

### PX12 Planer QuadTecII Cutterhead



MPLANPX12-0130 MPLANPX12-0130-R

Lagunatools.com

Thank you for investing in a PX12 Planer by Laguna Tools. This planer is one of a family of unique machines proudly offered by Laguna Tools. Every Laguna machine is engineered for years of dependable service. Please feel free to contact Laguna Tools if you have a question or suggestion. We appreciate working with you and your choice of a Laguna Tools machine for your shop.

Regards, Torben Helshoj President & Founder Laguna Tools

#### LATEST MANUAL:

Below is a QR code which will direct you to the manual reference page, where the latest version of the PX12 manual is located on the Laguna Tools website. The online manual may have updates and information added after the printed copy was released. Scan the code with your smartphone or copy the URL link to be directed to the latest manual page to reference your specific machine and model.

https://lagunatools.com/resources/product-manuals/#classic



This manual applies to the PX12 Planer. Enter the model number and serial number below for quick reference when ordering accessories, supplies or parts. NOTE: The model and serial number plate can be found on the side of the planer.

Model:

Place of purchase: \_\_\_\_\_

Serial: Date of purchase: \_\_\_\_\_

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## SAFETY

READ AND UNDERSTAND THIS MANUAL AND ALL INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions may result in electric shock, fire and/or serious personal injury or property damage! Electronic copies of this manual are available at <u>www.lagunatools.com</u>.

#### **SAFETY GUIDELINES - DEFINITIONS**

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols below. Please read the manual and pay attention to these sections.



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, <u>could</u> result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, <u>may</u> result in minor or moderate injury.



(Used without the safety alert symbol) indicates a potentially hazardous situation which, if not avoided, <u>may</u> result in property damage.

Woodworking, metalworking, composites, etc. (and similar materials) can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, feather-boards, goggles, dust masks and hearing protection can reduce the potential for injury. Even the best guard will not make up for poor judgement, carelessness, or inattention. *Always use common sense* and exercise caution in the workshop. If a procedure feels dangerous, do not try it. Figure out an alternative procedure that is safer. **REMEMBER:** Your personal safety is your responsibility.

### **IMPORTANT SAFETY INSTRUCTIONS**



This machine was designed for certain applications only. We strongly recommend that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted the manufacturer to determine if it can or should be performed on the product.

If you have any questions relative to its application DO NOT use the product until you have contacted the manufacturer and we have advised you.

When using an electrical appliance/machine, basic precautions should always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING (THIS MACHINE)!



To reduce the risk of fire, electric shock, or injury:

1. Do not leave appliance when plugged in. Unplug from outlet when not in use and before servicing.

2. Do not use outdoors or on wet surfaces

3. Do not allow to be used as a toy. Close attention is necessary when used by or near children.

4. Use only as described in this manual. Use only manufacturer's recommended attachments.

5. Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.

6. Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.

7. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

8. Do not handle plug or appliance with wet hands.

9. Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.

10. Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.

11. Turn off all controls before unplugging.

12. Use extra care when cleaning on stairs.

13. Do not use to pick up flammable or combustible liquids, such as gasoline, or use in areas where they may be present.

14. Connect to a properly grounded outlet only. See Grounding Instructions.

#### SAVE THESE INSTRUCTIONS

# **1.** Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.

- 2. Replace the warning labels if they become obscured or removed.
- 3. This SuperBrush is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of this type of machine, do not use until proper training and knowledge have been obtained.
- 4. Do not use this machine for other than its intended use. If used for other purposes, **LAGUNA TOOLS INC.**, disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
- 5. Always wear approved safety glasses/face shields while using this machine.
- 6. Before operating this machine, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended.
- 7. Wear ear protectors (plugs or muffs) during extended periods of operation.
- 8. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are: (next page)

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

Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a wellventilated area and work with approved safety equipment, such as face or dust masks/respirators that are specifically designed to filter out microscopic particles.

- 9. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
- 10.Make certain the switch is in the **OFF** position before connecting the machine to the power source.
- 11.Make certain the machine is properly grounded.
- 12.Make all machine adjustments or maintenance with the machine unplugged from the power source.
- 13.Form a habit of checking to see that all extra equipment such as adjusting keys, wrenches, scrap, stock, and cleaning rags are removed away from the machine before turning on.
- 14.Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately when maintenance is complete.
- 15.Make sure the dust collector is on a flat, even surface and the wheels locked in place before use.
- 16.Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 17.Provide for adequate space surrounding work area and non-glare, overhead lighting.
- 18.Keep the floor around the machine clean and free of scrap material, oil and grease.
- 19.Keep visitors a safe distance from the work area. **Keep children away.**

- 20.Make your workshop child proof with padlocks, master switches or by removing starter keys.
- 21. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
- 22.Maintain a balanced stance at all times so that you do not fall or lean against the dust collector. Do not overreach or use excessive force to perform any machine operation.
- 23.Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
- 24.Use recommended accessories; improper accessories may be hazardous.
- 25.Maintain machinery with care. Follow instructions for lubricating and changing accessories.
- 26.Turn off the machine before cleaning. Use a brush or compressed air to remove dust or debris do not use your hands.
- 27.Do not stand on the machine. Serious injury could occur if the machine tips over.
- 28.Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
- 29.Never operate or run the machine without closing the drum up against the lid. Failure to do so will result in the machine amperage increasing and may trip your circuit.

Familiarize yourself with the following safety notices used in this manual:

#### **SAFETY GUIDELINES - DEFINITIONS**

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols, described earlier. Please read the manual and pay attention to these sections.

#### **GENERAL SAFETY RULES**



### FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS INJURY.

**FOR YOUR OWN SAFETY, READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learn the unit's application and limitations as well as the specific hazards peculiar to it.

**KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.

**DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use this unit in damp or wet locations, or expose it to rain. Keep work area well-lighted.

**KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

**DISCONNECT UNIT** before servicing.

**CHECK DAMAGED PARTS.** Before further use of the unit, properly repair or replace any part that is damaged.



### FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS INJURY.

#### ADDITIONAL SAFETY INFORMATION

**Intended use.** This machine is intended for the applications discussed and approved by Laguna/SuperMax. Do not use this machine for non-approved applications or flammable, combustible, or hazardous materials.

**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 work piece material, and always wear a NIOSH-approved respirator to reduce your risk.

**Dust allergies.** Dust from certain woods and other materials may cause an allergic reaction in people and animals. Make sure you know what type of dust you will be exposed to in case there is a possibility of an allergic reaction.

**Wear respirator.** Fine dust that is too small to be caught in the filter may be introduced into the ambient air during operation. Always wear a NIOSH-approved respirator during operation and for a short time after to reduce your risk of permanent respiratory damage.

**Disconnecting power supply.** Turn the switch off, disconnect from the power supply, and allow machine to come to a complete stop before leaving the machine unattended or doing any service, cleaning, maintenance, or adjustments.

**Suspended dust particles and ignition sources.** Do not operate in areas were explosion risks are high. Areas of high risk include, but are not limited to, areas near pilot lights, open flames, or other ignition sources.

**Fire suppression.** Only operate in locations that contain a fire suppression system or have a fire extinguisher nearby.

**Static electricity.** Plastic dust lines generate high amounts of static electricity as dust chips pass through them. Although rare, sparks caused by static electricity can cause explosions or fire. To reduce this risk, make sure all dust lines are thoroughly grounded by using a grounding wire.

**Regular cleaning.** Regularly check the machine for excessive dust and debris and clean. Make sure to regularly clean the surrounding area where the machine is operated—excessive dust buildup on overhead lights, heaters, electrical panels, or other heat sources will increase the risk of fire.

#### SAVE THESE INSTRUCTIONS. Refer to them often and use them to instruct others.

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

#### **MOTOR SPECIFICATIONS**

The typical main motor is 5 HP and is wired for 220 Volt, Single-Phase, 60 HZ, AC current. Confirm your motor electrical configuration before connecting power! Before connecting the machine to the power source, make sure the starter and switches are in the "OFF" position. Power Cord and "plug" are NOT included. These must be installed by a qualified technician/electrician to meet all applicable codes.



Confirm electrical configuration (Voltage & Phase) of this machine before connecting to power source!

#### **GROUNDING INSTRUCTIONS**

THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. This machine must be connected to a grounded metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance.

The installer, such as a qualified electrician, shall cut (or bend over) and insulate the grounding conductor from a field wiring supply cable.

In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or 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. Full Load Amperage Draw; 110V Single-Phase......15 Amps

#### **Power Supply Circuit Requirements**

The power source circuit for your machine must be grounded and rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician. See page 31 for Wiring Diagram.** 

Circuit Size (110V, 1-Phase) ......20 Amp minimum



IN ALL CASES, MAKE CERTAIN THE RECEPTACLE OR DISCONNECT IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE OR DISCONNECT.

### UNPACKING

Your PX12 comes packed in a single box and possibly in a crate, before attempting to assemble this machine, follow these directions:

- 1. Remove the crate covering the machine, if so packed.
- 2. Carefully cut the banding straps and remove them from the box, if so packed.
- 3. Remove the box from the crate and open box.
- 4. Using the information below, ensure that all parts are present and in good condition.



Be careful when lifting and handling the PX12! Lift PX12 from the two handles located on each side of the machine base. Failure to comply may cause serious injury and/or damage to the machine and/or property!



Figure 1: Lifting planer

#### Inventory

Crate: 1 PX12 Planer

Box:

- 1 Dust Chute
- 3 Screws, Dust Chute
- 1 T25 Torx Wrench
- 1 Height Adjustment Handle
- 1 Screw for Handle



Figure 2: Crate with top and front removed & box

Report any missing or damaged parts to your dealer or distributor. Prior to machine assembly and use, read this manual thoroughly to familiarize yourself with proper assembly, maintenance and safety procedures.

### ASSEMBLY

#### **Tools/items Required: Assembly & Adjustment**

T-25 Torx wrench, included T-20 Torx wrench, not included 10mm hex wrench, not included



For your own safety, do not connect the machine to the power source until the machine is completely assembled! Please also make sure that you read and understand the entire manual.

#### **Machine Preparation and Setup:**

1. Install Thickness Adjustment Handle. Place handle on exposed stud, aligning flat of handle with flat of stud, insert mounting screw and tighten.



Figure 3: Installing Thickness Adjustment Handle

CAUTION

The Carriage Lock must be "UP" (unlocked) when turning the Thickness Adjustment Handle (Fig. 4)!



Figure 4: Carriage Lock

"UP" Unlocked "DOWN" Locked



#### The Carriage Lock must be locked when operating the planer!

2. Clean all rust protected surfaces with a commercial de-greaser. DO NOT use acetone, gasoline, lacquer thinner or any type of cleaner that could damage paint. Coat cleaned surfaces with WD-40® or 20W machine oil.

3. Install dust chute using the included hardware to mount to the outfeed side of planer. 3 screws, one on each side and one underneath the dust chute.



Figure 4: Dust Chute

- 4. Attach dust collector to dust chute.
  - NOTE: Make sure the dust collection system has sufficient capacity and CFM for this planer. Always turn ON the dust collector before planning.

#### **Table Guides**

The Guides act as a stop to reduce the chance of stock from sliding past the edge of the cutterhead or table.

#### Feed Speed

The feed speed is 26 FPM (feet per minute).



Figure 5: Main Components



- ON/OFF Switch; Starts and Stops rotation of cutterhead.

- Overload Reset Button

#### NOTE: Assembly is continued in next section "Power Supply"

## **POWER SUPPLY**

#### **Power Supply Circuit Requirements**

The power source circuit for your machine must be grounded and rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.** 

Circuit Size (110V, Single Phase) ......20 Amp (minimum)



IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

### **MOTOR SPECIFICATIONS**

The typical main motor is 2 HP and is typically wired for 110 Volt, Single Phase, 60 HZ, AC current. Confirm your motor electrical configuration before connecting power! Before connecting the machine to the power source, make sure the switch is in the "OFF" position.



When completed, the machine must conform to the National Electric Code and all local codes and ordinances.

### Connecting Power (See also wiring diagram page 31)

1. Plug cord into dedicated 20 Amp circuit.



Disconnect power supply to planer before continuing! Only connect power when required.

### **Calibrating the Thickness Scale**



Figure 7: Thickness Scale Calibration

NOTE: The following procedures describe the use of a "calibrating board". It is a piece of hardwood which has been surfaced on one side with a jointer, drum sander or wide belt sander.

1. With the planer OFF, the cutter head not rotating and power disconnected, place the Calibrating Board on the table, with the previously machined (flat) face "down", and slide under the cutterhead.

2. Make sure the Carriage Lock is unlocked (UP position).

2. Use the Table Height Adjustment handle (Fig. 8, A) to raise the table until the infeed roller is approximately 1/16" above the calibrating board.

3. Remove the calibrating board from the planer.

4. Connect power to the planer and turn ON.

5. Turn the height adjustment handle clockwise, one complete revolution, to lower the carriage and run the calibrating board (previously machined face "down") through the planer. Lock ("down" position) the carriage lock.

6. Repeat Step 5 until the planer removes the entire top surface of the calibrating board.

- NOTE: Drawing pencil marks across the width of the top of the calibrating board in several locations can make it easier to determine when the entire surface has been planned.
- 7. Measure the thickness of the calibrating board with a caliper.

8. Loosen the two screws of the Thickness Scale pointer and adjust the pointer (Fig. 7) until it corresponds to the measured thickness and tighten the screws.

### Thickness Gauge

The top of the planer is a thickness gauge. Material thickness can be quickly identified by placing it on edge into the various gauges and reading the corresponding measurement (Fig. 8).



Figure 8: Thickness Gauge

### Stock Removal Gauge

Stock Removal Gauge



Figure 9: Stock Removal Gauge

The Stock Removal Gauge on the front of the planer (Fig. 9) identifies the amount of material being removed while the stock is being fed through the planer. 1/16'' is the maximum stock removal rate and may be less depending on the material being processed and the condition of the cutterhead knives.

To establish stock removal before planing, turn power OFF. Make sure cutterhead is not rotating. Slide stock onto bed, under gauge. Lower carriage until desired stock removal appears on gauge. Pull stock from machine. Process stock as described in "Operation".

### Depth Stop

The depth stop is located on the side of the planer (Fig. 10). It has four settings. Rotate dial to desired thickness. When lowering carriage to preset thickness resistance will be felt when at desired setting. DO NOT use force to lower carriage when resistance is felt as damage to the carriage and lift mechanism will result. When not using the depth stop, leave at the lowest setting, approximately 5/32'' +/-(1/8'') shown) as this is the minimum thickness of material that can be processed.



Figure 10: Depth Stop

### **Extension Tables**

There are two extension tables, one on the infeed and one on the outfeed side of the planer (Fig. 11B).

- 1. Lower both extension tables.
- 2. Place a straight edge on the bed of the planer and extend over the extension tables. The inside "edge" (next to main bed) of each extension table should be flush with the bed (ideal) or slightly lower up to 1/32" lower (ok). The outside edge of each extension table should be approximately **1/16" higher** than the main bed. NOTE: This setting helps prevent snipe.



Fig. 11A, straight edge on both extension tables

3. If adjustment is needed, raise the extension table(s) requiring adjustment.



Extension Table Adjustment Bolts

Figure 11B: Extension Table Adjustment

- 4. Loosen the lock nut at the bottom of each bolt. Adjust the two hex head bolts on each side of the extension table either up or down and check alignment. Make only small adjustments.
- 5. When the tables align properly tighten the two lock nuts at the bottom of each bolt.

## **OPERATION**



#### Place the planer on a secure and stable surface for operation. Clamp or bolt the planer into position.

1. Lower each extension table to support stock.

2. Establish the proper depth of cut (typically less than 1/16"), using the Thickness Adjustment handle and referencing the Thickness Scale or the Material Removal Scale.

Thickness Adjustment Handle



Figure 12: Thickness Adjustment Handle

NOTE: One revolution of the Thickness Adjustment Handle equals 1/16", half a turn equals 1/32", etc.

3. Lock the Carriage Lock after setting the depth of cut!



Figure 13: Carriage Lock

- 4. Start dust collection.
- 5. Start planer.

6. Feed stock into planer, maintain control and support of stock until the stock is securely feeding through planer.

7. Reposition yourself to the outfeed side of planer and control and support stock until it has exited the outfeed roller.

### TIPS

- Planers are most effective if one face of stock is flat. If not, flatten one face with a jointer or drum sander.
- If not possible to flatten one face, process cupped material with the cup "up" so the material is stable on the planer bed.
- If material is severely cupped, another option is to rip the material, plane it and glue it back together.
- Plane with the direction of grain to reduce tear-out and provide the best surface finish.

## MAINTENANCE/ADJUSTMENT

### Quadtec: II Cutterhead



Knife rotation/replacement

Figure 14: Cutterhead



### Knife inserts are dangerously sharp. Use extreme caution when inspecting, removing, or replacing knife inserts.



### Turn planer OFF and disconnect power before performing any maintenance or adjustments!

The knife inserts on the 12" Planer are four-sided. When dull, remove each knife, rotate it 90° for a fresh edge, and re-install it. No further adjustment is necessary. Use a Torx wrench (T20) to remove the knife insert screw. Use a second Torx wrench to hold the cutterhead (from rotating) in position (in another screw). DO NOT USE YOUR HAND TO HOLD THE CUTTERHEAD! See Fig. 14.

NOTE: The dust chute and chip deflector must be removed to access cutterhead. Remove the three screws attaching the dust chute and remove. Remove the two screws securing the chip deflector and remove.

NOTE: When changing knife inserts it may be necessary to rotate the cutterhead to a new location. Depress the auto lock (Fig. 15) on the right side while rotating cutterhead with a Torx wrench in one of the screw heads or a piece of wood.



Figure 15: Auto Lock

It is advisable to rotate all inserts at the same time to maintain consistent cutting. However, if one or more knife inserts develops a nick, rotate only those inserts that are affected. Each knife insert has an etched reference mark so you can keep track of the rotation. **Torque each screw to 52-60 in/lbs**.

**IMPORTANT:** When removing or rotating inserts, clean saw dust from the screw, the insert, and the cutterhead platform. Dust accumulation between these elements can prevent the insert from seating properly and may affect the quality of the cut.

Before installing each screw, lightly coat the screw threads with machine oil and wipe off any excess. Securely tighten each screw which holds the knife inserts before operating the jointer!



Make sure all knife insert screws are tightened securely. Loose inserts can be propelled at high speed from a rotating cutterhead, causing injury. **Torque each screw to 52-60 in/lbs.** 

#### **Conveying Rollers**

Keep rollers clean to help prevent slippage of material. Be careful not to contact cutterhead knives as they are very sharp!



Turn planer OFF and disconnect power before performing any maintenance or adjustments!

#### Carriage thickness adjustment chain tension

The chain tension for carriage adjustment was established at the factory. When the chain stretches from normal use it may require tensioning. Excessive play in the thickness adjustment handle indicates a potentially loose chain.

- 1. Disconnect Power to planer.
- 2. Lay planer on its front side.
- 3. Test tension by compressing chain between sprockets. It should deflect approximately 3/8". If it compresses more, continue with the next steps.
- 4. To adjust tension, loosen the socket head hex cap screw in the center of chain tension arm (Fig. 16).



Chain Tension Arm and hex head cap screw

Figure 16: Chain Tension

NOTE: Do not allow the chain to fall from the sprockets when loosening the tension bracket as this would require recalibrating the raising mechanism.

5. Rotate tension bracket to establish proper tension (the chain deflecting approximately 3/8" when compressed between sprockets).

NOTE: Over tension will result in difficult thickness adjustment cranking.

6. Tighten the socket head hex cap screw in the center of chain tension arm.

## TROUBLESHOOTING

Description of	Possible Cause	Corrective Action
Machine will not start	<ol> <li>Fuse blown or circuit breaker tripped</li> <li>Cord damaged</li> <li>Not connected to power source</li> <li>Connected to wrong voltage</li> <li>Overload tripped</li> </ol>	<ol> <li>Replace fuse or reset circuit breaker</li> <li>Have cord replaced</li> <li>Check connection</li> <li>Check voltage</li> <li>press reset switch on control panel</li> </ol>
Cutterhead does not come up to speed	<ol> <li>Low current</li> <li>Motor not connected to correct voltage</li> </ol>	<ol> <li>Contact local electric company</li> <li>Refer to motor nameplate for correct voltage</li> </ol>
Workpiece stops when feeding	<ol> <li>Too much material being removed in one pass</li> <li>Insufficient pressure on in- feed or out-feed rollers</li> </ol>	<ol> <li>Reduce the amount of material being removed</li> <li>Increase pressure on in-feed or out-feed rollers</li> </ol>
Snipe	<ol> <li>Incorrect setting for infeed, out-feed rollers, pressure bar</li> <li>Inadequate support of long boards</li> </ol>	<ol> <li>Adjust feed system</li> <li>Support long boards with extension rollers</li> </ol>

Fuzzy Grain	<ol> <li>Planing wood with a high moisture content</li> <li>Dull knives</li> </ol>	<ol> <li>Allow wood to dry properly</li> <li>Rotate, replace or sharpen knives</li> </ol>
Poor feeding of lumber	<ol> <li>Inadequate feed roll pressure</li> <li>Planer bed dirty</li> <li>Dirty feed rollers</li> <li>Incorrect setting for in-feed, out-feed rollers</li> </ol>	<ol> <li>Adjust feed roll tension or lower feed rollers</li> <li>Clean pitch and residue off table with a non- flammable solvent</li> <li>Clean feed rollers with a non- flammable solvent</li> <li>Adjust feed system</li> </ol>

#### **Dust Collection**

To ensure proper operation and longest knife life it is important to maintain full air flow to your dust collection system. Make sure the filter media is clean and there are no obstructions in the ducting.

## **EXPLODED VIEWS**

#### **Cutterhead & Drivetrain**





Motor



**Wiring Diagram** 



## **PX12 PARTS LIST**

Key	Part No.	Description	Specifications	Qty
1	924830-000	Handle Assy.		1
.1	090354-148	Handle		1
.2	250260-615	Knob		1
.3	250262-615	Knob Cover		1
.4	251421-675	Scale Ring		1
.5	250662-615	Pin	6200	1
.6	360302-901	Handle Shaft		1
2	000302-103	Round Head Phillip Screw	M4-0.7x10	3
4	049103-104	T Type Screw	M6-1.0x12	1
5	000802-101	Round Head Hex. Screw	M8-1.25x16	4
6	251436-615	Top Cover	M16-1.5(23B-8H)	1
7	251400-615	Inlet		1
8	200111-615	Sponge	2mm	1
10	923507-000	Torx Wrench	Т30	1
11	001601-101	Round Head Phillip Screw & Washer	M4-0.7x8/4-10x0.8	11
12	029301-101	Torx Screw w/Lock Washer	M5-0.8x10/5.1x7.9	2
13	924827-001	Deflector Assy.	6200	1
14	014303-000	Drive Belt	135J-9	1
15	008036-200	Hex Nut	M16-1.5(23Bx8H)	1
16	110010-000	Drive Pully		1
17	010107-000	Retaining Ring	RTW-47	1
18	030208-001	Ball Bearing	6204	1
19	925046-001	Segmented Cutterhead Assembly	QuadTecII	1
.1	925149-001	Cutterhead	QuadTecII	1
	038201-101	Screw (knife insert)	#10-32x1/2"	26
.2	040710-000	Torx Wrench	T-25	1
	925135-001	Knife Inserts (original)	10 Pcs/Box	1
	ATQUADTECII	Knife Inserts (new)	10 Pcs/Box	1
23	012003-002	Кеу	5x5x10	1
25	280035-901	Spring		3
26	130088-000	Bearing Block		4
27	000303-707	Round Head Phillip Screw	M5-0.8x20	4
28	660010-000	Dust Proof Plate		4
29	170737-902	Right Mounting Plate		2

Key	Part No.	Description	Specifications	Qty
30	000303-104	Round Head Phillip Screw	M5-0.8x12	10
31	340098-000	Feed Roller		2
32	280036-901	Spring		1
33	016204-000	Chain	#410x26P	2
34	170736-902	Left Mounting Plate		2
35	380257-901	Sprocket		1
36	150004-000	Sprocket		2
37	010006-000	Retaining Ring	STW-15	2
38	000302-102	Round Head Phillips Screw	M4-0.7x8	3
40	250114-615	Dust Port		1
41	250133-615	Connector		1
42	000002-111	Hex Screw	M6-1.0x20	6
43	008005-100	Hex Nut	M6-1.0(10Bx5H)	6
44	002401-101	Round Head Phillips Nylock Screw w/Washer	M4-0.7x12/4x10x0.8	4
47	008006-100	Hex Nut	M8-1.25(13Bx6.5H)	1
48	360309-901	Shaft		1
50	170315-901	Pulley Cover		1
51	924820-001	Rod Linkage Assembly		1
.1	921937-001	Rod Assembly		2
.2	280039-901	Spring		2
.3	000302-102	Round Head Phillip Screw	M4-0.7x8	2
.4	924819-001	Knob Assembly		1
.5	010304-000	SPN Ring	SPN-10	2
.6	921938-000	Rod Linkage Assembly		2
52	090093-147	Carriage		1
53	250141-620	Scale Pointer		1
54	000301-101	Round Head Phillip Screw	M3-0.5x6	3
55	251401-615	Scale Plate		1
57	170314-458	Pointer		1
58	170313-901	Contact Plate		1
59	290012-901	Shoulder Screw		1
61	230238-905	Self-Tapping Screw w/Lock Washer		2
62	360297-000	Pin		2
63	001802-102	Cap Screw w/Lock Washer	M6-1.0x20/6.5x10.5	2
65	030206-001	Ball Bearing	6202	1

Key	Part No.	Description	Specifications	Qty
66	010103-000	Retaining Ring	RTW-35	1
67	250086-615	Chain Cover		1
68	160031-000	Spacer		1
69	280037-000	Spring		1
70	000304-102	Round Head Phillip Screw	M6-1.0x10	4
71	170296-901	Guide Rail		2
72	170311-000	Wear Plate		1
73	924828-001	Depth Stop Assy		1
74	130392-903	Block		2
76	006001-001	Flat Washer	4.3-10x1.0	3
77	017002-000	Ball	Ø6	1
78	280052-000	Spring		1
79	000104-107	Cap Screw	M8-1.25x15	4
80	361376-902	Lead Screw		1
81	000103-102	Cap Screw	M6-1.0x10	4
82	270005-000	Fix Plate		2
83	360307-000	Column		4
84	251402-000	Right Side Cover		1
85	090353-147	Base		1
86	001902-101	Nylock Set Screw	M6-1.0x10	4
87	150005-000	Sprocket		2
88	270007-901	Clip		2
89	921933-001	Extension Table Assembly		2
92	001701-101	Cap Screw w/Washer	M8-1.25x20/8x23x2.0	4
93	016211-000	Chain	#410x82P	1
94	001201-501	Tapping Screw	M4-1.41x12	4
95	360306-902	Lead Screw		1
96	251403-000	Left Side Cover		1
97	021102-000	Cord Clamps	ACC-2.5	1
98	910140-000	Motor Assembly	110V-120V	1
99.2	575140-000	Scale		1
99.6	575545-000	Material Remove Gauge Scale	3/32"	1
108	010002-000	Retaining Ring	STW-11	1
109	006003-009	Flat Washer	5.2-10x1.0	4
111	251437-615	Lock Handle		1
112	150006-000	Sprocket		2
113	170310-901	Plate		1

Key	Part No.	Description	Specifications	Qty
114	001803-102	Cap Screw & Lock Washer	M8-1.25Px20/8.2x13.7	1
115	001901-102	Set Nylock Screw	M5-0.8x8	2
116	280038-901	Spring		1
117	170738-905	Position Plate		1
118	001602-101	Round Head Phillips Screw w/Washer	M5-0.8x10/5x12x0.8	2

## **SPECIFICATIONS: PX12**

Main Motor:	2 HP
Electrical:	110V / 60Hz / 1PH
Circuit:	20 Amp (min.) 110V, 1PH
Air Volume:	600 CFM per port (min.)
Inlet:	One 4" port
Switch:	ON/OFF for main motor
Packing Size:	25″ x 17″ x 21.5"
$(L \times W \times H)$	(635 x 432 x 546 mm)
Machine weight:	65 lbs. (30 kg.)
Shipping weight:	72 lbs. (33 kg.)

## **SUPPLIES:**

Replacement knives, (10 pack) part # ATQUADTECII

Contact Laguna Tools for supplies :

800.234.1976

### WARRANTY & REGISTRATION

#### Thank You!

Welcome to the Laguna Tools® group of discriminating machinery owners. We understand that you have a choice of where to purchase your machines and appreciate the confidence you have in the Laguna Tools® brand.

Through hands-on experience, Laguna Tools® is constantly working hard to make innovative, precision products. Products that inspire you to create works of art are a joy to operate and encourage your best work.

> Laguna Tools® Imagination, Innovation, and Invention at Work

#### Warranty & Registration

Every product sold is warranted to be free of manufacturer's defective workmanship, parts, and materials. For any questions about this produce, the intended use or what it was designed for, customer service, or replacement parts, please contact our customer service department:

> Laguna Tools® Customer Service 744 Refuge Way, Grand Prairie, Texas 75050, USA 1-800-234-1976 customerservice@lagunatools.com www.lagunatools.com/why/customer-service/ 8AM. To 5PM PSF. Monday through Friday

For warranty claims or to report damage upon receiving-please reach out to our warranty department:

> Laguna Tools® Warranty Service 744 Refuge Way, Grand Prairie, Texas 75050, USA 1-800-234-1976 customerservice@lagunatools.com www.lagunatools.come/policies/warranty 8AM to 5PM PST, Monday through Friday

#### Registration

To prevent voiding this warranty, all products sold must be registered within thirty (30) days of receiving the product. Registering the product will enable the original purchaser to receive notifications about important product changes, receive customer service, and be able to file a warranty claim against defective workmanship, parts, or materials.



#### Who is Covered

The applicable warranty covers only the initial purchaser of the product from the date of receiving the product. To file such claims, the original purchaser must present the original receipt as proof of purchase.

#### What is Covered

The warranty covers any defects in the workmanship of all parts and materials that make up the machine unless otherwise specified. Any part determined by Laguna Tools® to have a defect will be repaired or replaced (and shipped), without charge. The defective item/part must be returned to Laguna Tools® with the complaint and proof of purchase in the original packaging that it was received in. In the event the item/part is determined to be not covered by this warranty, the customer will be responsible for the cost to replace the item/part and all related shipping charges

#### Warranty Limitations

This limited warranty does not apply to natural disasters, acts of terrorism, normal wear and tear, product failure due to lack of maintenance or cleaning, damage caused by accident, neglect, or lack-of inadequate dust collection. The warranty may be voided against proof of misuse/abuse, damage caused where repair or alterations have been made or attempted by others, using the product for purposes other than those described as intended use (unless with consent by Laguna Tools®), modification to the product, or use with an accessory that was not designed for the product. It is the responsibility of the user to understand basic machinery settings and procedures and to properly maintain the equipment in accordance with the standards provided in this manual

#### Length of Warranty

All new machines and optional accessories sold through an authorized dealer carry a two-year warranty effective from the date of receiving the product. Machines sold for either commercial or industrial use have a one-year warranty. Wearable parts like throat plates, bandsaw guides, etc., have a ninety-day warranty.

	Table A-1 Warranty Lengths
2 Year - New Machines Sold Through a	in Authorized Dealer
2 Year - Accessories Sold as Machine	Options (excluding blades)
1 Year – Machines Sold for Commercial	l or Industrial Use
1 Year – Blades and Accessories outsid	e or Machine Options

90 Days - Wearable Parts

1 Yea 1 Yea

Aside from being free of defects upon receiving, consumable parts, like cutters and abrasives, are not covered by this warranty unless otherwise stated by Laguna Tools®. These parts are designed to be used at the expense of the operator and are available for replacement or inventory purchase. The determination of a consumable part will be made on a caseby-case basis by Laguna Tools®.

#### Shipping Damage

Laguna Tools® is not responsible for damage or loss caused by a freight company or other circumstances not in the direct control of Laguna Tools® All shipping-related claims for loss or damage to goods must be made to Laguna Tools® within twenty-four hours of delivery.

#### How to Receive Support

To file a warranty-claim please contact the warranty department at 1-800-234-1976. To receive customer service or technical support please contact the customer service or technical support please contact the customer service department at 1-800-332-4049. Parts, under warranty, are shipped at the expense of Laguna Tools® either by common carrier, FedEx ground services or similar method. Technical support to install replacement parts is primarily provided by phone, fax, email, or the Laguna Tools® Customer Service Support Website



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### LAGUNA TOOLS

744 Refuge Way Suite 200 Grand Prairie TX 75050 800.234.1976 www.lagunatools.com