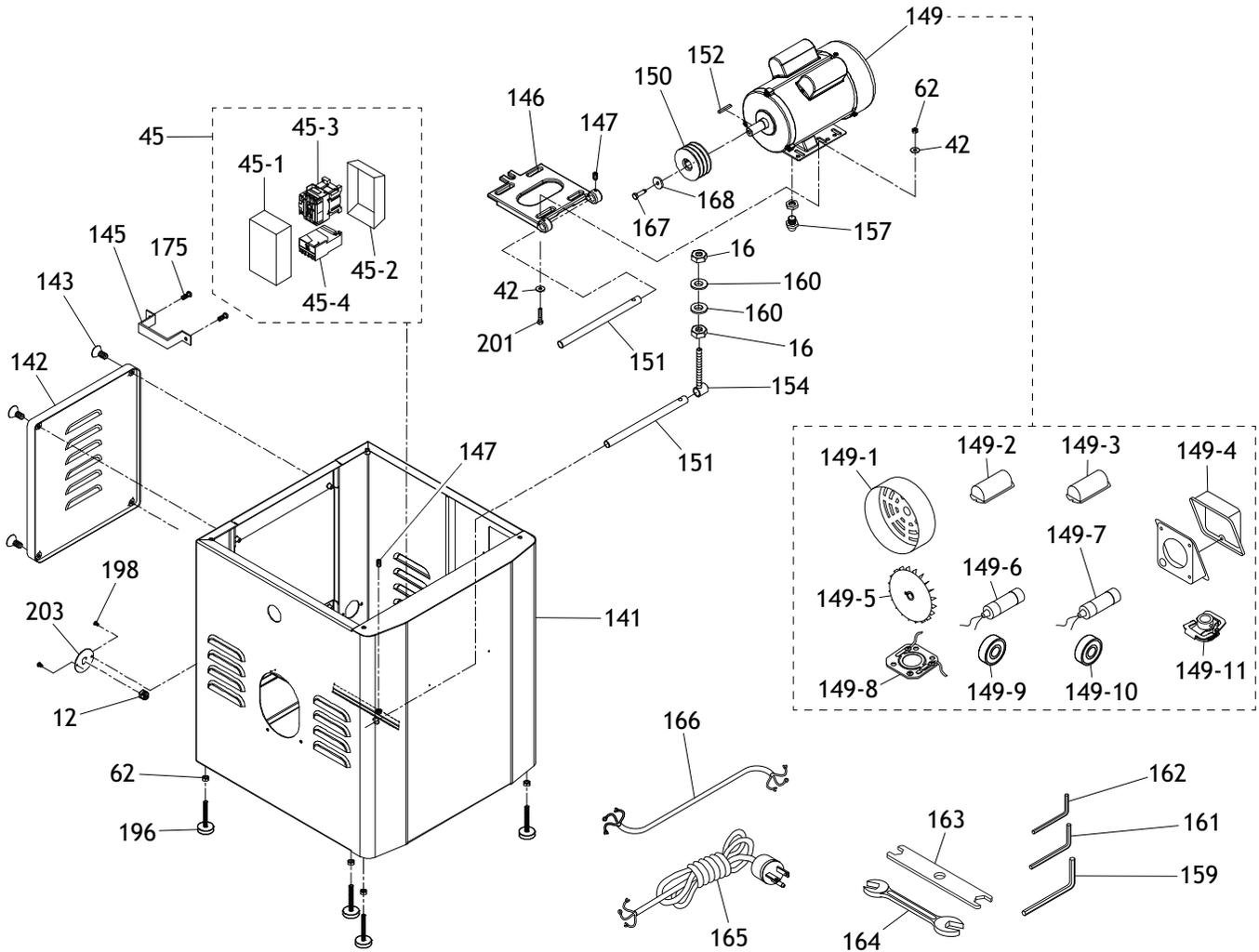
REF PART #	DESCRIPTION
54	X1862054 DEPTH LIMITER
55	X1862055 FLAT HD SCR M5-.8 X 12
57	X1862057 SPROCKET 31T
58	X1862058 FENDER WASHER 6 X 20 X 3MM
59	X1862059 HEX BOLT M6-1 X 16
60	X1862060 CHAIN 06B-1 X 63 (31 LINKS)
61	X1862061 SPROCKET 31T
63	X1862063 EXT RETAINING RING 12MM
64	X1862064 CHIP BREAKER ADJUSTMENT ROD
65	X1862065 CHIP BREAKER PIVOT ROD
66	X1862066 HEX NUT M12-1.75
67	X1862067 E-CLIP 15MM
68	X1862068 SPACER
69	X1862069 ANTI-KICKBACK FINGER
70	X1862070 ANTI-KICKBACK SHAFT
71	X1862071 INFEEED ROLLER
72	X1862072 SPROCKET 31T
73	X1862073 CAP SCREW M6-1 X 12
74	X1862074 BALL BEARING 6204-2NSE
75	X1862075 GEAR 16T
76	X1862076 CAP SCREW M6-1 X 25
77	X1862077 BALL BEARING 6201ZZ
78	X1862078 GEAR 47T
79	X1862079 GEARED SHAFT 18T
80	X1862080 KEY 5 X 5 X 10
81	X1862081 GEARBOX COVER
82	X1862082 LOCATING PIN 8 X 7.55 X 7.95
83	X1862083 SET SCREW M6-1 X 16
84V2	X1862084V2 GEARED SHAFT 28T/18T V2.02.19
85	X1862085 KEY 6 X 6 X 40
86	X1862086 GEAR 71T
87	X1862087 KNOB 3/8-16, D1-1/4, BALL
88	X1862088 CHAIN 06B-1 X 47 (23 LINKS)
89	X1862089 SPROCKET 12T W/KEY
90	X1862090 OIL PLUG 1/4 NPT X 3/4"
91	X1862091 OIL SEAL 28 X 40 X 8
92	X1862092 GEARBOX
93	X1862093 GASKET
94V2	X1862094V2 COMBO GEAR 86T/96T V2.02.19
95	X1862095 BEARING SHAFT
96	X1862096 GEAR SHAFT
97	X1862097 COMPRESSION SPRING 0.6 X 5.9 X 16
98	X1862098 STEEL BALL 6MM
99	X1862099 OIL SEAL 25 X 47 X 6

Main Parts List (Cont.)

REF	PART #	DESCRIPTION
100	X1862100	BALL BEARING 6204ZZ
101	X1862101	KEY 5 X 5 X 12
102	X1862102	SHIFTING FORK
103	X1862103	SHIFTING SHAFT
104	X1862104	O-RING 12 X 1.5 S12.5
106	X1862106	GIB BOLT M8-1.25 X 10 (W1862)
108	X1862108	BALL BEARING 608ZZ
114	X1862114	SET SCREW M6-1 X 12
140	X1862140	CUTTERHEAD 15" 3-KNIFE (W1862)
140	X1863140	HELICAL CUTTERHEAD 15" (W1863)
140-1	X1863140-1	FLAT HEAD TORX 10-32 X 1/2 (W1863)
140-2	X1863140-2	CARBIDE INSERTS 15 X 15 X 2.5MM-10 PK
148	X1862148	CHIP BREAKER
153	X1862153	KNIFE-SETTING JIG ASSEMBLY (W1862)
153-1	X1862153-1	E-CLIP 9MM (W1862)
153-2	X1862153-2	KNIFE-SETTING JIG FOOT (W1862)
153-3	X1862153-3	KNIFE-SETTING JIG SHAFT (W1862)
155	X1862155	PLANER KNIVES 15" HSS, SET OF 3 (W1862)
156	X1862156	HALF LINK

REF	PART #	DESCRIPTION
158	X1862158	MASTER LINK
171	X1862171	WORM GEAR HOUSING
172	X1862172	WORM SHAFT
173	X1862173	BALL BEARING 6200ZZ
174	X1862174	INT RETAINING RING 30MM
178	X1862178	RETURN ROLLER
179	X1862179	DUST HOOD
181	X1862181	CLIP-ON NUT M6-1
186	X1862186	PULLEY GUARD PLATE
188	X1862188	GEARBOX COVER PLATE
190	X1862190	FENDER WASHER 6.2 X 22 X 3
191	X1862191	HEX BOLT M8-1.25 X 30
192	X1862192	LOCK WASHER 8MM
193	X1862193	CAP SCREW M8-1.25 X 10
194	X1862194	FLAT WASHER 8MM
195	X1862195	PHLP HD SCR M4-.7 X 8
199	X1862199	CAP SCREW M5-.8 X 6
200	X1862200	CAP SCREW M6-1 X 25
202	X1862202	GIB (W1862)

W1862 Stand & Motor

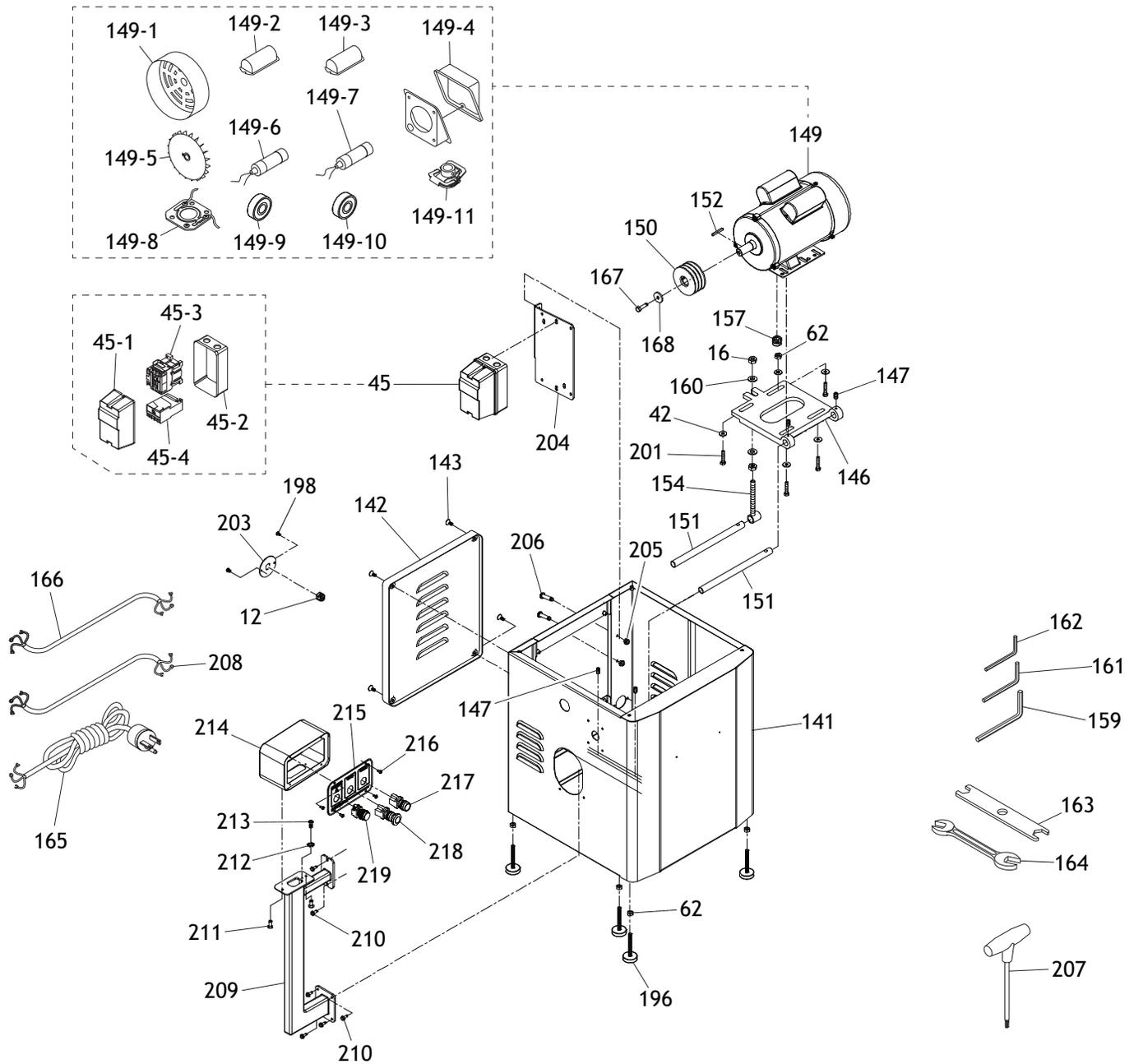


W1862 Stand & Motor Parts List

REF	PART #	DESCRIPTION
12	X1862012	STRAIN RELIEF TYPE-1 7/16
16	X1862016	HEX NUT M10-1.25
42	X1862042	FLAT WASHER 8 X 22 X 3MM
45	X1862045	MAGNETIC SWITCH ASSY MP-18
45-1	X1862045-1	MAGNETIC SWITCH COVER (FRONT)
45-2	X1862045-2	MAGNETIC SWITCH COVER (REAR)
45-3	X1862045-3	CONTACTOR SDE MA-18 220-240V
45-4	X1862045-4	OL RELAY SDE RA-20 12-18A
62	X1862062	HEX NUT M8-1.25
141	X1862141	CABINET STAND
142	X1862142	MOTOR ACCESS PANEL
143	X1862143	FLAT HD SCR M6-1 X 20
145	X1862145	SWITCH MOUNT BRACKET
146	X1862146	MOTOR MOUNT PLATE
147	X1862147	SET SCREW M6-1 X 12
149	X1862149	MOTOR 3HP 230V 1-PH
149-1	X1862149-1	MOTOR FAN COVER
149-2	X1862149-2	CAPACITOR COVER (START)
149-3	X1862149-3	CAPACITOR COVER (RUN)
149-4	X1862149-4	MOTOR JUNCTION BOX
149-5	X1862149-5	MOTOR FAN
149-6	X1862149-6	S CAPACITOR 400M 125V 1-9/16 X 3-1/2
149-7	X1862149-7	R CAPACITOR 70M 250V 1-9/16 X 3-1/2
149-8	X1862149-8	CONTACT PLATE

REF	PART #	DESCRIPTION
149-9	X1862149-9	BALL BEARING 6205ZZ (FRONT)
149-10	X1862149-10	BALL BEARING 6203ZZ (REAR)
149-11	X1862149-11	CENTRIFUGAL SWITCH
150	X1862150	MOTOR PULLEY
151	X1862151	PLATE CONNECTING ROD
152	X1862152	KEY 5 X 5 X 30
154	X1862154	ROD END BOLT M10-1.5 X 100, ID 16.5MM
157	X1862157	STRAIN RELIEF TYPE-3 PG13.5
159	X1862159	HEX WRENCH 6MM
160	X1862160	FENDER WASHER 10 X 28 X 3MM
161	X1862161	HEX WRENCH 4MM
162	X1862162	HEX WRENCH 3MM
163	X1862163	FLAT WRENCH 10 X 13MM OPEN-ENDS
164	X1862164	WRENCH 12 X 14MM OPEN-ENDS
165	X1862165	POWER CORD 12G 3W 150" 6-20P
166	X1862166	SWITCH CORD 12G 3W 30"
167	X1862167	HEX BOLT M8-1.25 X 25
168	X1862168	FENDER WASHER 8 X 30 X 4MM
175	X1862175	PHLP HD SCR M5-.8 X 10
196	X1862196	FOOT M8-1.25 X 67, D36
198	X1862198	PHLP HD SCR M6-1 X 8
201	X1862201	HEX BOLT M8-1.25 X 40
203	X1862203	STRAIN RELIEF MOUNTING PLATE

W1863 Stand & Motor



W1863 Stand & Motor Parts List

REF	PART #	DESCRIPTION
12	X1863012	STRAIN RELIEF TYPE-1 7/16
16	X1863016	HEX NUT M10-1.25
42	X1863042	FLAT WASHER 8 X 22 X 3MM
45	X1863045	MAGNETIC SWITCH ASSY MP-18
45-1	X1863045-1	MAGNETIC SWITCH COVER (FRONT)
45-2	X1863045-2	MAGNETIC SWITCH COVER (REAR)
45-3	X1863045-3	CONTACTOR SDE MA-18 220-240V
45-4	X1863045-4	OL RELAY SDE RA-20 12-18A
62	X1863062	HEX NUT M8-1.25
141	X1863141	CABINET STAND
142	X1863142	MOTOR ACCESS PANEL
143	X1863143	FLAT HD SCR M6-1 X 20
146	X1863146	MOTOR MOUNT PLATE
147	X1863147	SET SCREW M6-1 X 12
149	X1863149	MOTOR 3HP 230V 1-PH
149-1	X1863149-1	MOTOR FAN COVER
149-2	X1863149-2	CAPACITOR COVER (START)
149-3	X1863149-3	CAPACITOR COVER (RUN)
149-4	X1863149-4	MOTOR JUNCTION BOX
149-5	X1863149-5	MOTOR FAN
149-6	X1863149-6	S CAPACITOR 400M 125V 1-9/16 X 3-1/2
149-7	X1863149-7	R CAPACITOR 70M 250V 1-9/16 X 3-1/2
149-8	X1863149-8	CONTACT PLATE
149-9	X1863149-9	BALL BEARING 6205ZZ (FRONT)
149-10	X1863149-10	BALL BEARING 6203ZZ (REAR)
149-11	X1863149-11	CENTRIFUGAL SWITCH
150	X1863150	MOTOR PULLEY
151	X1863151	PLATE CONNECTING ROD
152	X1863152	KEY 5 X 5 X 30
154	X1863154	ROD END BOLT M10-1.5 X 100, ID 16.5MM
157	X1863157	STRAIN RELIEF TYPE-3 PG13.5

REF	PART #	DESCRIPTION
159	X1863159	HEX WRENCH 6MM
160	X1863160	FENDER WASHER 10 X 28 X 3MM
161	X1863161	HEX WRENCH 4MM
162	X1863162	HEX WRENCH 3MM
163	X1863163	FLAT WRENCH 10 X 13MM OPEN-ENDS
164	X1863164	WRENCH 12 X 14MM OPEN-ENDS
165	X1863165	POWER CORD 12G 3W 138" 6-20P
166	X1863166	SWITCH CORD 12G 4W 79"
167	X1863167	HEX BOLT M8-1.25 X 25
168	X1863168	FENDER WASHER 8 X 30 X 4MM
196	X1863196	FOOT M8-1.25 X 67, D36
198	X1863198	PHLP HD SCR M6-1 X 8
201	X1863201	HEX BOLT M8-1.25 X 40
203	X1863203	STRAIN RELIEF MOUNTING PLATE
204	X1863204	SWITCH MOUNTING PLATE
205	X1863205	HEX NUT M6-1
206	X1863206	PHLP HD SCR M6-1 X 16
207	X1863207	T-HANDLE TORX DRIVER T-25
208	X1863208	MOTOR CORD 12G 3W 33"
209	X1863209	SWITCH PEDESTAL
210	X1863210	FLANGE BOLT M6-1 X 12
211	X1863211	HEX BOLT M5-.8 X 10
212	X1863212	EXT TOOTH WASHER 4MM
213	X1863213	PHLP HD SCR M4-.7 X 8
214	X1863214	SWITCH BOX
215	X1863215	SWITCH PLATE
216	X1863216	PHLP HD SCR M5-.8 X 10
217	X1863217	START SWITCH
218	X1863218	STOP SWITCH
219	X1863219	POWER INDICATOR LIGHT 220V 25MM RED

Table & Base

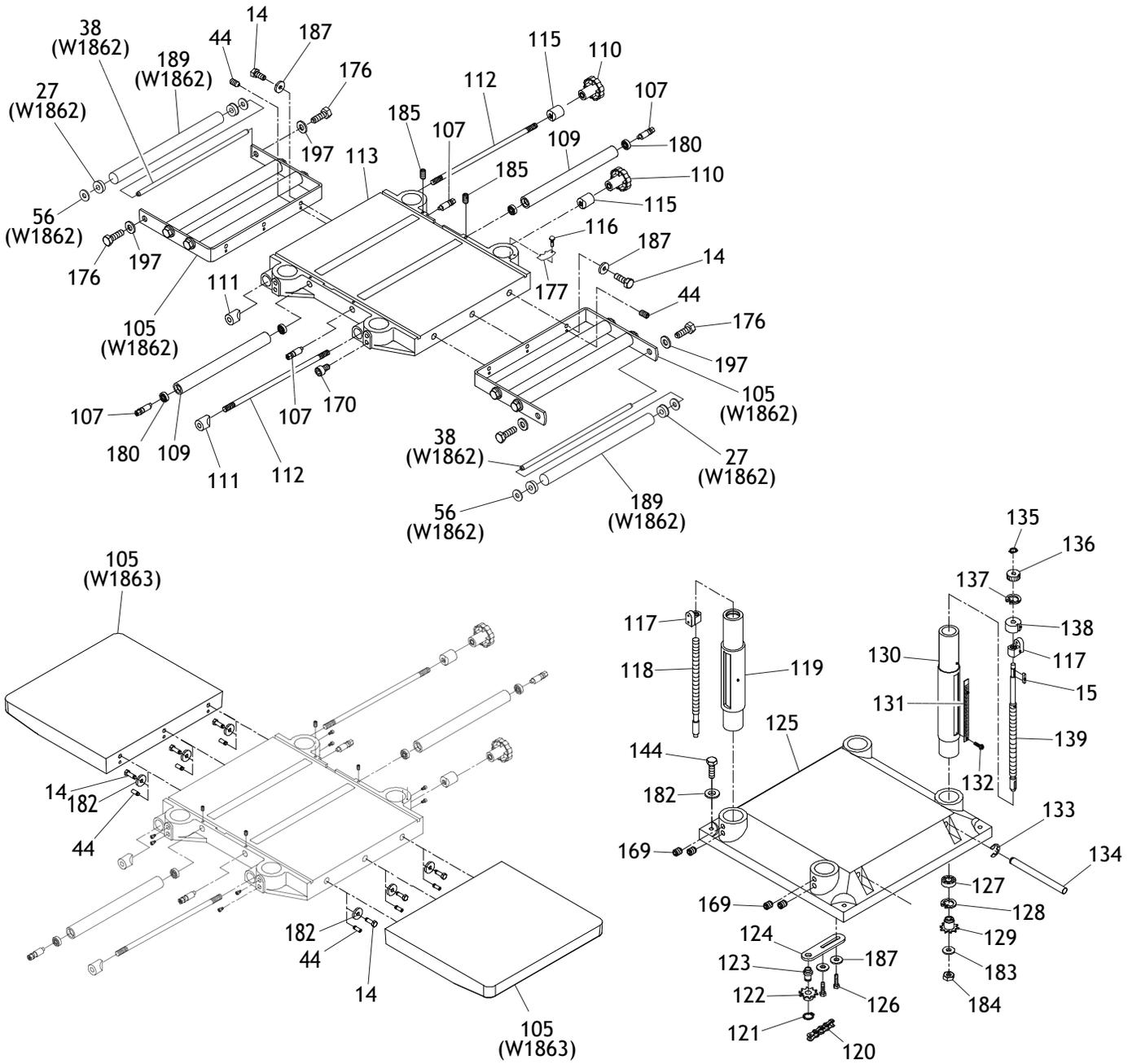
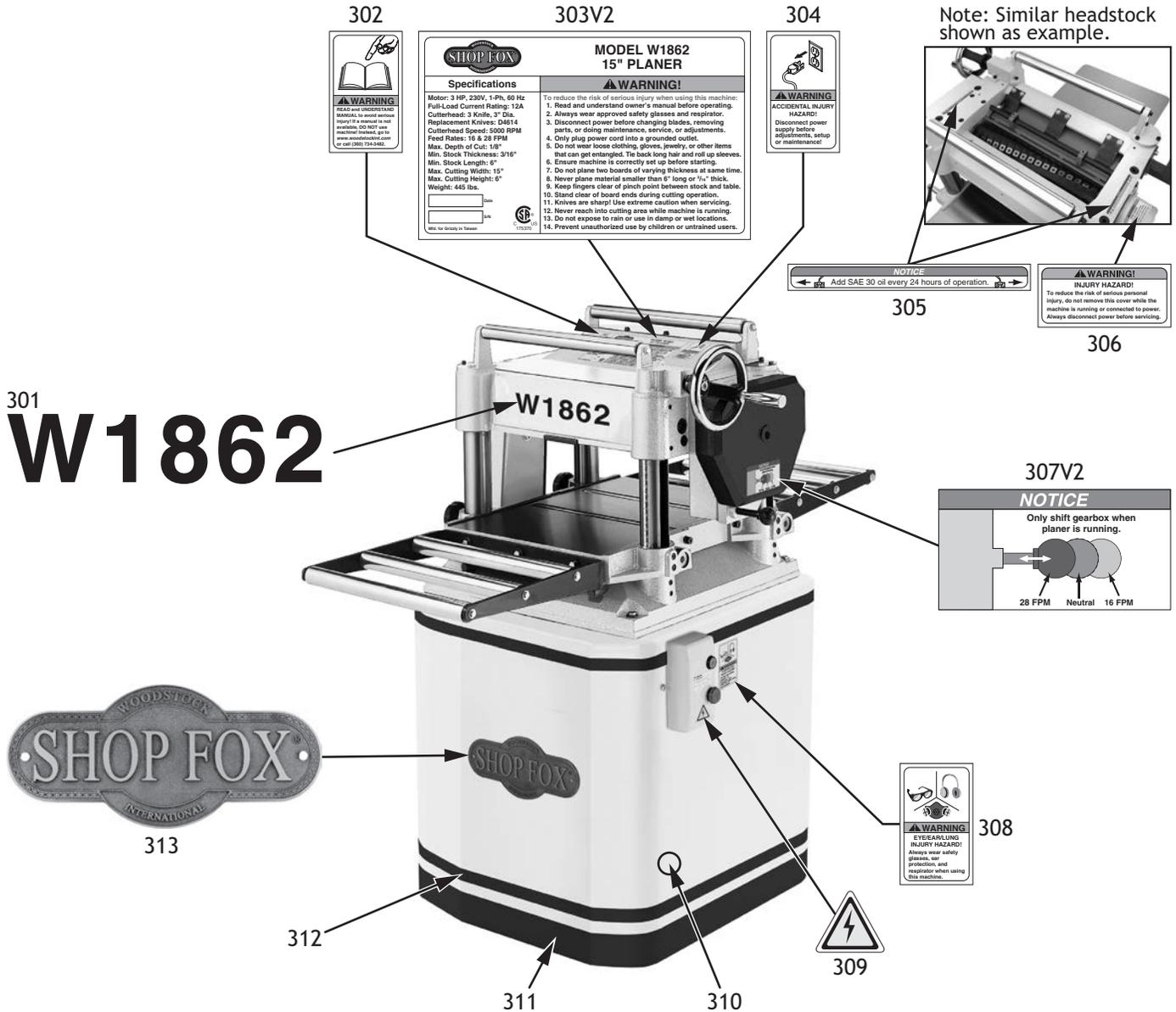


Table & Base Parts List

REF PART #	DESCRIPTION
14	X1862014 HEX BOLT M8-1.25 X 20
15	X1862015 KEY 4 X 4 X 10
27	X1862027 ROLLER BUSHING, PLASTIC (W1862)
38	X1862038 ROLLER AXLE (W1862)
44	X1862044 SET SCREW M8-1.25 X 10
56	X1862056 FLAT WASHER 10 X 25 X 3MM (W1862)
105	X1862105 ROLLER EXTENSION TABLE FRAME (W1862)
105	X1863105 EXTENSION TABLE (W1863)
107	X1862107 ECCENTRIC SHAFT
109	X1862109 TABLE ROLLER
110	X1862110 KNOB 6-LOBE M12-1.75, D53
111	X1862111 THREADED GIB
112	X1862112 LOCKING ROD
113	X1862113 MAIN TABLE (W1862)
113	X1863113 MAIN TABLE (W1863)
115	X1862115 GIB
116	X1862116 RIVET 2 X 5MM
117	X1862117 LEADSCREW NUT
118	X1862118 LEADSCREW, SECONDARY
119	X1862119 COLUMN
120	X1862120 CHAIN #410 X 134
121	X1862121 EXT RETAINING RING 15MM
122	X1862122 IDLER SPROCKET 10T
123	X1862123 IDLER SHAFT
124	X1862124 IDLER BRACKET
125	X1862125 BASE
126	X1862126 HEX BOLT M8-1.25 X 25

REF PART #	DESCRIPTION
127	X1862127 BALL BEARING 620ZZZ
128	X1862128 INT RETAINING RING 35MM
129	X1862129 SPROCKET 10T
130	X1862130 SCALE COLUMN
131	X1862131 SCALE
132	X1862132 PHLP HD SCR M3-.5 X 6
133	X1862133 E-CLIP 12MM
134	X1862134 LIFTING BAR
135	X1862135 EXT RETAINING RING 10MM
136	X1862136 GEAR 14T
137	X1862137 INT RETAINING RING 38MM
138	X1862138 SPACER
139	X1862139 LEADSCREW, PRIMARY
144	X1862144 HEX BOLT M8-1.25 X 45
169	X1862169 SET SCREW M10-1.5 X 12
170	X1862170 CAP SCREW M6-1 X 20
176	X1862176 HEX BOLT M6-1 X 12
177	X1862177 POINTER
180	X1862180 BALL BEARING 608-2RS
182	X1862182 FLAT WASHER 8MM
183	X1862183 FLAT WASHER 10MM
184	X1862184 HEX NUT M10-1.5
185	X1862185 SET SCREW M6-1 X 12
187	X1862187 SPACER 8 X 22 X 3MM
189	X1862189 EXTENSION TABLE ROLLER (W1862)
197	X1862197 FENDER WASHER 6 X 20 X 3MM

W1862 Labels & Cosmetics



Note: Similar headstock shown as example.

301
W1862



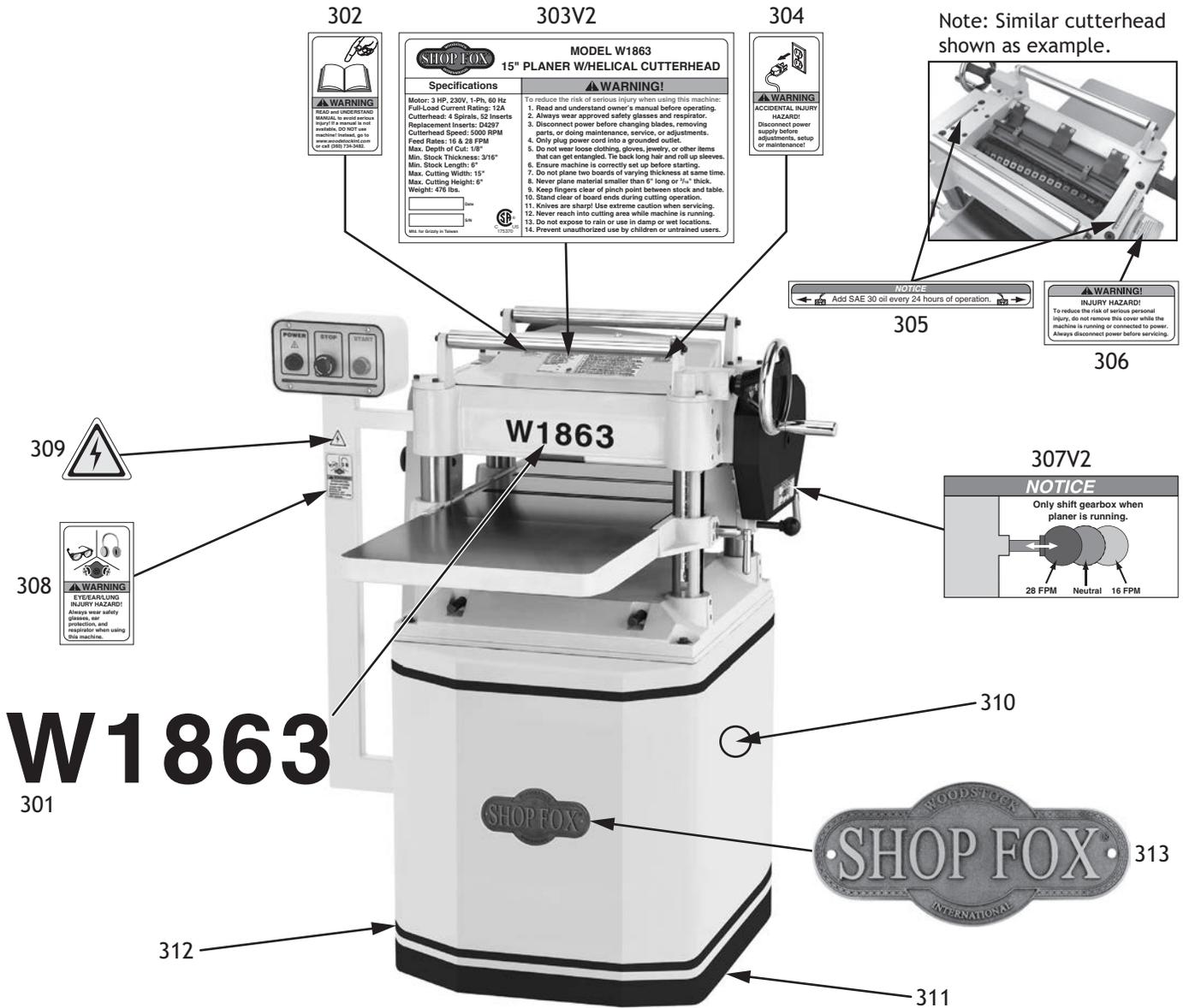
REF	PART #	DESCRIPTION
301	X1862301	MODEL NUMBER LABEL
302	X1862302	READ MANUAL LABEL
303V2	X1862303V2	MACHINE ID LABEL V2.02.19
304	X1862304	DISCONNECT POWER LABEL
305	X1862305	ADD OIL NOTICE
306	X1862306	BELT COVER WARNING LABEL
307V2	X1862307V2	SHIFT GEARBOX NOTICE V2.02.19

REF	PART #	DESCRIPTION
308	X1862308	EYE/EAR/LUNG INJURY LABEL
309	X1862309	ELECTRICITY LABEL
310	X1862310	TOUCH-UP PAINT, SHOP FOX WHITE
311	X1862311	BLACK STRIPE TAPE (LOWER)
312	X1862312	BLACK STRIPE TAPE (UPPER)
313	X1862313	SHOP FOX NAMEPLATE-MEDIUM

⚠ WARNING

Safety labels warn about machine hazards and how to prevent serious personal injury. The owner of this machine **MUST** maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, **REPLACE** that label before allowing machine to be operated again. Contact us at (360) 734-3482 or www.woodstockint.com to order new labels.

W1863 Labels & Cosmetics



303V2

SHOP FOX MODEL W1863
15" PLANER W/HELICAL CUTTERHEAD

Specifications

Motor: 3 HP, 230V, 1-Ph, 60 Hz
Full-Load Current Rating: 12A
Cutterhead: 4 Spirals, 52 Inserts
Replacement Inserts: D4297
Cutterhead Speed: 5000 RPM
Feed Rates: 16 & 28 FPM
Max. Depth of Cut: 1/8"
Min. Stock Thickness: 3/16"
Min. Stock Length: 6"
Max. Cutting Width: 15"
Max. Cutting Height: 6"
Weight: 475 lbs.

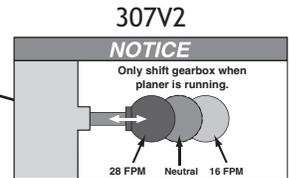
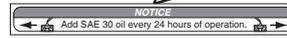
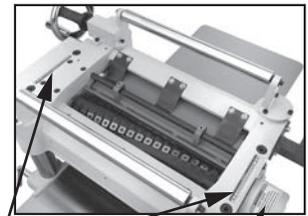
WARNING!

To reduce the risk of serious injury when using this machine:

1. Read and understand owner's manual before operating.
2. Always wear approved safety glasses and respirator.
3. Disconnect power before changing blades, removing parts, or doing maintenance, service, or adjustments.
4. Only plug power cord into a grounded outlet.
5. Do not wear loose clothing, gloves, jewelry, or other items that can get entangled. Tie back long hair and roll up sleeves.
6. Ensure machine is correctly set up before starting.
7. Do not plane two boards of varying thickness at same time.
8. Never plane material smaller than 6" long or 1/4" thick.
9. Keep fingers clear of pinch point between stock and table.
10. Stand clear of board ends during cutting operation.
11. Knives are sharp! Use extreme caution when servicing.
12. Never reach into cutting area while machine is running.
13. Do not expose to rain or use in damp or wet locations.
14. Prevent unauthorized use by children or untrained users.



Note: Similar cutterhead shown as example.



W1863

301

REF	PART #	DESCRIPTION
301	X1863301	MODEL NUMBER LABEL
302	X1863302	READ MANUAL LABEL
303V2	X1863303V2	MACHINE ID LABEL V2.02.19
304	X1863304	DISCONNECT POWER LABEL
305	X1863305	ADD OIL NOTICE
306	X1863306	BELT COVER WARNING LABEL
307V2	X1863307V2	SHIFT GEARBOX NOTICE V2.02.19

REF	PART #	DESCRIPTION
308	X1863308	EYE/EAR/LUNG INJURY LABEL
309	X1863309	ELECTRICITY LABEL
310	X1863310	TOUCH-UP PAINT, SHOP FOX WHITE
311	X1863311	BLACK STRIPE TAPE (LOWER)
312	X1863312	BLACK STRIPE TAPE (UPPER)
313	X1863313	SHOP FOX NAMEPLATE-MEDIUM

⚠ WARNING

Safety labels warn about machine hazards and how to prevent serious personal injury. The owner of this machine **MUST** maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, **REPLACE** that label before allowing machine to be operated again. Contact us at (360) 734-3482 or www.woodstockint.com to order new labels.



Warranty Registration

Name _____
 Street _____
 City _____ State _____ Zip _____
 Phone # _____ Email _____ Invoice # _____
 Model # _____ Serial # _____ Dealer Name _____ Purchase Date _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. Of course, all information is strictly confidential.

- How did you learn about us?

<input type="checkbox"/> Advertisement	<input type="checkbox"/> Friend	<input type="checkbox"/> Local Store
<input type="checkbox"/> Mail Order Catalog	<input type="checkbox"/> Website	<input type="checkbox"/> Other:
- How long have you been a woodworker/metalworker?

<input type="checkbox"/> 0-2 Years	<input type="checkbox"/> 2-8 Years	<input type="checkbox"/> 8-20 Years	<input type="checkbox"/> 20+ Years
------------------------------------	------------------------------------	-------------------------------------	------------------------------------
- How many of your machines or tools are Shop Fox?

<input type="checkbox"/> 0-2	<input type="checkbox"/> 3-5	<input type="checkbox"/> 6-9	<input type="checkbox"/> 10+
------------------------------	------------------------------	------------------------------	------------------------------
- Do you think your machine represents a good value? Yes No
- Would you recommend Shop Fox products to a friend? Yes No
- What is your age group?

<input type="checkbox"/> 20-29	<input type="checkbox"/> 30-39	<input type="checkbox"/> 40-49
<input type="checkbox"/> 50-59	<input type="checkbox"/> 60-69	<input type="checkbox"/> 70+
- What is your annual household income?

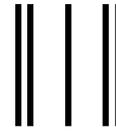
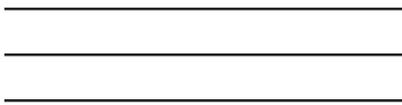
<input type="checkbox"/> \$20,000-\$29,000	<input type="checkbox"/> \$30,000-\$39,000	<input type="checkbox"/> \$40,000-\$49,000
<input type="checkbox"/> \$50,000-\$59,000	<input type="checkbox"/> \$60,000-\$69,000	<input type="checkbox"/> \$70,000+
- Which of the following magazines do you subscribe to?

<input type="checkbox"/> Cabinet Maker	<input type="checkbox"/> Popular Mechanics	<input type="checkbox"/> Today's Homeowner
<input type="checkbox"/> Family Handyman	<input type="checkbox"/> Popular Science	<input type="checkbox"/> Wood
<input type="checkbox"/> Hand Loader	<input type="checkbox"/> Popular Woodworking	<input type="checkbox"/> Wooden Boat
<input type="checkbox"/> Handy	<input type="checkbox"/> Practical Homeowner	<input type="checkbox"/> Woodshop News
<input type="checkbox"/> Home Shop Machinist	<input type="checkbox"/> Precision Shooter	<input type="checkbox"/> Woodsmith
<input type="checkbox"/> Journal of Light Cont.	<input type="checkbox"/> Projects in Metal	<input type="checkbox"/> Woodwork
<input type="checkbox"/> Live Steam	<input type="checkbox"/> RC Modeler	<input type="checkbox"/> Woodworker West
<input type="checkbox"/> Model Airplane News	<input type="checkbox"/> Rifle	<input type="checkbox"/> Woodworker's Journal
<input type="checkbox"/> Modeltec	<input type="checkbox"/> Shop Notes	<input type="checkbox"/> Other:
<input type="checkbox"/> Old House Journal	<input type="checkbox"/> Shotgun News	

9. Comments: _____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE



Place
Stamp
Here



WOODSTOCK INTERNATIONAL INC.
P.O. BOX 2309
BELLINGHAM, WA 98227-2309



FOLD ALONG DOTTED LINE

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair, replace, or arrange for a dealer refund, at its expense and option, the Shop Fox machine or machine part proven to be defective for its designed and intended use, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington office with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox machinery complies with the provisions of any law, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.'s liability under this limited warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We are committed to continuously improving the quality of our products, and reserve the right to change specifications at any time.



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