

Shaper

# Model 10047VS

Owner's Manual

For Models Manufactured Since 06/2019



Oliver Machinery  
1-800-559-5065  
6902 S 194th St, Kent, WA 98032

info@olivermachinery.net  
WWW.OLIVERMACHINERY.NET

Stock Number: 10047VS.001  
Manual Version: 1.0.0



**READ AND UNDERSTAND ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO ASSEMBLE OR OPERATE THE MACHINE.**

**FOLLOW THE INSTRUCTIONS AND THINK SAFETY!**

**THE OWNER OF THIS MACHINE IS SOLELY RESPONSIBLE FOR THE SAFETY OF ANYONE USING THIS MACHINE. SUCH RESPONSIBILITY INCLUDES BUT NOT LIMITED TO:**

- **PROPER ASSEMBLY, OPERATION, INSPECTION, MAINTENANCE, AND RELOCATION OF THE MACHINE.**
- **PROPER TRAINING FOR THE OPERATORS AND ENSURES THIS MANUAL IS AVAILABLE AT ALL TIMES.**
- **USAGE AUTHORIZATION.**
- **USAGE OF SAFETY AND PROTECTION DEVICE.**

**OLIVER MACHINERY DISCLAIMS ANY LIABILITY FOR MACHINES THAT HAVE BEEN ALTERED OR ABUSED. OLIVER MACHINERY RESERVES THE RIGHT TO EFFECT AT ANY TIME, WITHOUT PRIOR NOTICE, THOSE ALTERATIONS TO PARTS, FITTINGS, AND ACCESSORY EQUIPMENT WHICH THEY MAY DEEM NECESSARY FOR ANY REASON WHATSOEVER.**

**\*\* SAVE THIS MANUAL FOR FUTURE REFERENCES. \*\***

## **PROP 65 NOTICE**

**WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, and/or other 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.

Avoid inhaling wood dust and other harmful chemicals. Use a dust mask and/or other safety devices for personal protection.

**For more information go to <http://www.P65Warnings.ca.gov/wood>**

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# Introduction

Thank you for choosing Oliver! This manual contains important information on how to safely set up, operate, and maintain this machine. Please take the time to read through this manual, and make sure you understand all instructions.

While this manual may provide tips on optimizing the result of your workpiece, the manual is not intended as a substitute for formal woodworking training. If you need to know how to safely perform an operation, please consult knowledgeable and qualified sources before proceeding further.

We made every effort to keep this manual up-to-date. Instructions, specifications, drawings, and photographs in this manual should match the machine delivered. If you find any differences, or anything that seems confusing in this manual, please check our website for an updated version:

## WWW.OLIVERMACHINERY.NET/MANUALS

Alternatively, you can contact our technical support for help:

**1-800-559-5065**

Before calling, please note down the manufacture date and serial number of the machine. You can find the information on a nameplate located on the back of the machine cabinet. This information is needed to provide proper technical support, and to determine if an updated manual is available for your machine.

Please let us know how well this manual serves you. If you have any suggestions, please call the number above or email us at:

**info@olivermachinery.net**

We love to hear from our customers and make improvements.



# Specifications

## Quick View

Model	10047VS Shaper
Stock Number	10047VS.001
Power Requirement	230V, 1Ph, 60Hz
Motor	TEFC 3HP, 230V, 3Ph
Max Spindle Under Nut Capacity	4" with 1-1/4" Spindle
Max Cutter Diameter Allowed	6-1/4" Below Table 7" Above Table
Spindle Speed	5,000-10,000 RPM, Reversible
Dimensions	32-1/4"(W) x 32"(D) x 50"(H)
Footprint	22-3/4"(W) x 22-3/4"(D)
Fully Assembled Weight	396 lbs.
Warranty	1 Year (Motor and electronics) 2 Years (All other parts)

## Product Dimensions

Width x Depth x Height (Fully Assembled)	32-1/4"(W) x 32"(D) x 50"(H)
Footprint	22-3/4" (W) x 22-3/4"(D)
Fully Assembled Weight	396 lbs.

## Shipment Info

Type	Wood Crate with Pallet Base
Content	Shaper with Included Accessories
Dimensions	36"(L) x 35-1/2"(W) x 56"(H)
Weight	511 lbs.
Approx. Assembly Time	30 Minutes
Must Ship Upright	YES
Stackable	NO

## Electricals

Power Requirement	230V, 1Ph, 60Hz
Full Load Current Rating	15A
Recommended circuit size	30A
Power Switch Type	Magnetic Switch with Overload Protection.
Connection Type	NEMA L6-30 Plug with 9.5' 12AWG Cord
Overload Protection	Equipped

### Motor

Motor Type	TEFC
Horsepower	3HP
Power Requirement	230V, 3Ph, 60Hz
Full Load Current Rating	9A
Speed	3450 RPM (Max)
Efficiency / Power Factor	81% / 88%
Power Transfer Mechanism	Poly V-Belt and Pulleys
Bearing type	Permanently Sealed Ball Bearing

### Spindle and Cutter

Spindle Sizes	1-1/4" (Included) 1/2", 3/4", 1" (Optional)								
Spindle Speed	5,000-10,000 RPM, Reversible								
Vertical Spindle Travel	4"								
Max Cutter (Under Nut) Capacity:	<table border="1"> <tr> <td>1/2" Spindle</td> <td>2-3/4"</td> </tr> <tr> <td>3/4" Spindle</td> <td>3-1/2"</td> </tr> <tr> <td>1" Spindle</td> <td>3-1/2"</td> </tr> <tr> <td>1-1/4" Spindle</td> <td>4"</td> </tr> </table>	1/2" Spindle	2-3/4"	3/4" Spindle	3-1/2"	1" Spindle	3-1/2"	1-1/4" Spindle	4"
1/2" Spindle	2-3/4"								
3/4" Spindle	3-1/2"								
1" Spindle	3-1/2"								
1-1/4" Spindle	4"								
Max Cutter Diameter	6-1/4" Below Table 7" Above Table								

### Table

Material	Precision Ground Cast Iron
Table Dimensions	32-1/4"(W) x 26-3/4"(D)
Table Height	34-3/8"
Table Opening Diameter	6-1/4"
Number of Table Inserts	2
Table Insert Opening Diameter:	4-5/16" (Large) 2-1/2" (Small)
Miter Slot Type	T-Slot (Standard Size)
Miter Slot Width	3/4"
Miter Slot Height	3/8"
Power feeder mounting locations	On both rear corners of shaper table.

### *Fence*

Material	Extruded Aluminum
Fence Length	16", for each infeed and outfeed fence
Fence Height	4-3/4"
Fence Maximum Travel Distance (Front to Back)	4-3/8"
Maximum Infeed/Outfeed Fence Offset	7/8"
Fence Slot Type	T-Slot
Cutter Guard	Included
Featherboard	Included

### *Miter Gauge*

Angle Range	-60° to 60°, with positive stops at -45°, 0°, 45°
Miter bar Length	18"

### *Safety*

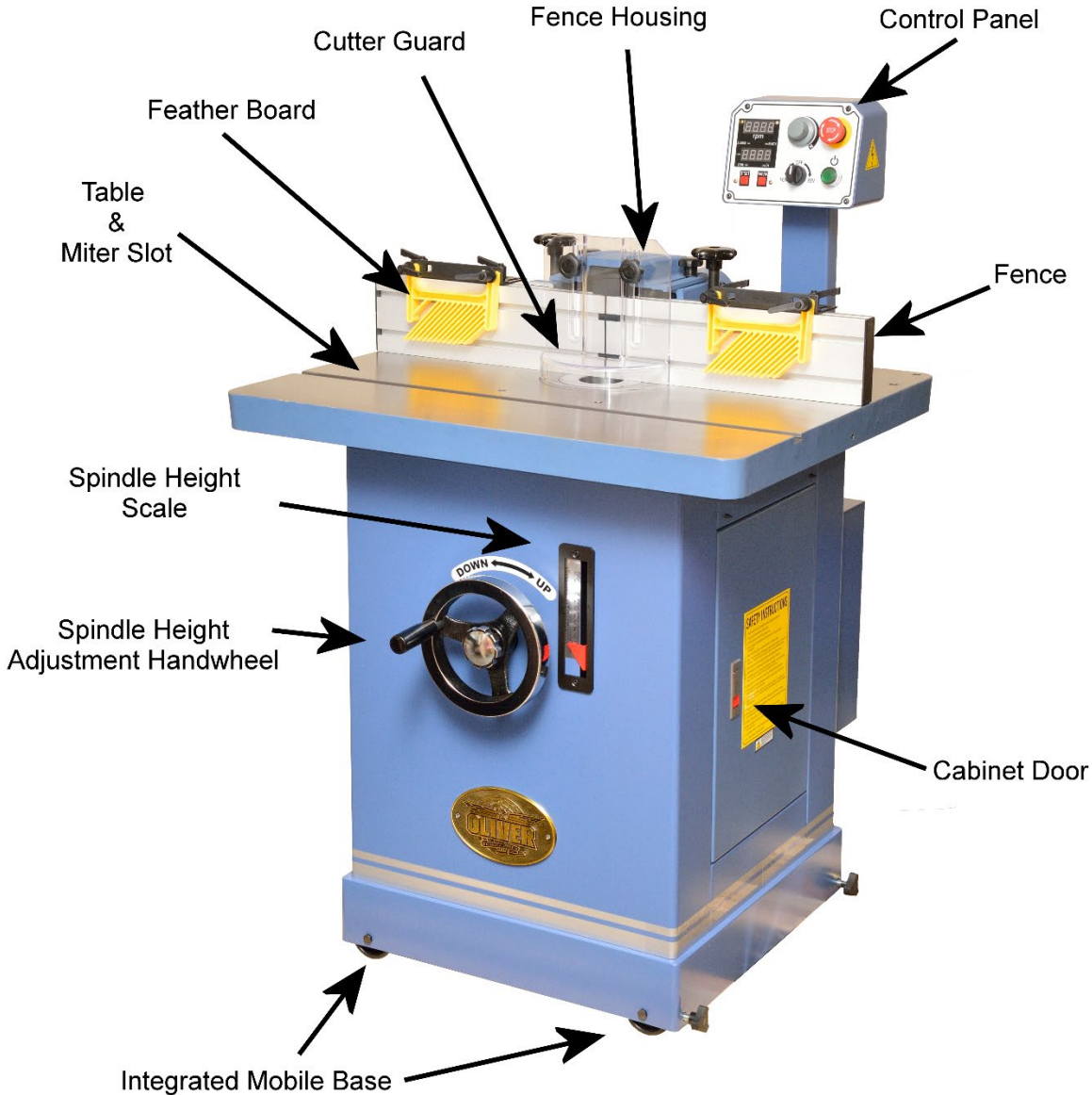
Guard material	Clear Polycarbonate
Maximum Guard Clearance	4-1/16"
Number of Featherboards Included	2
Number of Dust Ports	1
Dust Port Size	4"
Minimum CFM Required	800 CFM
Sound Rating @ 2' distance	85 dB @ 10000 RPM 75 dB @ 5000 RPM

### *Others*

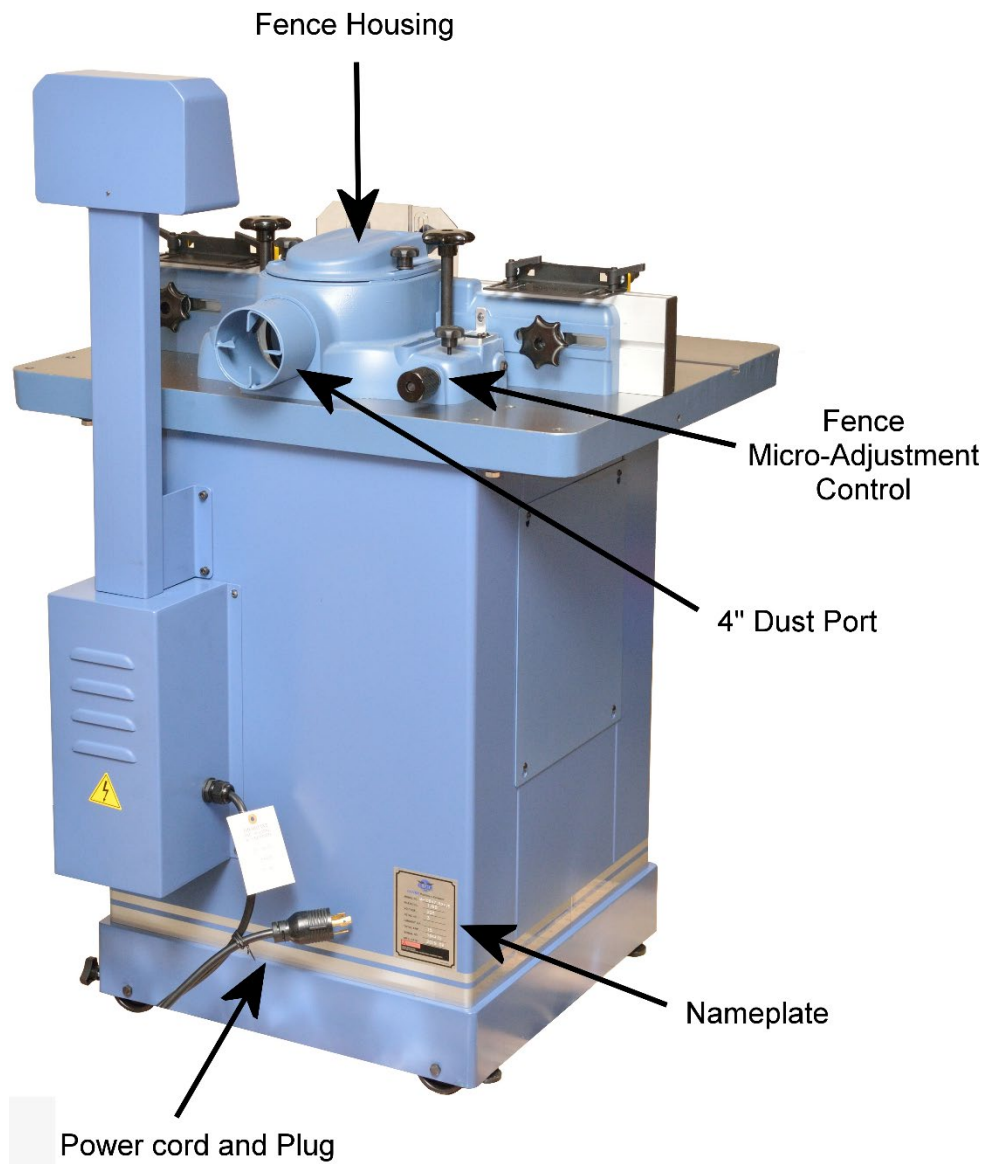
Measurement Scale	Inch/mm
Serial Number Location	On the back of the machine cabinet.
Country of Origin	Taiwan



# Identification










# Safety

Oliver Machinery has made every attempt to provide a safe, reliable, easy-to-use piece of machinery. Safety, however, is ultimately depending on the individual machine operator. **Before operating this machine, please become familiar with the following safety labels and guidelines.**

 <b>DANGER</b>	This indicate an imminent hazardous situation which, if not avoided, <b>WILL</b> cause death or serious injury.
 <b>WARNING</b>	This means if the warning is not taken seriously, it <b>CAN</b> cause death or serious injury.
 <b>CAUTION</b>	This means if the precaution is not taken, it <b>MAY</b> cause minor or moderate injury.
<b>IMPORTANT</b>	This is a tip about proper operation of the machine to avoid machine damage.

## General Safety Guidelines

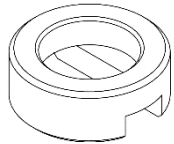
1. **FAMILIARIZE** yourself with all safety instructions found in this manual. Know the limitations and hazards associated with this machine. Do not operate / service this machine until you are properly trained.
2. **ELECTRICAL GROUNDING**, when done properly, reduce the risk of electrocution, shocks and fire. Make certain that the machine frame is electrically grounded and that a ground lead is included in the incoming electrical service. In cases where a cord and a plug are used, make certain that the grounding plug connects to a suitable ground. Follow the grounding procedure indicated in the electrical code of your area.
3. **DISCONNECT** the machine from power before performing any service, maintenance, adjustments or when changing cutters. A machine under repair should be RED TAGGED to show it should not be used until the maintenance is complete.
4. **EYE PROTECTION**: Always wear an approved safety face shield, goggles, or glasses that complies with ANSI Z87.1 and CSA Z94.3 standards. Common eyeglasses are not safety glasses, and may not provide adequate protection.
5. **EAR PROTECTION**: Use hearing protective devices where the noise exceeds the level of exposure allowed in Section 1910.95 of the OSHA Regulations. When in doubt, use it.
6. **OTHER PERSONAL PROTECTION**: Before operation, remove tie, rings, watch and other jewelry. Roll up sleeves above elbows. Remove all loose outer clothing and confine long hair. Protective type footwear should be used. Do not wear gloves unless it is instructed to perform particular step(s) in the manual.
7. **GUARDS**: Keep machine guards in place for all applicable operations. If any guards are removed for maintenance, DO NOT OPERATE machine until all guards are reinstalled. Check clearance between the guards and the cutter before starting the machine.
8. **WORKPLACE SAFETY**: Keep the floor around the machine clean. Scrap material, saw dust, oil and other liquids increase the risk of tripping or slipping. Be sure to clean up the table before starting the

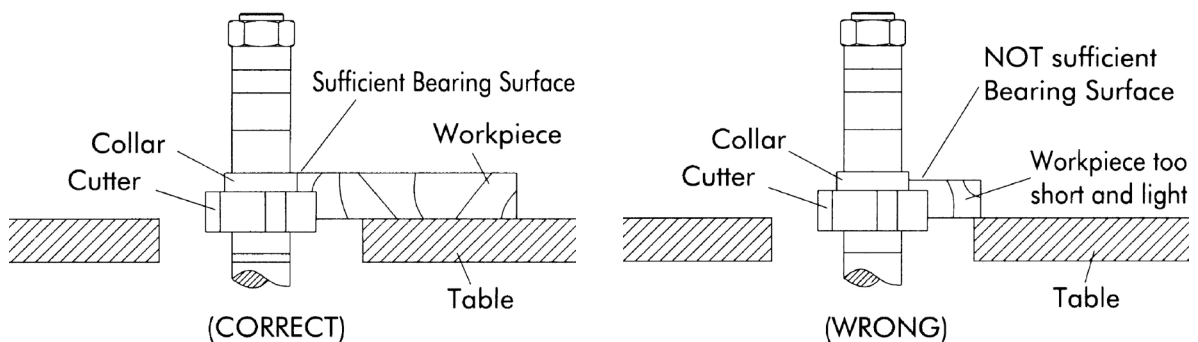
machine. Make certain work area is well lighted and that a proper exhaust system is used to minimize dust. Use anti-skid floor strips on the floor area where the operator normally stands and mark off machine work area. Provide adequate work space around the machine.

9. **ACCESS CONTROL** should be enforced so only trained personnel can access the work area and operate the machine. Use childproof power switch when applicable.
10. **STAY ALERT** at all times. Do not operate this machine while under the influence of drugs/alcohol, or when not feeling well.
11. **NEVER STAND ON MACHINE.** This prevents injuries from tipping related accidents and accidental contacts to cutters.
12. **REPLACEMENT PARTS:** Use only genuine Oliver Machinery replacement parts and accessories recommended for this machine. Generic parts made by other manufacturers may create a safety hazard, and WILL void the factory warranty and other guarantees.
13. **PROPER USE:** Do not use this machine for other than its intended use. If used for other purposes, Oliver Machinery disclaims any real or implied warranty and holds itself harmless for any injury or damage which may result from that use.

## Safety Guidelines Specific to Shaper

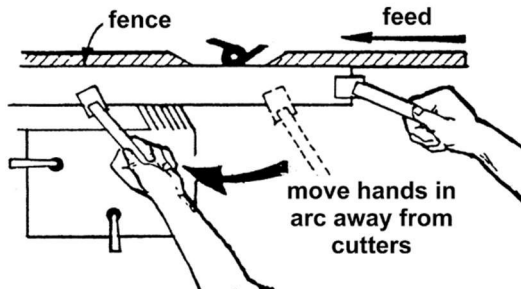
### Before Work Begin:

1. **INSPECT CUTTER:** Make sure cutters are sharp, clean, balanced and free from damages. Forcing dull cutters to work invites accidents and impacts finish quality.
2. **CUTTER POSITIONING:** Whenever possible, position the cutter below the workpiece and make blind cuts with hold-downs. Doing so reduce operator's exposure to the cutter.
3. **SECURE SPINDLE AND CUTTER:** Make sure the spindle and the draw bar are tightened on the arbor.
4. **KEYED COLLAR:** Never operate the shaper without the keyed collar located immediately under the spindle washer. Key collar prevents the cutter from coming loose when the spindle rotates. Do not substitute any other type of washer/spacer in place of the keyed collar. 
5. **CUTTER CLEARANCE:** Adjust fence plates and guard, and use correctly sized table inserts to create practically minimal cutter clearance. Never start shaper with workpiece touching the cutter.
6. **CHECK SPINDLE SPEED AND SPINDLE-FEED DIRECTION:** Always start this shaper at the lowest speed, and never set rotation speed above the rated RPM of the cutter. Always feed stock against cutter rotation direction to maintain better control of stock.
7. **CHECK STOCK LENGTH:** Never shape stock less than 12 inches in length without special fixtures. When practical, shape longer stock and cut to size.
8. **SHAPE ONLY QUALITY WOOD:** This machine is designed for wood products only. Do not shape any material other than wood. Do not attempt to shape workpiece with loose knots or with any other foreign material. Do not attempt to shape twisted, warped, bowed stock. Use a jointer to flatten stock prior to shaping.
9. **COLLARS:** When shaping with collars, the collar must have sufficient bearing surface. The work must also be fairly heavy in proportion to the cut being made. Do not use short, lightweight stock when shaping against collars.

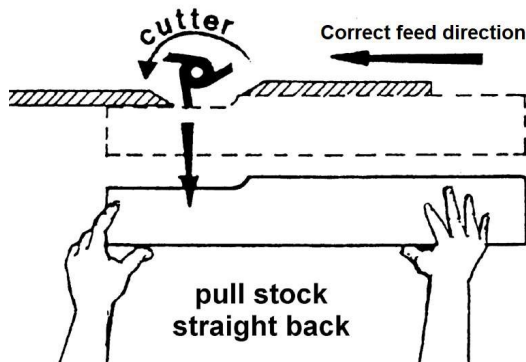


## When Shaping:

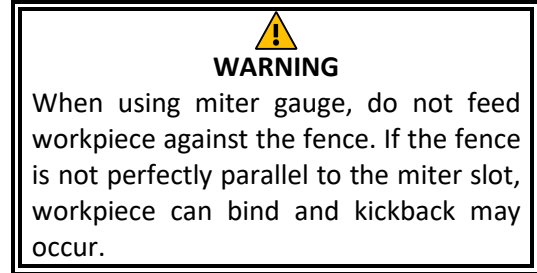
1. **6-INCH RULE:** To avoid accidental cutter contact, never allow your hands to come closer than 6 inches to the cutters. Use push block, jigs, and hold-downs to safely feed the workpiece while cutting.



2. **NO CLIMB CUT:** To prevent kickback, feed stock opposite to the direction of the cutter rotation. Never back stock out of the cutter once the cut has been started. Instead, pull the stock straight back away from cutter and begin the cut again.



3. **SHAPING SHORT EDGE:** When shaping workpiece with an edge shorter than 6", use miter gauge and hold down fixtures for feeding.




4. **FREEHAND SHAPING** is for advanced users only. Always use a starting pin or pivot board when starting a cut. Never start shaping at a corner.
5. **MAKE LIGHT PASSES:** Never force the cutter to remove too much material in one pass. Doing so increase the risk of kickback and impact finish quality. Make several light passes when applicable.
6. **KEEP HANDS SAFE:** Do not clear dust and debris with hands; use a brush or compressed air instead.

## After Operation

1. **STOP THE MACHINE** when operator leaves the machine for any reason.
2. **WAIT** until the cutter comes to a complete stop.
3. **CLEAN UP** before departure.

# Electricals



**WARNING** All electrical work must be done by a qualified electrician, and must meet the electrical code in your area.

## Minimum Circuit Size Required for Model 10047VS Shaper

Stock Number	Minimum Circuit Size Required
10047VS.001	30A

Please ensure the electrical circuit for this machine meets the minimum circuit size requirement. Minimum circuit size requirement applies to a dedicated circuit which provides power to one 10047VS Shaper. If more machines are sharing the same circuit, consult a qualified electrician to ensure the designated circuit is properly sized for safe operation.

If a circuit is available, but not meeting the minimum circuit size requirement listed above, a new circuit must be installed for this machine.

## Grounding



**WARNING** Improper grounding can cause electric shock, fire, and equipment damage.

Proper grounding reduces the risk to the operator in the event of electrical malfunction or breakdown. This machine must be connected to the grounding conductor when available, and all grounding connections must meet or exceed the electrical code requirements in your area. Furthermore, all grounds must be verified and must meet or exceed the electrical requirement of the machine. If grounding is not available, consider the use of a GFCI protection device as an alternative, if this complies with the electric code in your area.


## Electrical Wiring

This machine is pre-wired for 230V with a cord and a NEMA L6-30 plug. Use of extension cord is not recommended. If you need to use an extension cord to connect to a power source, select a durable cord type with high temperature rating (90C° or above). Use minimum amount of extension cord as needed.

### Minimum cord size (AWG) required based on amperage draw and length of the cord:

Amps	Power Cord Length			
	25 feet	50 feet	75 feet	100 feet
8 to 12	14	14	12	10
12 to 15	12	12	10	10
15 to 20	10	10	10	NR
21 to 30	10	NR	NR	NR

\*NR: Not Recommended



**WARNING** Use properly sized wires that meet or exceed the power requirement of your machine. Using undersized wires may cause overheating and increase the risk of fire and machine damage.

# Setup

## Shop Preparation

### Space Requirement

The dimensions of this machine are 32-1/4"(L) x 32"(W). You will need additional spaces for manipulating your workpiece, electrical connection and dust collection.

### Load Limits

This machine has a shipping weight of 511 lbs., and a net weight of 396 lbs. Please ensure all lifting tools and building structures have adequate load capacity, for transporting and supporting the total weight of this machine, the operator, and related items.

### Electricals

Make sure properly sized circuit and electrical outlet are available near the machine. Please refer to section "Electricals" on page 14 for details regarding electrical requirements.

### Lighting

Adequate lighting is needed for operating this machine. Overhead, non-glare lighting should be installed.

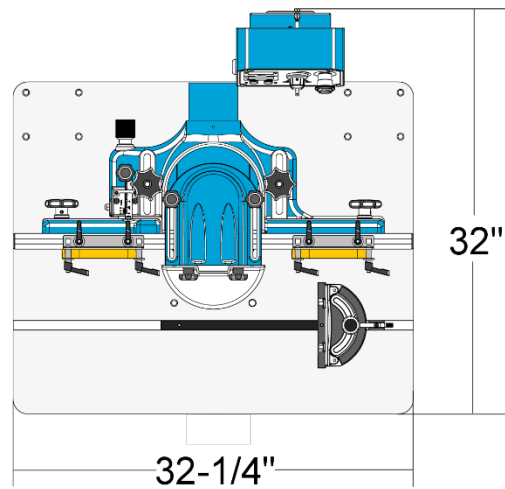
### Safety Labels

If this machine introduces a new safety hazard to your work place. Please display proper warning signs in highly visible location(s).

### Dust Collection

Wood dust created by this shaper is a health hazard. Connect this machine to a dust collection system. Check the air suction regularly to ensure dust and shavings are effectively removed.

Dust masks should be available for using the shaper.



**Air resistance and leakage in a dust collection system impacts its effectiveness. Use a dust collection system that is rated above 800 CFM at dust port. Doing so improves air quality in the workplace, and prevents machine from jamming.**



## Receiving

Your shipment should come with one wood crate with pallet base. Upon receiving your shipment, check for any significant damages before signing the delivery confirmation.

### **IMPORTANT**

If items are damaged, please call us immediately at **1-800-559-5065**



You may need to remove strapping that is used for securing your package. Strapping may spring back violently when released and cause injury. Always wear safety goggles and gloves for this task.

## Moving Machine into the Shop

Your machine will be delivered by freight service, and it will be left outside of your workshop by default. On the day of delivery, please be sure help is available to move the machine to its final location.



**10047VS Shaper has a gross weight of 511 lbs. and a net weight of 396 lbs.**

**Safe moving techniques and proper lifting equipment required, or serious personal injury may occur.**



**Your machine may be secured by the straps. Do not lift your shipment by the strap. They are not designed to hold the total weight of your shipment. They may snap without warning and cause serious injury and machine damage.**

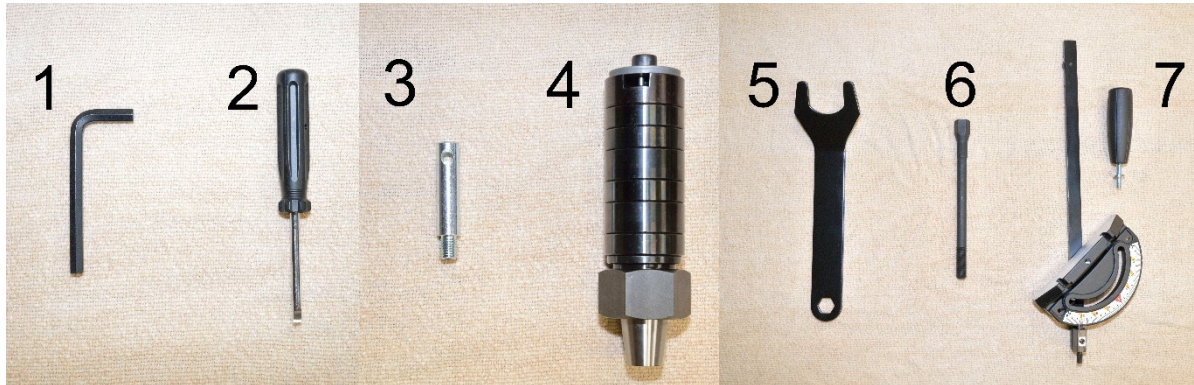
## Unboxing

Upon removing the crate cover, you should find a shaper that is mostly assembled, and a paper box that contains all loose parts and accessories.



## Inventory

Carefully unwrap the packaging and make sure all components are included in the shipment. Lay out all items received and inventory them.



<i>Item</i>	<i>Description</i>	<i>Quantity</i>
1	8mm Hex Key	1
2	Screw driver	1
3	Starting Pin	1
4	1-1/4" Spindle Assembly	1
5	Wrench for spindle nut and spindle draw bar	1
6	Spindle draw bar	1
7	Miter gauge assembly	1

**NOTICE:** If you cannot find an item in the list above, please check if it is still attached to the packaging or inside the cabinet. Occasionally the item may have been pre-installed in factory. See section “**Parts List**” to check if a component is included or installed.

**NOTICE:** This machine comes with various standard sized, non-proprietary parts. If any of these parts are missing, we be happy to deliver them to you. To have the machine up and running as soon as possible, you can also find these parts at your local hardware store.

### Additional Items Needed for Machine Assembly

<i>Item</i>	<i>Purpose</i>
Safety glasses	Protection
Disposable gloves	Protection
Paper Towel	Cleaning
Rust Inhibitor	Cast iron table top rust protection.

When all items are ready for setting up the machine, gently remove the machine from the pallet. Lift the shaper with its table. If using a forklift or any metal lifting devices, ensure the table is protected by paddings. Gently lower shaper on the floor to prevent damages to the casters.

## Cleaning

To prevent rusting, the cast iron tabletop of this shaper is covered with rust protectant and plastic film. Remove both fence assembly lock knob to remove the fence assembly. Then pull out the plastic film and wipe off rust protectant with paper towels.

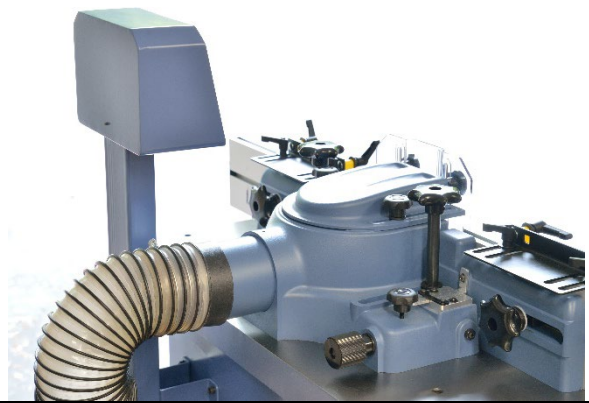
Once all rust protectant is removed, routinely coat the table top with rust preventive such as Boeshield® T-9 or paste wax. Do not use rust preventives that contains silicon, which is known to interfere with certain finishes and glues.



## Dust Collection

Shaper can generate a lot of wood shavings and dust. Connect this machine to a dust collection system.

Minimum CFM requirement for this shaper is 800 CFM at the dust port, which means your dust collection system should have a rating greater than 800 CFM, as air friction and leakage reduce effective CFM at the dust port.



### IMPORTANT

Running this shaper without dust collection system, or using a dust collection system with inadequate suction, will cause dust and shavings to accumulate inside the cabinet. This can damage the machine and cause other hazardous situations. Check your dust collection system regularly to make sure it is not jammed or filled up.

## Moving / Leveling Machine

This shaper is equipped with casters so it can be moved easily. To keep the shaper in place, tighten the caster locking knobs and lower the rubber feet.

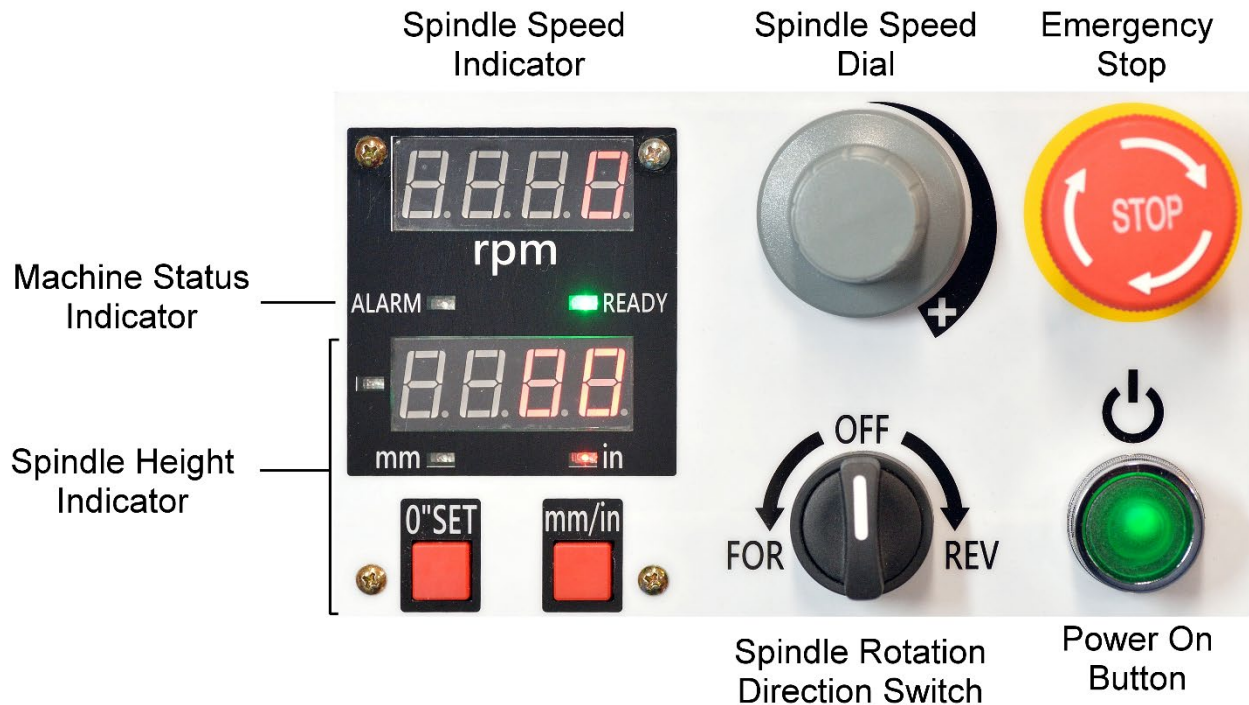
If shaper is standing on uneven floors, use rubber feet to level the machine.





# Controls and Operation

## Control Panel Overview



### Emergency Stop

Emergency stop button stops the machine and prevents unintentional restarts. Once pressed, the shaper will stop, and the emergency stop button will have to be reset before the shaper can be restarted. To reset, rotate the button clockwise until it pops up.

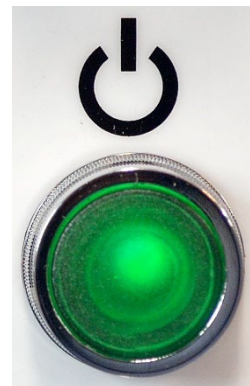


### Magnetic Power Switch

Press this button to power on the shaper so it is ready to run.

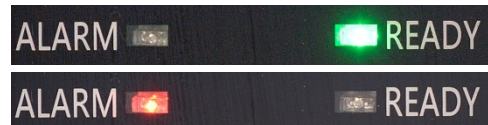
**NOTICE:** This magnetic switch will automatically shut off upon power outage. This prevents unintentional restarts when power resumes.

To restart the machine after a power outage, set spindle direction switch to OFF position, and set spindle speed to minimum, then press the power button to power on the machine.



### Machine Status Indicator

Indicates if the motor is ready to run. If the "ALARM" light is on, motor will not start. Hit STOP button and wait for 1 minute for the machine to reset.



## Rotation Direction Switch

This switch allows operator to set spindle rotation direction after the machine is powered on.

Position	Spindle Rotation Direction
"FOR"	Counter-clockwise
"REV"	Clockwise
"OFF"	Spindle does not rotate



### IMPORTANT

This machine comes with a safety feature which prevents unintentional startup. The rotation direction switch must be at **OFF** position before machine is powered on, otherwise the alarm light will turn on and machine will have to be reset before it can start again.

### IMPORTANT

Only change spindle rotation direction after the spindle has come to a complete stop, or machine damage may occur.

Always turn this switch to **OFF** position when operation completes.

## Spindle Speed Dial & Indicator

Controls spindle speed between 5000 and 10000 RPM. Real time spindle RPM is displayed on spindle speed indicator.



### WARNING

Always start this shaper at the lowest RPM and then increase to a safe speed for operation. NEVER set RPM above the cutter's rated speed or cutter may disintegrate. Serious body injury and machine damage may occur.

## Spindle Height Indicator

This digital readout shows current position of the spindle relative to a reference point set by the user. When spindle moves above the reference point, the Indicator will show a positive value, and vice versa.

To Set a Reference Point:

Press [0" SET]

To Change Measurement Unit:

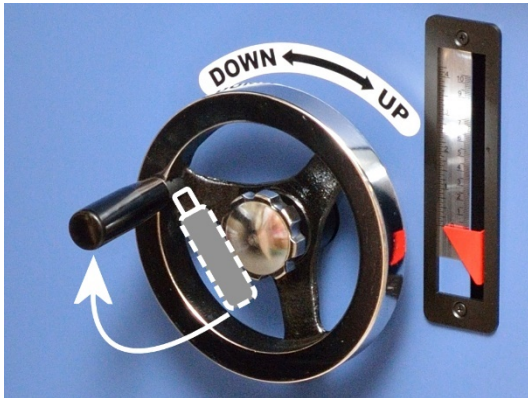
Press [mm/in.]



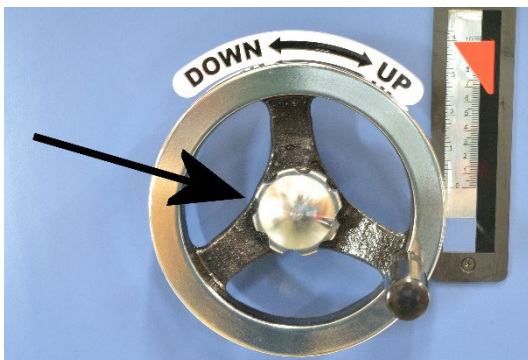
## Spindle Height Adjustment

The spindle height adjustment handwheel is located in front of the shaper cabinet.

1. To adjust spindle height, flip wheel handle up.



2. Loosen locking knob if the height adjustment handwheel is locked.



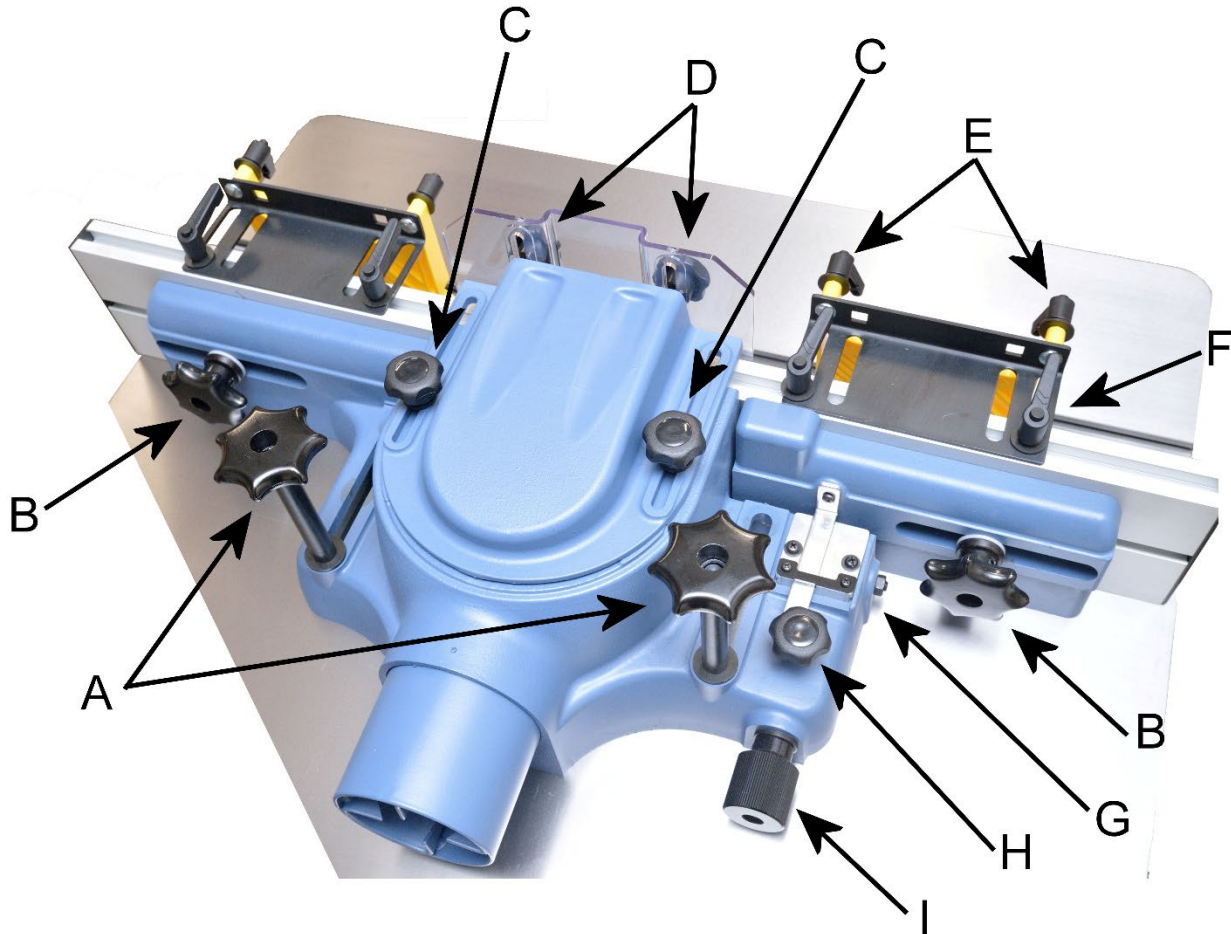
3. Turn handwheel clockwise to move spindle up, and vice versa.
4. Operator can use both digital readout and spindle height scale to measure the elevation of spindle.
5. To lock the spindle height, tighten the locking knob.
6. The wheel handle can be folded when all adjustments are done.



**WARNING**

**After adjusting spindle height, always verify clearance between the cutter and the guard/table insert/fence before starting the machine. Serious injury and machine damage may occur if cutter strikes any stationary part of the shaper.**

## Fence Assembly



### Key Component

Key	Component
A	Fence housing lock knob
B	Fence plate lock knob
C	Cutter guard lock knob (horizontal)
D	Cutter guard lock knob (vertical)
E	Featherboard lock
F	Featherboard bracket lock
G	Vernier scale
H	Micro adjustment lock
I	Micro adjustment dial

**Always turn off machine and wait for the spindle to come to a complete stop before adjusting the fence.**



**WARNING** Always re-lock all adjustable components of fence assembly and verify cutter clearance after adjusting the fence. Without enough clearance, cutter will strike the fence which may result in serious body injury and machine damage.



## Fence Adjustments

### Reposition aluminum fence plate:

1. Loosen the fence plate lock knob **[B]**.
2. Adjust fence plate position based on the size of the cutter installed. Make sure there is enough clearance for cutter to rotate freely.
3. After setting the position of the fence plate and verified cutter clearance, re-tighten the fence plate lock knob.

### Adjust infeed fence positions:

1. Loosen fence housing lock knobs **[A]**.
2. Move the entire fence assembly to adjust the infeed fence position relative to the cutter.
3. Check cutter clearance, then re-tighten fence housing lock knobs when adjustments complete.

### Adjust cutter guard clearance:

1. Loosen horizontal guard lock knobs **[C]** and vertical guard lock knobs **[D]** to adjust cutter guard position.
2. After setting guard position and verified cutter clearance, re-tighten the lock knobs.

### Micro-adjust outfeed fence positions:

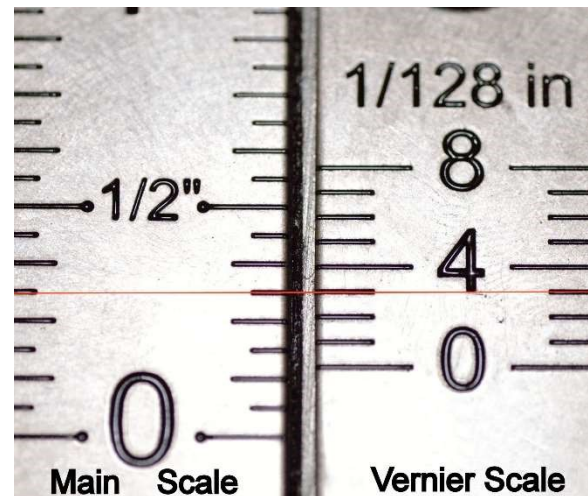
1. Loosen the outfeed fence micro adjustment lock **[H]**.
2. Rotate the micro-adjustment dial **[I]** to move the outfeed fence forward or backward. One revolution of the dial moves the fence by approximately  $5/64$ ". The outfeed fence can move forward by at most  $7/8$ ".
3. The Vernier scale **[G]** indicates the position of outfeed fence relative to the infeed fence, with precision of  $1/128$ ".
4. After setting the position of the fence and verified cutter clearance. Re-tighten micro adjustment lock.

### Measure fence position using Vernier scale:

1. Read the main scale where it is passed by the Vernier scale's zero. That is the main scale reading.
2. Find the first mark on the Vernier scale that lines up perfectly with any line on the main scale. Multiply the number of that mark by  $1/128$ ". That is the Vernier scale reading.
3. The exact position is the sum of the main scale and Vernier scale readings.

### Example:

This picture shows the  $3^{\text{rd}}$  mark on the Vernier scale lines up with a line on the main scale, while the zeroth mark passed the  $1/8$ " mark on the main scale:



*Main Scale Reading:  $1/8$ "*

*Vernier Scale Reading:  $3 * 1/128 = 3/128$ "*

*Exact position:*

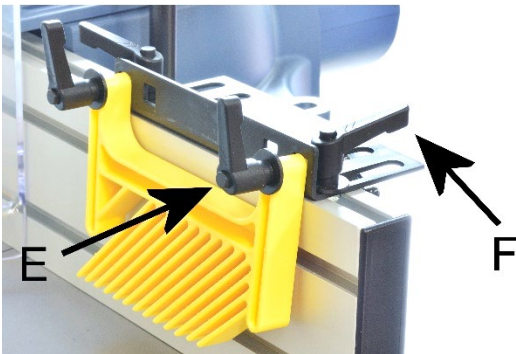
*$1/8" + 3/128" = 19/128"$*

### Reposition featherboard:

Whenever possible, use featherboards to hold the workpiece down for shaping. This reduces the risk of kickback and keeps hands away from the cutter.

This shaper comes with two featherboards and mounting brackets, which allows various ways of setting up the featherboard.

1. Featherboard can be mounted on any position along the fence. Loosen the featherboard bracket locks [F] to adjust featherboard position, and retighten them when done.



2. The height of the featherboard can be adjusted by loosening the featherboard locks [E].
3. If the featherboard needs to be lowered even further, flipped over the mounting bracket and mount the featherboard as shown in the picture.



4. To hold down thick/tall stock, the mounting bracket can be flipped 90° and featherboard can be mounted as shown in the picture:



5. The featherboard can also be directly mounted on the aluminum fence if desired.



6. Additional featherboards (purchased separately) can be mounted on shaper table's miter slot to ensure stock is pushed firmly against the fence.

## Spindle Assembly Components and Functionalities

### Cap Screw & Spindle Washer

Holds down the cutter and spacers that rotate with the spindle.

### Keyed Collar

A specially milled spacer which prevents the cap screw from loosening during operation.

### Spacers

For setting positions between the spindle, collar and cutter(s).

### Spindle Body

### Spindle Nut

Secure the spindle on the quill.

### Quill

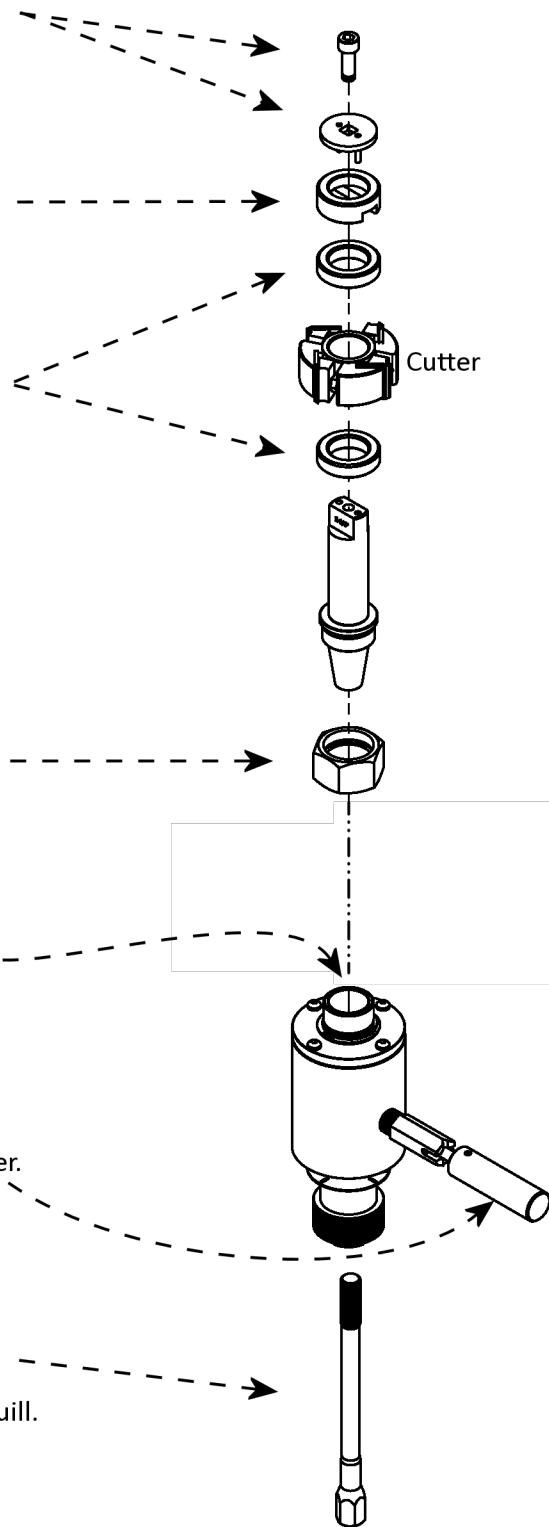
Lower section of the spindle which connects to the spindle body.

### Spindle Lock Handle

Locks the spindle arbor so operator can install/remove spindle and cutter.

### Spindle Draw Bar

Works together with the spindle nut to secure spindle body on the quill.



## Spindle / Cutter Setup

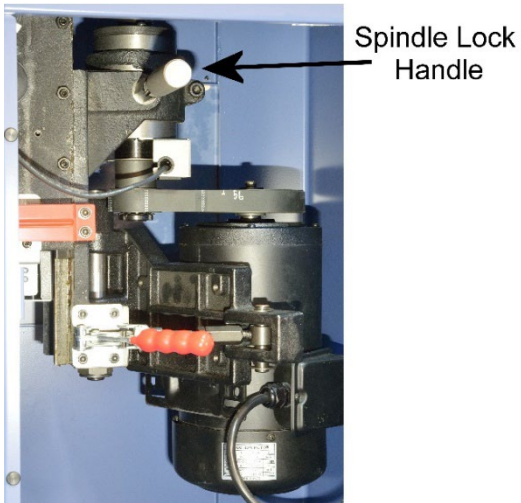


**Before changing spindle, cutters or collets, disconnect machine from power source and lock spindle arbor. Failure to comply may result in serious injury.**

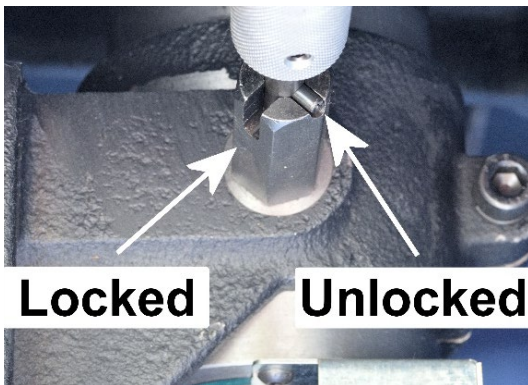
### Lock / Unlock Spindle Arbor

#### To Lock Spindle Arbor

1. **Disconnect machine from power source!!**
2. Open cabinet door and locate the spindle lock handle.



3. Pull and rotate the handle until the pins engage into the “Locked” position.



4. Rotate spindle / pulley by hand until the spindle lock engages.

#### To Unlock Spindle Arbor

1. **Disconnect machine from power source!!**
2. Pull and rotate the handle until the pins engage into the “Unlocked” position.
3. Rotate spindle / pulley by hand to ensure the lock is disengaged.
4. Close cabinet door before starting the shaper.



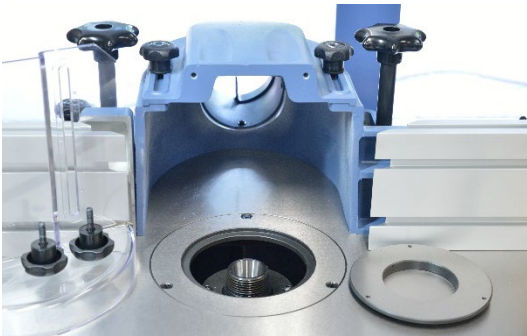
## Install / Remove Spindle



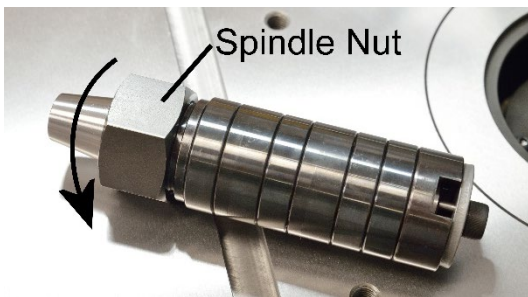
**Disconnect machine from power source before installing/removing spindles.**  
**WARNING** Failure to comply may result in serious injury!

### To Install Spindle:

1. **Disconnect machine from power source!!**
2. Lock spindle arbor.
3. Move cutter guard and fence away from the table opening. Remove table inserts to gain access of the quill.



4. Hand thread spindle nut all the way into the spindle.

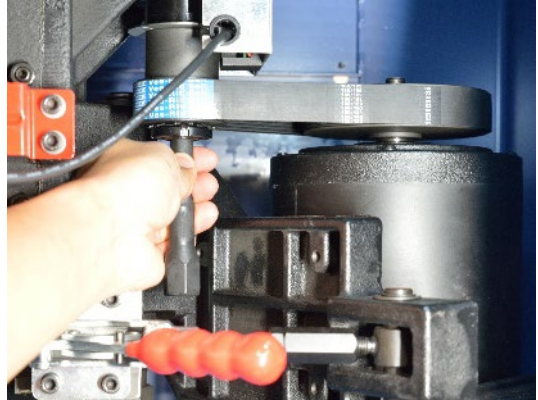


5. Raise arbor all the way up, then lower the spindle straight into the quill. Hand thread the entire spindle assembly into the quill.

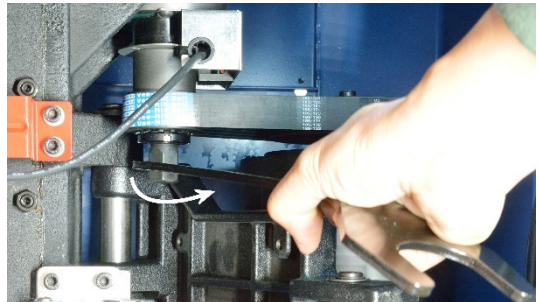


**IMPORTANT:** Take extra care not to cross thread, or the spindle/quill connection will be damaged.

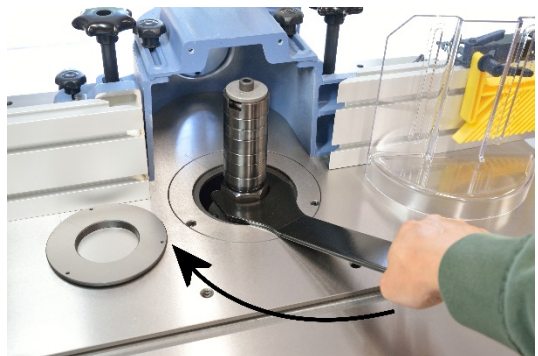
6. Insert spindle draw bar up into the hole at the bottom of the spindle pulley.



7. Thread and tighten the draw bar with the spindle wrench provided. You may also find a ratcheting wrench useful in tight space.



8. Tighten the spindle nut with spindle wrench.



9. If you need to install cutters, continue with section “Installing/Removing Cutters” for details.
10. Otherwise, unlock the spindle arbor.
11. Close the cabinet door.
12. Reconnect machine to power source when all adjustments complete.

#### **To Remove Spindle**

- **Disconnect machine from power source!!**
- Lock the spindle arbor.
- Loosen and remove the draw bar.
- Use the spindle wrench to loosen the spindle nut, then continue to rotate the spindle nut until it breaks free of the quill.

## Install Shaper Cutter



**WARNING**

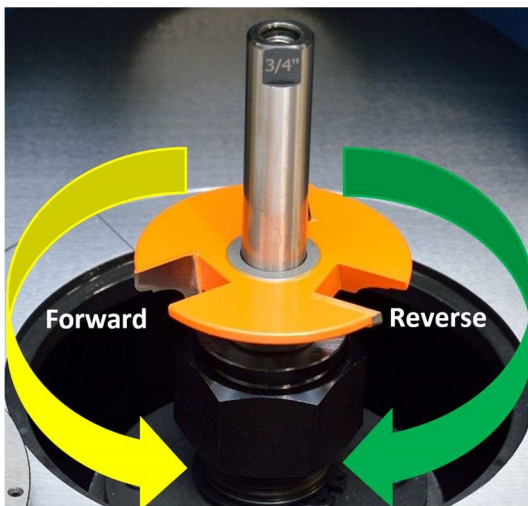
When changing cutters, disconnect the machine from its power source. Wear thick leathers gloves to prevent hand injuries. Do not use damaged cutters, as it may disintegrate during operation and cause serious injuries.

### To Install Cutter

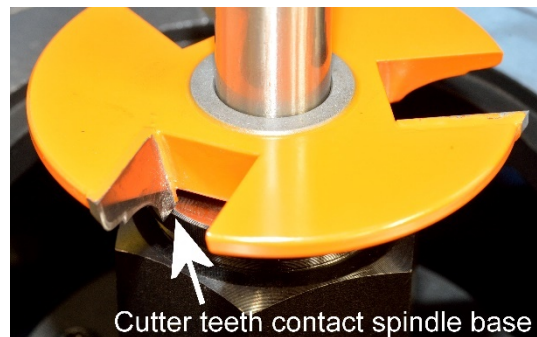
1. **Disconnect machine from power source!!**
2. Lock spindle arbor.
3. Remove cap screw, spindle washer, keyed collar, and extra spacers from the spindle, then install shaper cutter.



4. **IMPORTANT:** Pay attention to the orientation of the cutter blade. When rotation switch is set to "FOR" (Forward), the spindle will rotate counter-clockwise, and vice versa. Operator should set up the spindle assembly such that cutter rotation direction goes against feed direction.



5. **IMPORTANT:** It is generally advisable to place the cutter as low as possible on the spindle to reduce spindle deflection. This setup creates the best possible finish. However, if cutter blades contact the base of the spindle body, the cutter will need to be raised with spacers.



6. After the cutter is properly inserted, Add more spacers on top of the cutter.





7. Then insert the keyed collar.



**IMPORTANT:** The keyed collar **MUST** sit slightly **ABOVE** the top of the spindle. This ensures significant pressure is applied to hold down the cutter during operation.

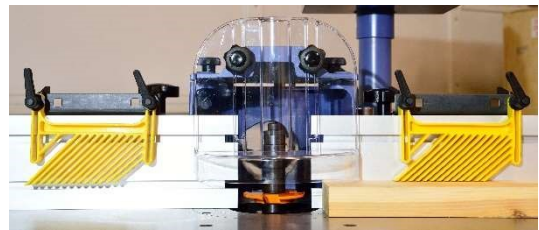
8. Install spindle washer and the cap screw. **NOTICE:** Spindle washer may or may not be pronged. If a spindle is equipped with a pronged washer, make sure the prongs are inserted into the holes of the spindle.



9. Thread and tighten the cap screw with an 8mm hex wrench.



10. After cutter is securely installed, unlock the spindle arbor.
11. Rotate the spindle to ensure cutter rotates freely. Adjust fence, guard and use the right table insert to create practically minimal cutter clearance.



## Installing/Removing Router Collets (Sold Separately)

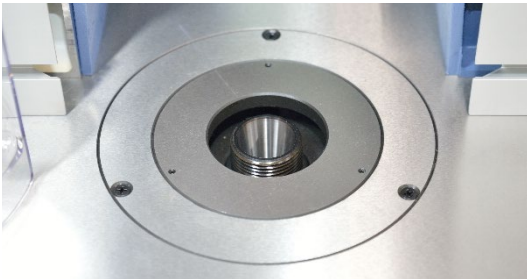
Two optional router collets (1/4" & 1/2") are available for this shaper. To purchase these collets, please visit our website or call our parts department at **1-800-559-5065**.



**Disconnect machine from the power source before installing/removing collets.  
Failure to comply may result in serious injury!**

### To Install Router Collet

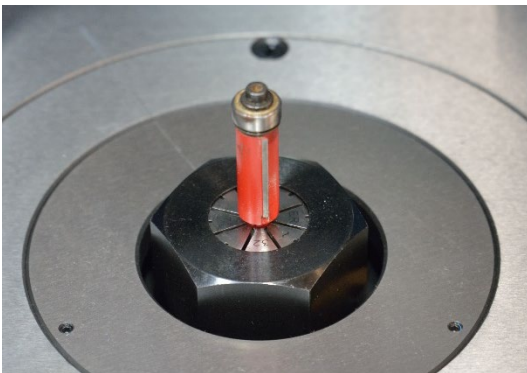
1. **Disconnect machine from power source!!**
2. Lock spindle arbor.
3. Raise spindle arbor all the way up.



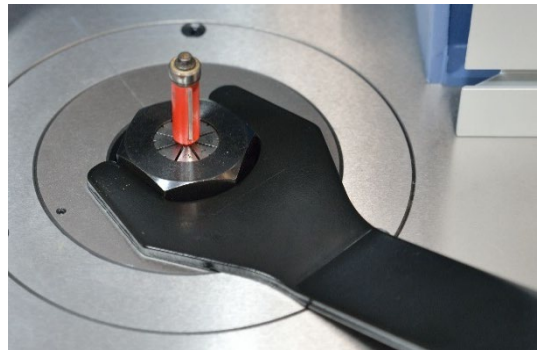
4. Hand thread the router collet onto the arbor.



5. Insert the router bit into the collet.



6. Tighten the collet with spindle wrench.



7. When collet is secured, unlock the spindle arbor.
8. Rotate the collet to ensure cutter rotates freely. Adjust fence, guard and use the right table insert to create practically minimal cutter clearance.

### To Remove Router Collet

1. **Disconnect machine from power source!!**
2. Lock spindle arbor.
3. Raise the arbor all the way up.
4. Loosen the collet with the spindle wrench provided.

## Test Run

Each shaper has been inspected and calibrated before leaving the factory to meet our quality and precision standards. To get familiar with all safety features and controls before using this machine for production work, it is advised to complete the following test run. Please remove spindle, cutters and clean up shaper table before running the following tests.

**Verify emergency stop button prevents unintentional startups.**

1. Press STOP button.
2. Connect shaper to power source.
3. Press the green power button.
4. STOP button is not reset. Machine will not power on.

**Verify rotation direction switch has to be at OFF position when machine is powered on, and machine can be reset.**

5. Reset STOP button by rotating it clockwise until it pops up.
6. Set rotation direction switch to "FOR" position.
7. Press the green power button. The red ALARM light should turn on, and motor should not start.
8. Press STOP button or unplug shaper. Wait for 1 minute for the machine to reset.
9. Set rotation direction to "OFF".
10. Reset STOP button and press the green power button, the green READY light should turn on. Set rotation speed to the lowest, then rotation direction to "FOR", and motor will start.

**Verify magnetic switch is functional for preventing unintentional restart after a power outage.**

11. Continue from previous step, with motor running, unplug machine from power.
12. Reconnect machine to power source. Motor should not restart.
13. After setting rotation direction switch to "OFF", press the green power button to turn on machine, and "READY" light will come on.

**Verify rotation switch and speed dial are functional.**

14. Continue from previous step, set rotation direction to "FOR"
15. The quill should rotate counterclockwise when looking down through the table opening.
16. Set rotation direction to "OFF"
17. Wait until the quill comes to a complete stop, then set rotation direction to "REV"
18. The quill should rotate clockwise when looking down through the table opening.
19. Change rotation speed from minimum to maximum. RPM display should show machine speed goes from 5000 RPM to 9999 RPM. Reduce speed to minimum when finished.
20. Set rotation direction to "OFF" to stop the motor.

**Verify spindle elevator and digital readout are functional.**

21. Move spindle to the lowest position.
22. Readings of digital readout should change when lowering the spindle, and spindle can be lowered to 0" as indicated on the spindle height scale.
23. Reset digital readout and raise spindle all the way up.
24. Spindle should be able to raise to 4" as shown on the scale and digital readout.
25. Press STOP button to power off machine and complete the test.

Congratulations for completing the test run! If you discover any issue from the tests, please refer to the troubleshooting section and maintenance section to diagnose issues and make adjustments.

## Preparation for Wood Shaping

### Material Selection and Inspection

Only use natural wood materials that is in good quality. Cracked stock, board with loose knots can break apart and cause severe kickbacks, which can lead to severe injuries and machine damages.

Do not shape treated lumber or anything that contains harmful chemicals, as this will spread wood dust that contain such harmful chemicals.

Carefully inspect workpiece for foreign objects. Nails, staples, rock chips and other objects embedded on wood surface will damage shaper cutter. Clean workpiece with a stiff brush as needed.

### Warped Stock

Workpiece should have at least one flat surface so it can be pushed firmly against the fence or the table for feeding. Boards that are cupped, bowed or twisted should have at least one surface jointed flat before being processed by a shaper.


### Support Long Workpiece

Support long/wide boards with rollers or other devices to avoid injuries.

### Safety Devices

To reduce the chance of kickback and accidental cutter contact, create special jig to hold down workpiece that is less than 12" long, or if it is difficult to feed steadily. Use starting pin or pivot board to initiate a cut for freehand shaping.

## Shaping Wood

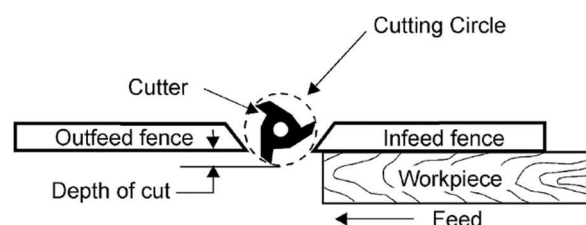
 <b>WARNING</b>	<p><b>Follow the "6-Inch Rule". Keep your hands at least 6 inches away from the cutter by using hold downs, push sticks, and/or push blocks.</b></p> <p><b>Use special jigs to hold down workpiece less than 12 inches long.</b></p>
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### Shaping Long and Straight Pieces

Using the fence is the safest and the best way of shaping straight pieces. Always use the fence whenever the work permits. Depends on situation, the infeed and outfeed fences will need to be adjusted to properly support a workpiece.

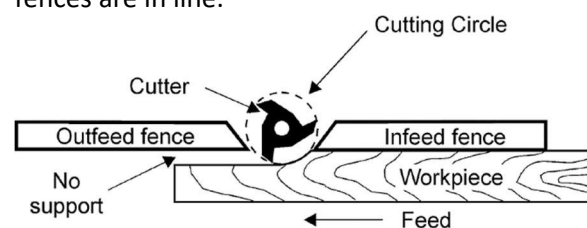
#### Case 1: Edge is partially shaped

When shaping a piece where a portion of the original edge remains intact, both the infeed and outfeed fences should be in line.



#### Case 2: Entire edge is shaped

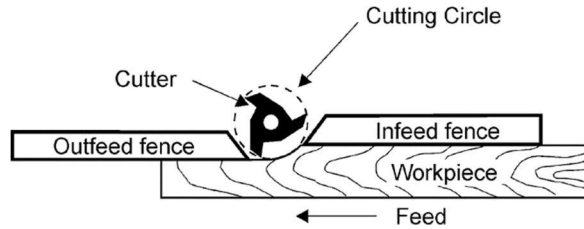
When using the shaper for jointing work or making a full bead, the shaped edge will not be supported by the outfeed fence when both fences are in line:



In this case, the outfeed fence should be adjusted to support the workpiece. With the shaper running, move a small section of the workpiece through the cutter.

When the workpiece entered approximately 1/3 of the outfeed fence, stop the machine. Hold the workpiece in place, and use the micro-

adjustment dial to move the outfeed fence forward, until it makes contact with the workpiece. The outfeed fence will then be in line with the cutting circle and supporting the workpiece. Disengage the workpiece from cutter, and the operation can continue.




### Cross Grain Shaping Tips

The workpiece is more likely to chip out when shaping across grain. Using a scrap piece to support the workpiece at the end of the cut can mitigate this problem.

If all four sides of the workpiece need to be shaped, shape the cross-grain sides first.

Often times cross grain shaping involves cutting the short edges of a workpiece. If that is the case, use miter gauge, or other cross cut jigs to support the workpiece so it can be fed steadily.

  
**WARNING**

When using miter gauge, do not feed workpiece against the fence. If the fence is not perfectly parallel to the miter slot, workpiece can bind and kickback may occur.

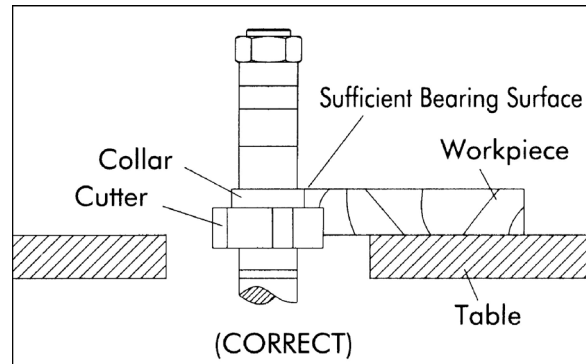
### Shaping Tall Workpieces

The height of the fence is 4-3/4" tall. For shaping tall workpieces, mounting an auxiliary fence, or using a tenon jig, will provide better support for feeding workpieces safely.

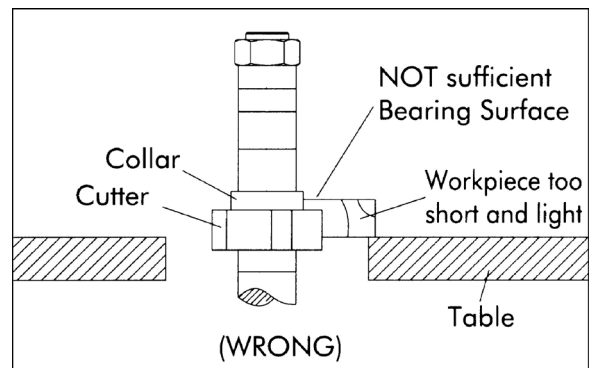
### Shaping with Collars

Make sure the edge of the workpiece that rides against the collar is smooth. Otherwise any irregularity on that edge will be duplicated on the shaped surface.

When shaping with collars, the collar must have sufficient bearing surface.



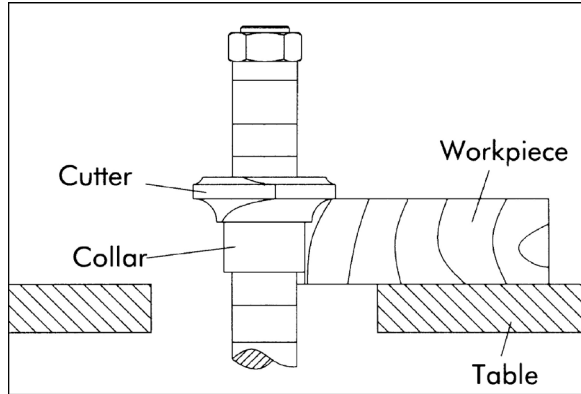
The work must also be fairly heavy relative to the cut being made. Never shape a short, light workpiece against the collars.





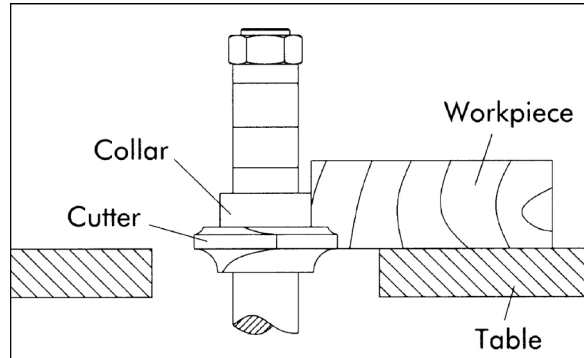
The collars may be used in any of the following positions: above, below, or between the cutters.

When the collar is used below the cutter. The progress of the cut can be seen throughout the operation. However, any accidental lifting of the work will gouge the wood and ruin the workpiece.



When the collar is used above the cutter, the cut cannot be seen, but this method offers an advantage in that the cut is not affected by slight

variations in the thickness of the stock. Also, accidental lifting of the workpiece will not gouge the workpiece; simply repeat the operation to correct the mistake.



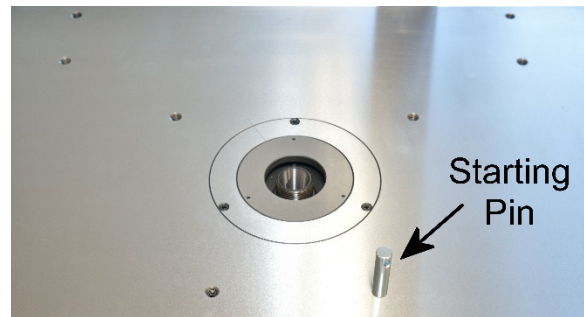
Using the collar between two cutters has the advantages and disadvantages of the first two procedures, and is frequently used where both edges of the work are to be molded.


### Freehand Shaping

Freehand shaping requires precise control of the workpiece and should only be performed by advanced users.

Use the provided starting pin or a custom-made pivot board to initiate a cut.

Never start freehand shaping at a corner.



 <b>WARNING</b>	<b>Proceed freehand shaping with extreme caution as there is a higher risk of accidental cutter contact and cutter catches in the workpiece. These accidents can result in serious injuries.</b>
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# Accessories

Oliver Machinery has a collection of accessories and add-ons to enhance productivity of your shaper. Please visit our website [OLIVERMACHINERY.NET](http://OLIVERMACHINERY.NET) to purchase these items.

You may also call **1-800-559-5065** or email [PARTS@OLIVERMACHINERY.NET](mailto:PARTS@OLIVERMACHINERY.NET) to purchase these items. We are available Monday through Friday, 9AM - 5PM Pacific Time.



**WARNING**

**Using unapproved accessories may cause machine to malfunction, resulting in serious injury and/or machine damage. Only use accessories recommended for this machine.**

## Collets



Item	Stock Number
1/4" Collet	4705.A002
1/2" Collet	4705.A003

## Spindle Assemblies



Item	Stock Number
1/2" Spindle	10047.A001
3/4" Spindle	10047.A002
1" Spindle	10047.A003
1-1/4 Spindle	A-10047.A006

## Touchup Paint

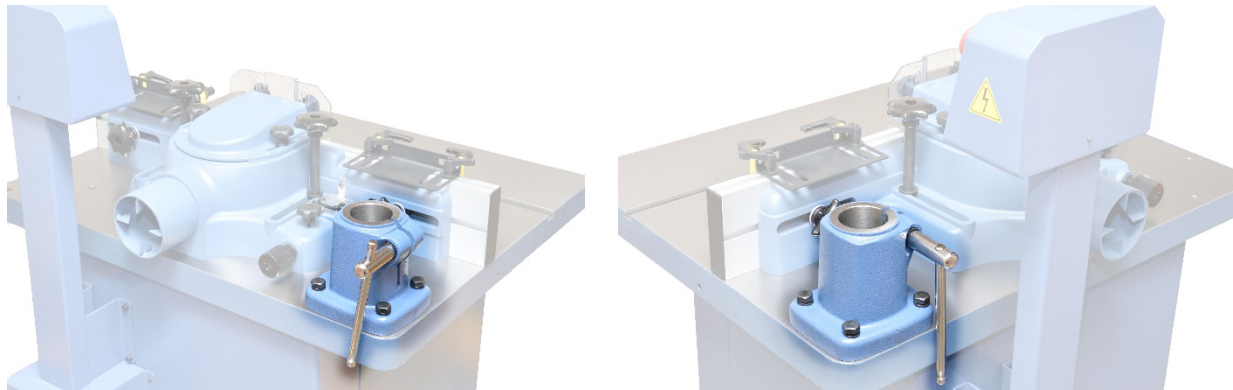


Keeping all painted surface in good condition not only keeps your machine looks nice, it keeps rusts away. We have pre-mixed spray paint available in Oliver-Blue for purchase.



## Power Feeders

Two power feeders are available for 10047VS Shaper. They can be installed on either side of the shaper table in the back.



### Features

- Polyurethane covered rollers provide excellent grip while protecting the work surface.
- Eight feed speeds and choice of three or four rollers to fit any application.
- Versatile stand allows adjustment of 10" in height and 18" in reach.
- Powerful TEFC motor available in single or three-phase.
- CSA Listed



Model	APF0038
Stock Number	APF0038.001 1HP, 1Ph, 230V (4.2A)
Stock Number	APF0038.002 1HP, 3Ph, 230V (3.4A)
Number of Rollers	3
Roller Size	4-3/4"(D) x 2-3/8"(W)
Feed Speed	8 Speeds: 6.5 / 13 / 18 / 22 / 36 / 43 / 55 / 108 FPM
Net Weight	137 lbs.



Model	APF0048
Stock Number	APF0048.001 1HP, 1Ph, 230V (4.2A)
Stock Number	APF0048.002 1HP, 3Ph, 230V (3.4A)
Number of Rollers	4
Roller Size	4-3/4"(D) x 2-3/8"(W)
Feed Speed	8 Speeds: 6.6 / 13 / 18 / 22 / 36 / 43 / 55 / 108 FPM
Net Weight	146 lbs.

Please visit our website at [WWW.OLIVERMACHINERY.NET](http://WWW.OLIVERMACHINERY.NET) for additional recommended accessories.

# Maintenance

Routine maintenance keeps your shaper in optimal condition. Please follow the maintenance schedule below, and use the maintenance record worksheet attached in the back of the manual to document all tasks completed.

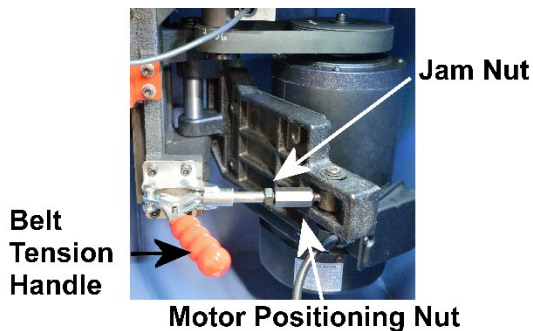
**NOTICE:** Maintenance schedule may vary for individual users due to different situations and safety requirements.

Task	Frequency
Check spindle and quill for damages	Every time when changing spindle.
Check electrical cord and plug for signs of failure	Every day.
Remove dust from cabinet	Every week, or whenever there is heavy dust buildup.
Re-coat table top with rust protectant	Every week.
Check V-belt tension and wear	Every month. Replace V-belt when it shows signs of cracking or glazing.
Lubricate motor bearings	<b>**Not needed**</b> Motor bearings are permanently sealed and lubricated.

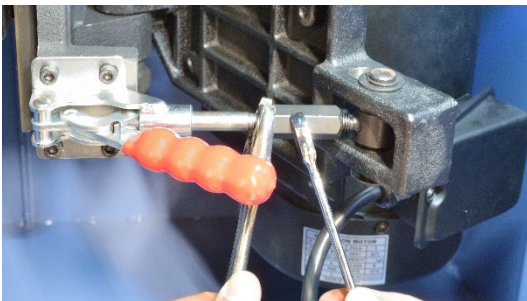
## Inspect / Adjust Belt Tension

Belt tension was set in the factory and should not require adjustments initially. Overtime, the drive belt may stretch and therefore it should be inspected regularly and make adjustments as needed.

1. **Disconnect machine from power source!!**
2. Open cabinet door to access drive belt.
3. When pushing down into the belt midway between the pulleys, the belt should flex by 1/8" using moderate finger pressure.
4. If belt tension needs to be adjusted, pull belt tension handle to the left to release belt tension, then loosen the jam nut.

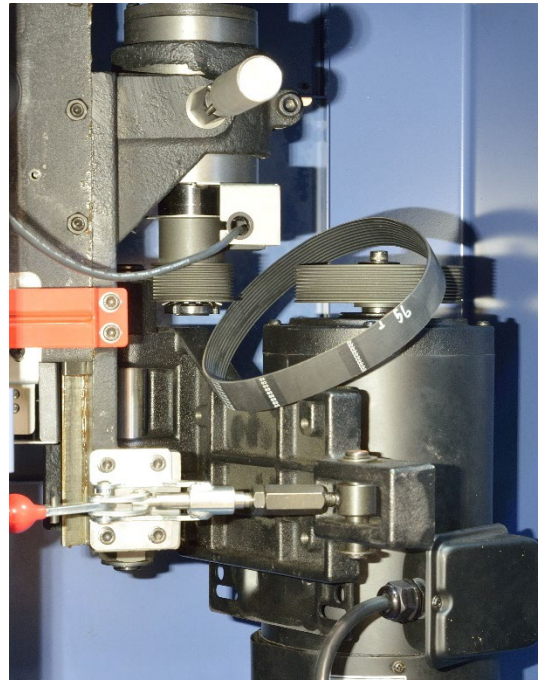


5. Adjust belt tension by rotating the motor positioning nut. Make small, incremental adjustments and check belt tension with every 1/2 turn of the nut. To test belt tension, hand tighten the jam nut and push the tension lever back to the right to lock the motor in place. If the belt tension lever is too difficult to move, reduce belt tension by a bit.
6. Once proper belt tension is set, use one wrench to hold motor positioning nut in place and re-tighten the jam nut.



## Replace Drive Belt

1. **Disconnect machine from power source!!**
2. Open cabinet door to access drive belt.
3. Pull belt tension handle all the way to the left to release the belt.

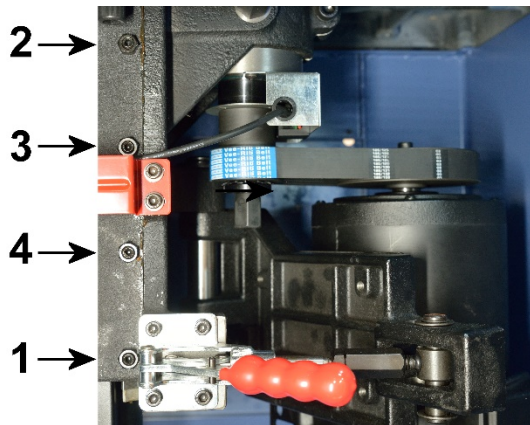


4. Install a new belt. Rotate the pulleys to make sure the new belt is sitting properly on the grooves of the pulleys.
5. Adjust belt tension. See previous section for details.

## Spindle Elevator Adjustment

The gib of the spindle elevator was factory adjusted and initially should not require readjustment. Depending on the amount of use, the spindle elevator may become loose and the spindle may vibrate. In this case, it will need to be adjusted:

1. Mark the original position of the set screws.
2. With a 13mm wrench, loosen four jam nuts that secure the gib set screws.
3. Use a 4mm hex wrench to tighten each set screw, 1/8 or less turn at a time. Begin with the lowest one, followed by the uppermost one, then the two middle set screws.



**NOTICE:** If the gibs are too tight, the spindle height adjustment handwheel will be difficult to turn. Loosen the gib set screws.

4. When the right amount of tightness is achieved, hold the set screw in position with a 4mm hex wrench to maintain the setting, and tighten the jam nut with a 13mm wrench.

# Troubleshooting

## Mechanical / Electrical Issues

Problem	Possible Cause	Solution
<b>Machine will not start</b>	Emergency stop is engaged.	Rotate "STOP" button clockwise until it pops up.
	Not connected to power source.	<ol style="list-style-type: none"> <li>1. Make sure machine is plugged in.</li> <li>2. Check electrical panel for tripped circuit breaker or blown fuse.</li> <li>3. Ensure all electrical connections have good contacts.</li> </ol>
	Low voltage / current.	Have an electrician to check/repair the power circuit.
	Faulty switch/motor/capacitor.	Contact customer service for further assistance.
<b>Alarm light turns on</b>	Rotation direction switch is not in "Off" position when machine turns on.	Set rotation direction switch to "Off". Unplug machine for 1 minute to reset machine.
	Machine is jammed.	Release spindle lock or remove any obstacles that jams the machine. Unplug machine for 1 minute to reset machine.
<b>Spindle does not rotate</b>	Rotation direction switch is in "Off" position.	Set direction to either "FOR" or "REV" for your operation.
<b>Machine stopped during operation.</b>	Thermal overload protection triggered.	Hit STOP button and wait for at least 30 seconds to cool down machine. Overload protection will reset automatically and the green ready light will turn on when the machine is cooled. Reduce depth of cut / feed rate before continue.
	Tripped circuit breaker or blown fuse.	Reconnect circuit. Reduce depth of cut / feed rate before continue.
<b>Overload protection is triggered frequently</b>	Feeding stock too fast.	Feed stock more slowly.
	Dull cutter.	Clean / replace cutter.
	Extension cord too light or too long.	Use a shorter / heavier cord that meets this machine's electrical requirements.
<b>Machine stalls or does not come up to speed</b>	Extension cord too light or too long.	Use a shorter / heavier cord that meets this machine's electrical requirements.
	V-Belt slippage.	Increase belt tension.
	Removing too much material in one pass.	Make lighter cuts or reduce feed rate.
	Cutter slippage	Tighten spindle cap screw. Ensure cutter / spindle is installed properly.
	Motor / capacitor issue.	Contact customer service for further assistance.



<b>Difficult to turn spindle height adjustment handwheel</b>	Handwheel is locked.	Loosen handwheel lock knob.
	Sawdust and dirt in raising mechanisms.	Brush or blow out loose dust and dirt. Lubricate spindle elevator lead screw as needed.
	Spindle gib too tight.	Adjust spindle gib tightness.
<b>Machine vibrates excessively</b>	Damaged cutter.	Replace cutter.
	Machine stands on uneven floors.	Reposition machine on flat, level surface.
		Use attached rubber feet to level machine.
	V-belt not tensioned correctly.	Adjust belt tension.
	Bad v-belt.	Replace v-belt.
	Spindle gib wear.	Adjust spindle gib pressure.
	Damaged pulley.	Replace pulley.
	Improper motor mounting.	Check and adjust motor mounting.
Motor/spindle bearing issue.	Contact customer service for further assistance.	

### Operation / Cut Quality Issues

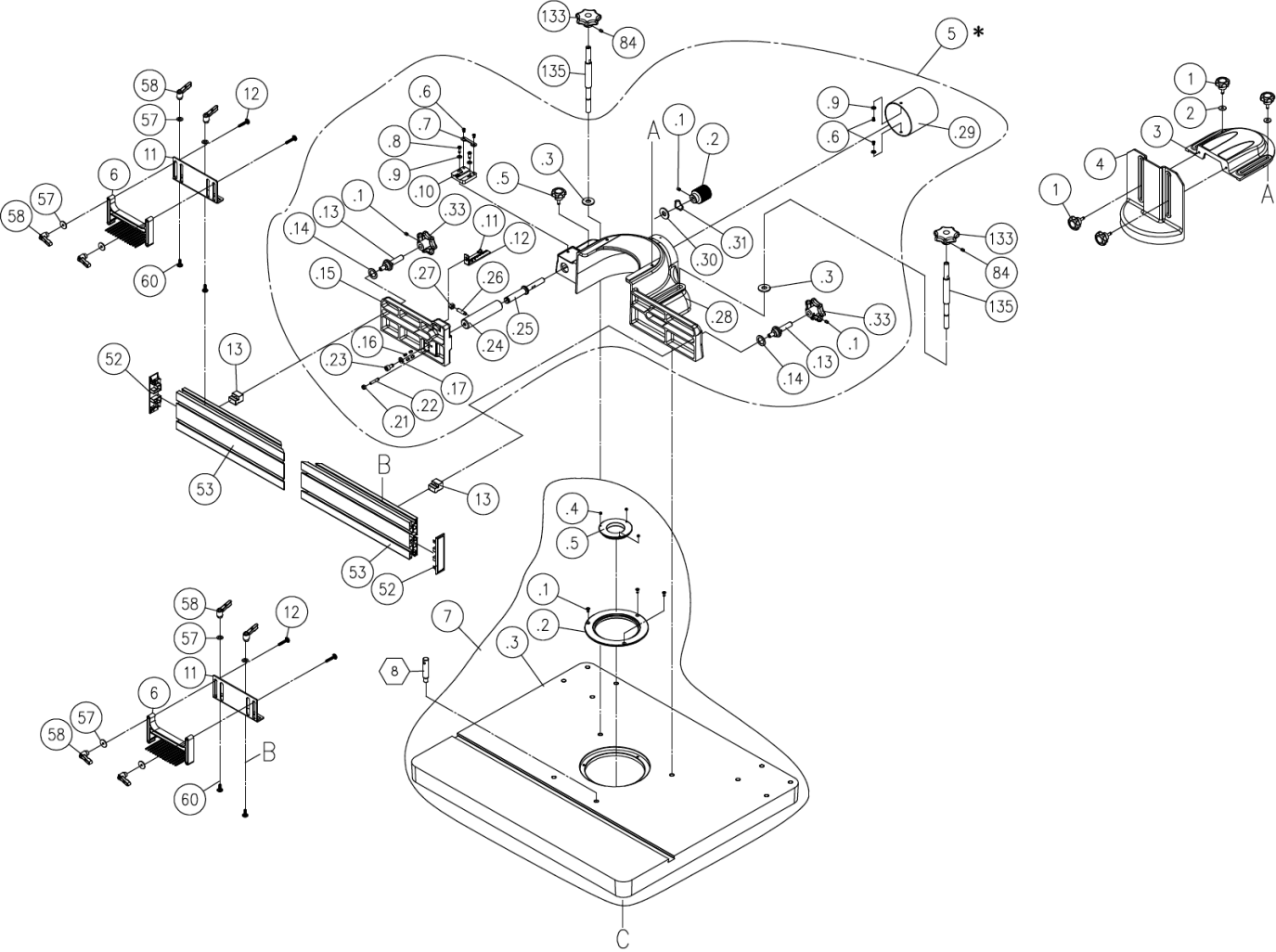
Problem	Possible Cause	Solution	
<b>Work pulled from hand</b>	Inadequate stock support.	Hold work firmly against the table / fence. Adjust the hold down pressure.	
		Use special jigs to support short stock.	
		For shaping short edges of a workpiece, use miter gauge with clamp or hold down.	
	Feeding work in wrong direction.	Feed work against cutter rotation direction.	
<b>Outfeed fence catches stock</b>	Incorrect cutter rotation direction.	Check and correct cutter rotation direction.	
	Removing too much materials in one pass.	Make lighter pass or reduce feed speed if possible.	
	Outfeed fence not adjusted correctly.	Reduce infeed/outfeed fence offset.	
<b>Edge splits off on cross grain cut</b>	Warped stock.	Ensure a flat surface is used to press against the fence.	
		Some wood types tend to split with cross cuts.	Use sharp cutters and reduce depth of cut.
		Make cross-grain cuts first then finish with grain.	
		Use scrap block to support at the end of a cut.	

<b>Stock burns</b>	Dull cutter.	Clean / replace cutter.
	Spindle speed too high.	Reduce spindle speed.
	Feed rate too low.	Increase feed rate.
	Cutter rotates in wrong direction.	Correct cutter rotation direction.
	Removing too much materials in one pass.	Take light cuts; attain full depth of cut with several passes.
<b>Raised areas on shaped edge</b>	Inconsistent hold down pressure.	Keep work firmly against fence/collar/table when feeding stock. Use hold-downs.
<b>Depth of cut not uniform</b>	Fence is not aligned.	Align infeed/outfeed fences. Check fence coplanarity.
	Feed pressure not uniform.	Use hold-downs or feeder; keep pressure against fence or collars consistent.
	Imperfection on the edge copied by collar.	Ensure the collar rides on a perfect edge with adequate support.
<b>Variation in height of cut</b>	Variation in pressure which holds work down on table.	Keep pressure firm throughout pass, use hold-downs; make pass slowly and steadily. Whenever possible, keep cutter under stock.
<b>Cuts not smooth</b>	Dull cutter.	Replace with sharp cutter.
	Spindle speed too low.	Increase RPM.
	Feeding too fast.	Reduce feed rate.
	Cutting against grain.	Cut with grain whenever possible.
	Removing too much materials in one pass.	Take light cuts; attain full depth of cut with several passes.

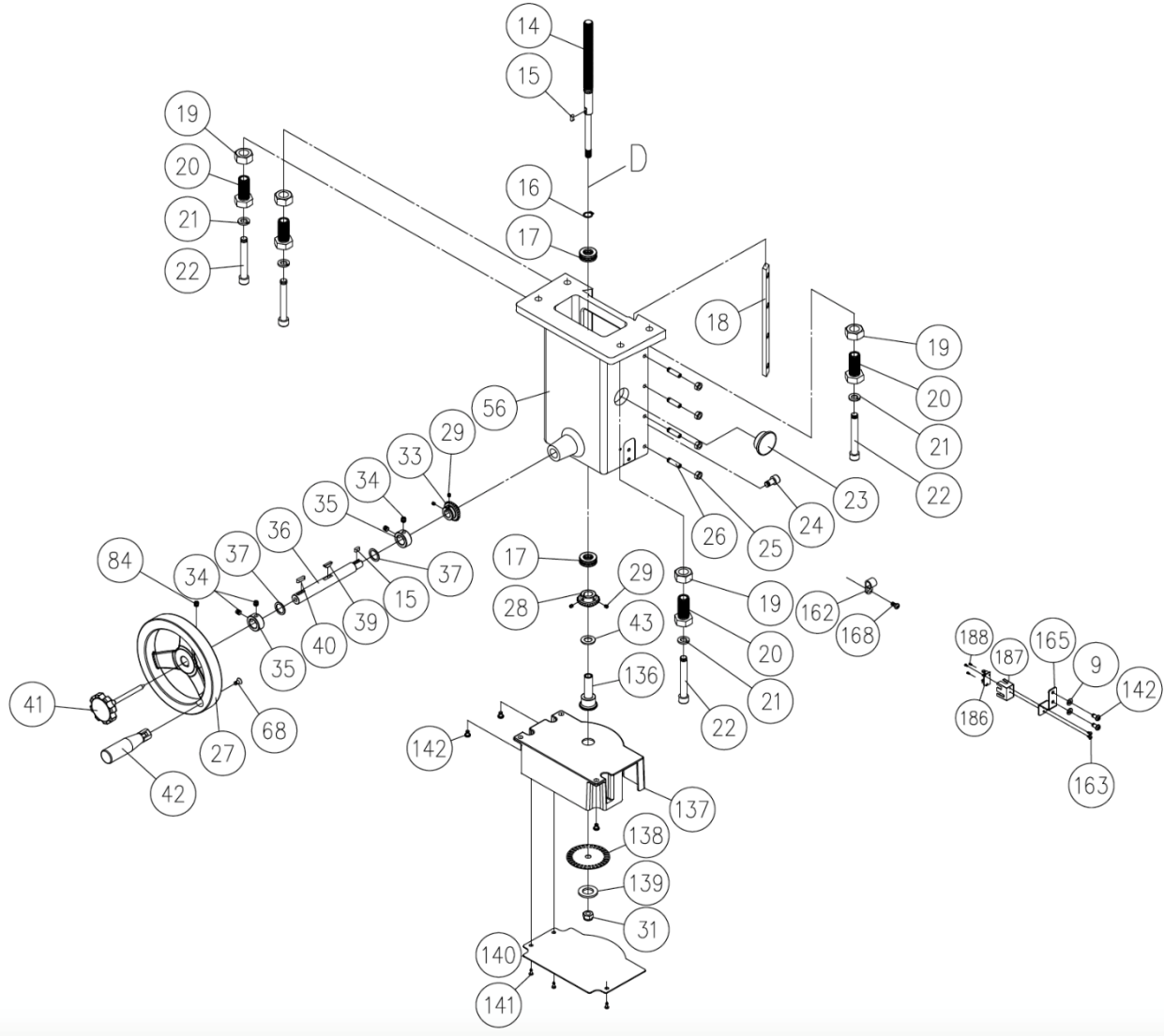


# Parts List

## Table and Fence

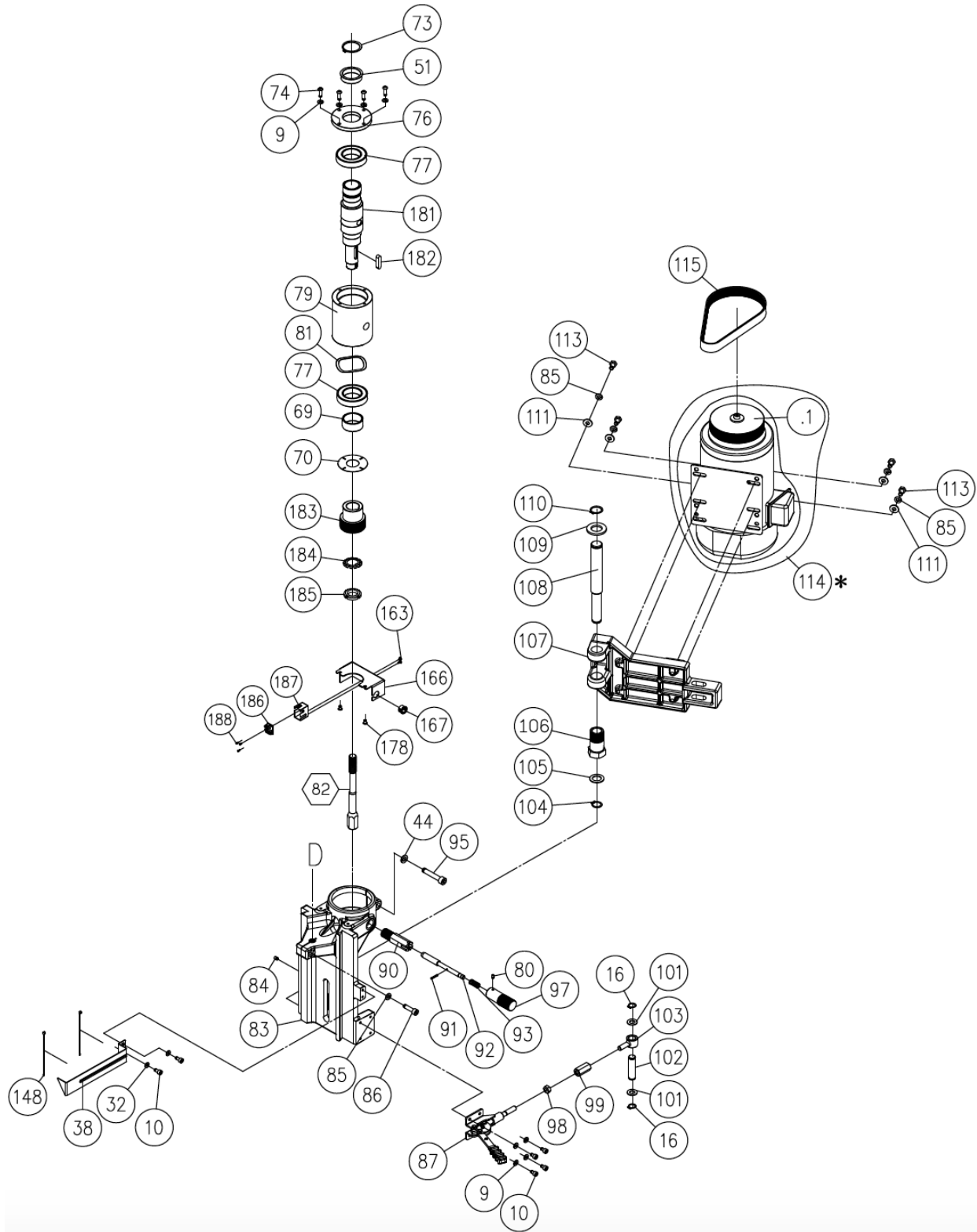


# Spindle Elevator Assembly

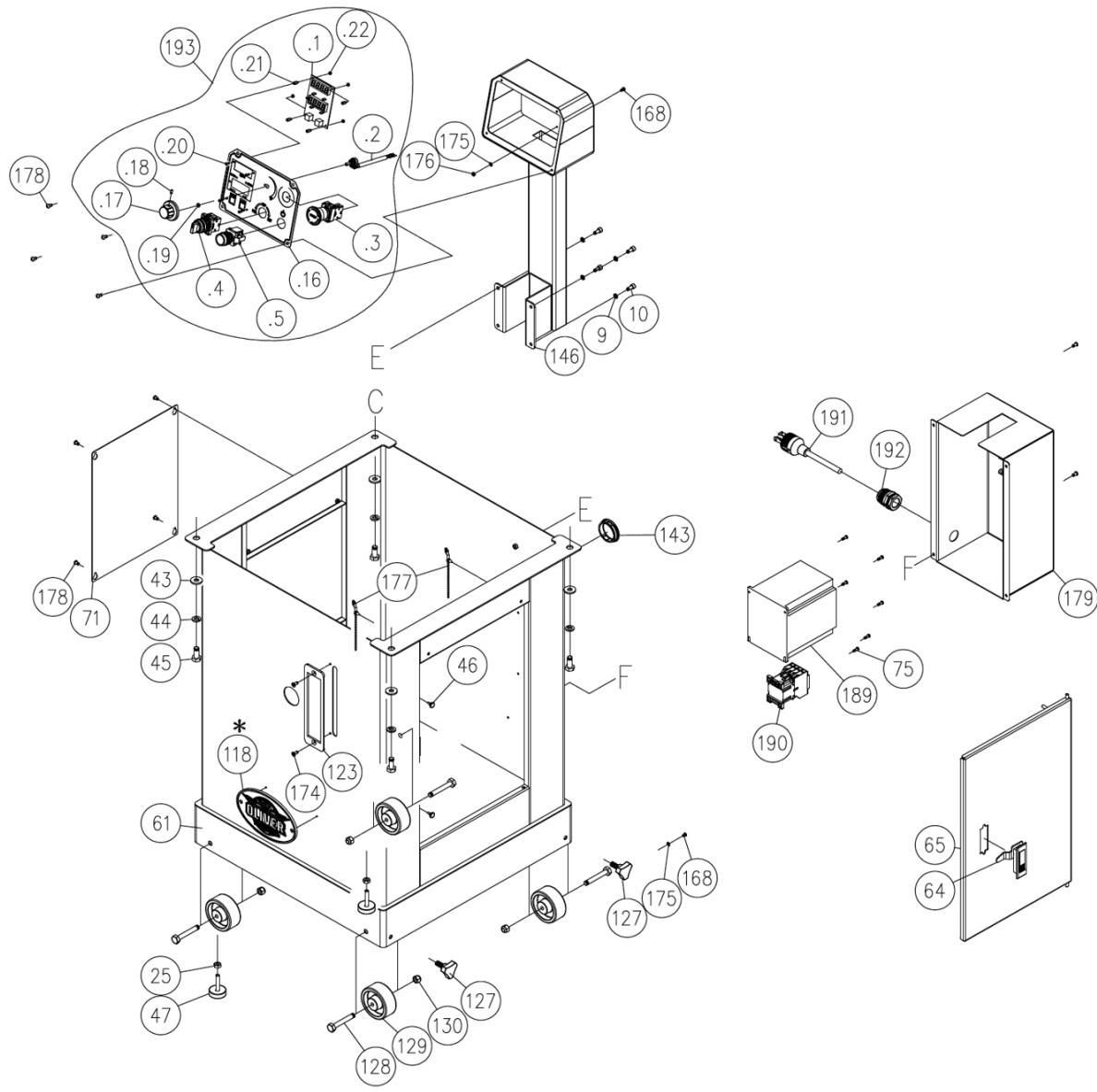




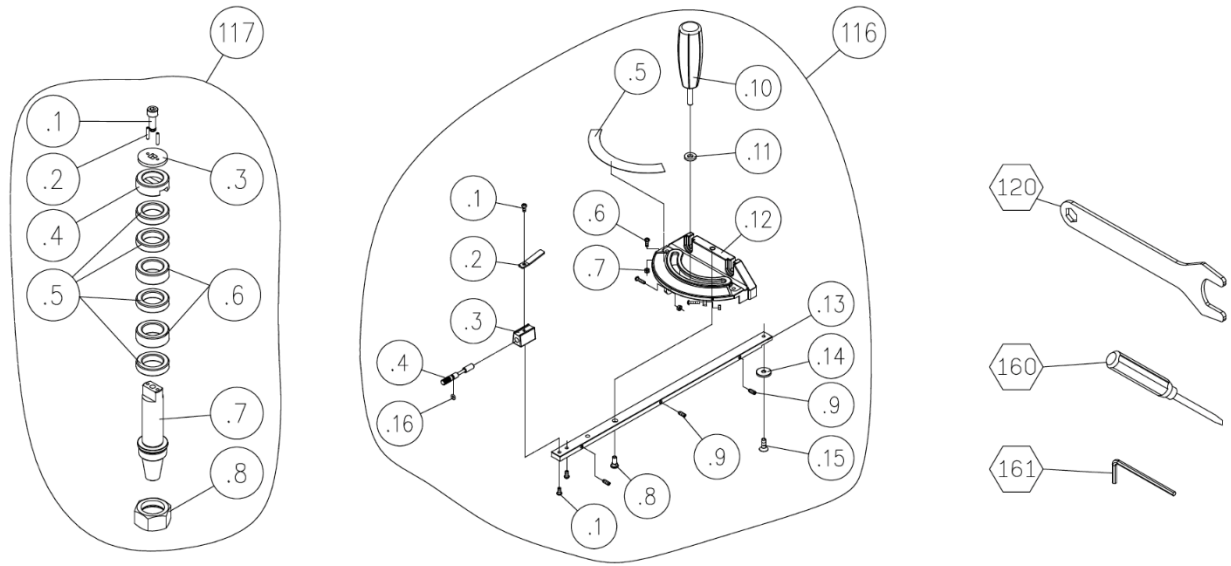
# Motor and Spindle



# Cabinet and Control Panel



# Spindle & Miter Gauge



Index	Part Number	Descriptions	Specifications	QTY
1	230131-000	Knob		4
2	006001-036	Flat Washer	6.7*19*2.0t	2
3	300015-000	Safety Guard Holder		1
4	250583-620	Spindle Guard		1
5	924822-000	Cutter Guard Assembly		1
5.1	001902-102	Set Screw	M6*1.0P*8	3
5.2	310160-911	Knob		1
5.3	006001-153	Flat Washer	13.5*30*3t	2
5.5	230131-000	Fix Bolt		1
5.6	000302-102	Pan Head Screw	M4*0.7P*8	4
5.7	250693-615	Slot Bar		1
5.8	000303-106	Pan Head Screw	M5*0.8P*16	2
5.9	006001-155	Flat Washer	6*12*1t	4
5.1	310161-909	Bracket		1
5.11	000303-103	Pan Head Screw	M5*0.8P*10	1
5.12	310162-909	Scale		1
5.13	361014-901	Lead Screw		2
5.14	250695-621	Plastic Washer		2
5.15	300019-000	Bracket - Left		1
5.16	000203-104	Set Screw	M6*1.0P*12	4
5.17	006305-100	Spring Washer	8.2*15.4	1
5.21	008005-100	Hex Nut	M6*1.0P(10B*5H)	1
5.22	000203-109	Set Screw	M6*1.0P*30	1
5.23	000104-104	Cap Screw	M8*1.25P*16	1
5.24	360855-000	Bracket Shaft		1
5.25	360857-901	Adjust Screw		1
5.26	230258-901	Position Set Screw	M8*1.25P	1
5.27	008006-100	Hex Nut	M8*1.25P(13B*6.5H)	1
5.28	300020-000	Cutter Guard		1
5.29	190155-000	Dust Chute		1
5.3	006001-096	Flat Washer	13.5*32*3t	1
5.31	006708-100	Wave Washer	12.7*18.1	1
5.33	240080-904	Knob		2
6	250608-000	Featherboard	TS-35	2
7	922139-000	Table Assy		1
7.1	002101-101	Flat Head Screw	M5*0.8P*20	3
7.2	050894-902	Insert Ring (Large)		1
7.3	050891-000	Table		1
7.4	001904-102	Set Screw	M4*0.7P*4	3
7.5	050893-902	Insert Ring (Small)		1
8	360735-905	Starter Pin		1
9	006303-100	Spring Washer	6.5*10.5	14
10	000103-103	Cap Screw	M6*1.0P*12	10
11	172031-901	Bracket		2
12	001004-203	Carriage Bolt	M5*0.8P*30L	4
13	130233-903	Slide		2

Index	Part Number	Descriptions	Specifications	QTY
14	360714-901	Up/Down Shaft		1
15	012003-003	Key	5*5*12	2
16	010006-000	Retaining Ring	STW-15	3
17	031006-001	Bearing	51202	2
18	050696-000	Gib		1
19	008017-100	Hex Nut	M20*1.5P(30B*16H)	4
20	380647-902	Adjust Screw	M20*1.5P	4
21	006308-100	Spring Washer	12.2*21.6	4
22	000106-112	Cap Screw	M12*1.75P*80	4
23	250159-615	Plug		1
24	002604-101	Pan Head Lock Screw	M10*1.5P*20	1
25	008006-100	Hex Nut	M8*1.25P(13B*6.5H)	6
26	000204-109	Set Screw	M8*1.25P*40	4
27	240077-000	Handwheel		1
28	380767-000	Bevel Gear	(Left Thread)	1
29	001901-101	Set Screw	M5*0.8P*5	4
31	008307-100	Lock Nut	M10*1.25P(17B*12H)	1
32	006003-023	Flat Washer	6.3*13*2t	2
33	380768-000	Bevel Gear	(Right Thread)	1
34	004403-103	Set Screw	5/16"-18NC*5/16"	4
35	360376-901	Fix Ring		2
36	360721-901	Lead Screw		1
37	006006-106	Flat Washer	19.1*25.4*1.6	2
38	172321-156	Pointer		1
39	130061-000	Key		1
40	012003-007	Key	5*5*20	1
41	230128-916	Lock Handle		1
42	230046-000	Handle		1
43	006001-075	Flat Washer	10.3*22*2.0t	5
44	006307-100	Spring Washer	10.2*18.5	5
45	000004-202	Hex Screw	M10*1.5P*25	4
46	340007-615	Spacer		2
47	230109-615	Packing Screw		2
51	190164-901	Bushing		1
52	250593-615	End Cap		2
53	310159-909	Fence		2
56	050692-008	Support		1
57	006001-127	Flat Washer	5.5*22*2.0t	8
58	230178-000	Lock Handle		8
60	001004-202	Carriage Bolt	M5*0.8P*16L	4
61	174803-000	Stand		1
64	230134-000	Latch		1
65	172841-000	Door		1
68	000702-102	Socket Hex Screw	M6*1.0P*12	1
69	190165-901	Bushing		1
70	174804-000	Plate		1



Index	Part Number	Descriptions	Specifications	QTY
71	173265-000	Side Cover		1
73	010025-000	S Ring	STW-40	1
74	000801-104	Pan Head Hex Screw		4
75	000302-204	Pan Head Phillips Screw		6
76	050892-901	Bearing Housing		1
77	033711-002	Ball Bearing	6008-2NSE	2
79	051046-000	Quill		1
80	000203-102	Set Screw	M6*1.0P*8	1
81	006725-100	Wave Washer		1
82	380505-902	Draw Bar		1
83	050691-008	Arbor Shaft Bracket		1
84	001902-102	Set Screw	M6*1.0P*8	4
85	006305-100	Spring Washer	8.2*13.7	5
86	000104-110	Cap Screw	M8*1.25P*30	1
87	230349-000	Belt Tension Handle	GH-31501	1
90	380511-901	Connector		1
91	011002-105	Spring Pin	4*20	1
92	360724-901	Rod		1
93	280151-905	Spring		1
95	000105-106	Cap Screw	M10*1.5P*55	1
97	300013-000	Handle		1
98	008007-100	Hex Nut	M10*1.5P(17B*8H)	1
99	380507-901	Hex Bushing		1
101	006001-125	Flat Washer	15.5*25*2.5t	2
102	360719-901	Connector		1
103	380513-901	Shaft		1
104	010010-000	Retaining Ring	STW-20	1
105	006001-142	Flat Washer	21*38*3t	1
106	380648-902	Adjustment Bolt	M30*1.5P	1
107	050689-008	Motor Bracket		1
108	360720-901	Shaft		1
109	006001-118	Flat Washer	25*44*4t	1
110	010011-000	Retaining Ring	STW-25	1
111	006001-042	Flat Washer	8.2*22*4.5t	4
113	000003-105	Hex Screw	M8*1.25P*25	4
114.1	901218-000	Motor Assembly	3HP*220-240V*60HZ*3PH*2P	1
114.1	381433-902	Motor Pulley		1
115	014318-000	V Belt	230 J10	1
116	924589-000	Miter Gauge Assy		1
116.1	003303-105	Pan Head Screw	3/16"-24NC*3/8"	3
116.2	250193-620	Pointer		1
116.3	130053-903	Spacer		1
116.4	360381-901	Angle Set Bar		1
116.5	571151-000	Miter Scale		1
116.6	003305-106	Pan Head Screw	5/32"-32NC*5/8"	3
116.7	009001-100	Hex Nut	5/32"-32NC	3

Index	Part Number	Descriptions	Specifications	QTY
116.8	290017-901	Shoulder Screw		1
116.9	230222-901	Fix Ball		3
116.1	230140-615	Handle		1
116.11	006002-051	Flat Washer	8.5*18*3t	1
116.12	090067-008	Miter Gauge Body		1
116.13	380614-904	Slot Bar		1
116.14	130380-903	Ring		1
116.15	000403-101	Flat Head Screw	M6*1.0P*8	1
116.16	043716-000	O-Ring	AS008	1
117	10047.A006	1-1/4" Arbor Assy		1
117.1	000105-103	Cap Screw	M10*1.5P*30	1
117.2	011102-103	Pin	4.0*20	2
117.3	171848-902	Washer	10.5*45*5t	1
117.4	380531-901	Bushing		1
117.5	380039-901	Spacer		4
117.6	380038-901	Spacer		2
117.7	220096-000	1-1/4" Arbor		1
117.8	380818-901	Arbor Nut		1
118	SS08-10	Machine Labels		
120	171895-904	Wrench	50mm	1
123	174805-904	Scale Frame		1
127	230388-000	Bolt	SS400	4
128	000003-313	Hex Screw	M8*1.25P*60 (Thread length 30)	4
129	250399-615	Wheel		4
130	008306-100	Lock Nut	M8*1.25P	4
133	240080-904	Knob		2
135	361015-901	Shaft		2
136	360809-902	Bushing		1
137	250630-000	Anti-Dust Cover		1
138	174919-000	Sensor Plate		1
139	172166-901	Packing Screw		1
140	172095-000	Anti-Dust Plate		1
141	001102-604	Self-Tapping Screw	M4*1.59P*12	3
142	000304-203	Pan Head Phillips Screw	M6*1.0P*12	5
143	021809-000	Ring	SB-50	1
146	174806-000	Switch Support		1
148	021004-000	Lock Tie	ALT-085S-B Black	2
160	040401-000	Screwdriver	#1*75	1
161	040007-000	Allen Wrench	8*100mm	1
162	021102-000	Wire Buckle	ACC-2.5	1
163	001101-205	Self-Tapping Screw	M3*1.06P*6	4
165	171986-000	Bracket		1
166	174808-000	Anti-Dust Upper Cover		1
167	021812-000	Ring	NB-1216C	1
168	000302-202	Pan Head Phillips Screw	M4*0.7P*8	3
174	000402-104	Pan Head Phillips Screw	M5*0.8P*12	2

Index	Part Number	Descriptions	Specifications	QTY
175	006501-200	Teethed Washer	4.3*8.5(BW-4)	2
176	008002-200	Hex Nut	M4*0.7P(7B*3.2H)	1
177	230297-615	Chain		2
178	000804-103	Pan Head Hex Screw	M5*0.8P*10	14
179	174809-000	Rear Access Cover		1
181	360912-901	Shaft		1
182	012005-003	Key	8*7*35	1
183	381432-902	Pulley		1
184	006802-100	Washer	25	1
185	008201-100	Nut	M25*1.5P	1
186	491196-000	Sensor	CT	2
187	250665-615	Up/Down Sensor		2
188	001106-601	Self-Tapping Screw	M2*0.63P*6L	6
189	491165-000	Inverter	TECO L510-203-SH1 ( 2.2KW ; 1PH 200V 3HP )	1
190	490657-000	Magnetic Contact	MA-18(220V-240V)	1
191	453153-002	Cable w/CSA/UL plug	SJT 12AWG*3C*3700mn-(L6-30P)	1
192	023701-007	Strain Relief	MG25AS-14B (w/nut)	1
193	950805-000	Switch Plate Assembly		1
193.1	491164-000	LCM Display		1
193.2	950796-000	Variable Speed Button Assembly		1
193.3	490591-000	Emergency Stop Button	KB2(RED STOP)+1b contact point (220V)(Ø22)	1
193.4	490941-000	3 Speed Switch	Black Ø22 KB2-ED33(2a)(KEYON)	1
193.5	490183-000	Lightening Start Switch	Green (220V)	1
193.16	924818-000	Switch Plate Assembly		1
193.17	251375-675	Speed Adjust Knob		1
193.18	001904-104	Set Lock Screw	M4*0.7P*8L	1
193.19	043311-000	O-Ring (P Type)	P5	1
193.2	000806-103	Pan Head Hex Screw	M3*0.5P*8L	4
193.21	491160-000	Plastic Rod	HTS-308(M3) (KSS)	4
193.22	491166-000	Plastic Nut	PN-3(M3) (KSS)	4





# Warranty and Service

Oliver Machinery makes every effort to assure that its equipment meets the highest possible standards of quality and durability. All products sold by Oliver Machinery are warranted to the original customer to be free from defects for a period of two (2) years on all parts excluding electronics and motors which are warranted for one (1) year from the date of shipment. Oliver Machinery's obligation under this warranty shall be exclusively limited to repairing or replacing products or parts or components, at its sole option, determined by Oliver Machinery to be defective. Oliver Machinery shall not be required to provide other form of indemnity or compensation including but not limited to compensatory damages.

This warranty does not apply to defects due to direct or indirect misuse, abuse, negligence, accidents, unauthorized repairs, alternation outside our facilities, lack of maintenance, acts of nature, or items that would normally be consumed or require replacement due to normal wear and tear.

## **OTHER TERMS**

To obtain and exercise the warranty right, please call 800-559-5065 or fill out warranty request form online at [www.olivermachinery.net](http://www.olivermachinery.net).

Warranty parts are shipped via Parcel or Ground. Additional charge will occur and charge to customers if express shipping is required.

## **DISCLAIMER**

Under no circumstances shall Oliver Machinery be liable for death, personal or property injury or damages arising from the use of its products.

Oliver Machinery reserves the right to make changes without prior notice to its products to improve function or performance or design.

## **FOR MORE INFORMATION**

If you need assistance or have questions beyond what is covered in the scope of this warranty information, please call 800-559-5065 or email us at [info@olivermachinery.net](mailto:info@olivermachinery.net).





Oliver Machinery is always adding new Industrial Woodworking products to the line.

For complete, up-to-date product information, visit us online at:

[WWW.OLIVERMACHINERY.NET](http://WWW.OLIVERMACHINERY.NET)

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