

THRIVING ON INNOVATION  
**LAGUNA TOOLS**



## Platinum Series 20" Planer Manual

**Dear Woodworker:**

**Thank you for your purchase and welcome to the Laguna Tools group of discriminating woodworkers. I understand that you have a choice of where to purchase your machines and appreciate the confidence you have in our products.**

**Every machine sold by Laguna Tools has been carefully designed and well thought through from a woodworker's perspective. I cut on our bandsaws, lathes, table saws and combination machines. Through my hands-on experience, I work hard to make our machines better. I strive to give you machines that inspire you to create works of art; machines that are a joy to run and work on; machines that encourage your performance.**

**Today, we offer high-performance machines with innovative solutions that meet the needs of woodworkers and their ever-evolving craft.**

**I started Laguna Tools as a woodworker, I still am.**

**Thank you again for becoming a Laguna Tools customer.**

**Torben Helshoj**

**President and Founder - Laguna Tools**

**Imagination, Innovation and Invention at work.**

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## **Safety Rules**

**As with all machinery there are certain hazards involved with the operation and use. Using it with 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. If you have any questions relative to the installation and operation, do not use the equipment until you have contacted your supplying distributor.**

**Read carefully before operating the machine.**

- 1. Keep the working area clean and be sure adequate lighting is available.**
- 2. Do not wear loose clothing, gloves, bracelets, necklaces or ornaments. Wear face, eye, respiratory and body protection devices as indicated for the operation or environment.**
- 3. Be sure that the power is disconnected from the machine before tools are serviced or an attachment is to be fitted or removed.**
- 4. Never leave the machine with the power on.**
- 5. Do not use dull, gummy or cracked cutting tools.**
- 6. Be sure that the keys and adjusting wrenches have been removed and all the nuts and bolts are secured.**

## **Limited Warranty**

New woodworking machines sold by Laguna Tools carry a one-year warranty from the date of shipping. Laguna Tools guarantees all new machines sold to be free of manufacturers' defective workmanship, parts, and materials.

We will repair or replace, without charge, any parts determined by Laguna Tools, Inc. to be a manufacturer's defect. We require the defective item/part to be returned to Laguna Tools. In the event the item/part is determined to be damaged due to lack of maintenance, cleaning or misuse/abuse, the customer will be responsible for the cost to replace the item/part, plus all related shipping charges.

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, lack of or inadequate dust collection, misuse/abuse or damage caused when repair or alterations have been made or attempted by others.

Laguna Tools, Inc. is not responsible for additional tools or modifications sold or performed (other than from/by Laguna Tools, Inc.) on any Laguna Tools, Inc. woodworking machine. Warranty may be voided upon the addition of such noted tools and/or modifications, determined on a case-by-case basis.

Normal user alignment, adjustment, tuning and machine settings are not covered by this warranty. It is the responsibility of the user to understand basic woodworking machinery settings and procedures and to properly maintain the equipment in accordance with the standards provided by the manufacturer.

Parts, under warranty, are shipped at Laguna Tools, Inc's cost either by common carrier, FedEx Ground service or similar method.

Technical support to install replacement parts is primarily provided by phone, fax, or e-mail. The labour required to install replacement parts is the responsibility of the user.

Laguna Tools is not responsible for damage or loss caused by a freight company or other circumstances not in our control.

Only new machines sold to the original owner are covered by this warranty. For warranty repair information, call 1-800-332-4094.

## **Noise emission**

Notes concerning noise emission

Given that there exists a relationship between noise level and exposure times, it is not precise enough to determine the need for supplementary precautions. The factors affecting the true level of exposure to operators are clearly the amount of time exposed, the characteristics of working environment other sources of dust and noise etc. For example, adjacent machines in other words the level of ambient noise. It is possible that exposure level limits will vary from country to country.

## **Specification sheet**

<b>Machine</b>	<b>16 inch</b>	<b>20 inch</b>
<b>Motor</b>	<b>3 hp TFEC</b>	<b>5 hp TFEC</b>
<b>Planer table size</b>	<b>16 inch X 20 inch</b>	<b>25 inch X 20 inch</b>
<b>Planer table with extensions</b>	<b>16 inches X 42 inches</b>	<b>55 inches X 20 inches</b>
<b>Cutter head</b>	<b>6 row spiral</b>	<b>6 row spiral</b>
<b>Dust chute diameter</b>	<b>4 inches</b>	<b>4 inches</b>
<b>Max planer width</b>	<b>16 inches</b>	<b>20 inches</b>
<b>Max planing height</b>	<b>8 inches</b>	<b>8 inches</b>
<b>Cutter speed</b>	<b>4800 rpm</b>	<b>4800 rpm</b>
<b>Volts</b>	<b>220V 1 Phase</b>	<b>220V 1 Phase</b>
<b>Weight</b>	<b>560 lb</b>	<b>830 lb</b>

## **Receiving your machine**

**Note.** It is probable that your machine will be delivered by a third party. Before you unpack your new machine you will need to first inspect the packing, invoice and shipping documents supplied by the driver.

Insure that there is no visible damage to the packing or the machine. You need to do this prior to the driver leaving. All damage must be noted on the delivery documents and signed by you and the delivery driver. You must then contact the seller [Laguna Tools] within 24 hours.

## **Introduction to planers**

Planers are designed to give you years of safe service. Read this owner's manual in its entirety before assembly or use.

The planer is generally defined as a machine that cuts planks of wood smooth and parallel. The machine achieves this by the plank being pushed along a flat table under a revolving cutter head.

There are many types of cutter heads but this machine uses an insert cutter type. The insert cutter type has the main advantage of reducing tear out of the grain but the finish is not as smooth. It is well within the capabilities of a belt sander to give a professional finish.

The parallel blade system gives a finish without the lines that the insert cutter system gives, but is susceptible to tear out, especially on planks with knots. On balance, it is better to use a machine with the insert cutters than the parallel blades, as it greatly reduces the risks of having to scrap valuable wood, or spending excessive time sanding tear out marks.

### **Additional Instructions for the use of planers**

Like all machines there is danger associated with the machine. Injury is frequently caused by lack of knowledge or familiarity. Use this machine with respect. If normal safety precautions are overlooked, or ignored, serious personal injury may occur.

#### **1. Supporting the work.**

Only make cuts if the work piece is stable and never attempt to cut unstable planks or injury may occur.

#### **2. Cutting depth.**

Never exceed the maximum cutting depth as stated in the specification for your machine. It is far better to take several small cuts rather than large cuts.

#### **3. Direction of cut.**

Planing against the grain is dangerous and could produce chatter or excessive chip out. Always plane with the grain.

#### **4. Guards.**

Guards are designed to reduce the risk of injury. **Always use the guards.**

**5. Stock.** Your safety will be greatly enhanced if you only use good lumber. Only work with lumber after you have inspected it completely. Staples, nails loose knots and any other metal in the plank will damage your cutter head and could cause injury and or fire. If you have any questions about a piece of lumber do not use it.

**What you will receive with the planer.**



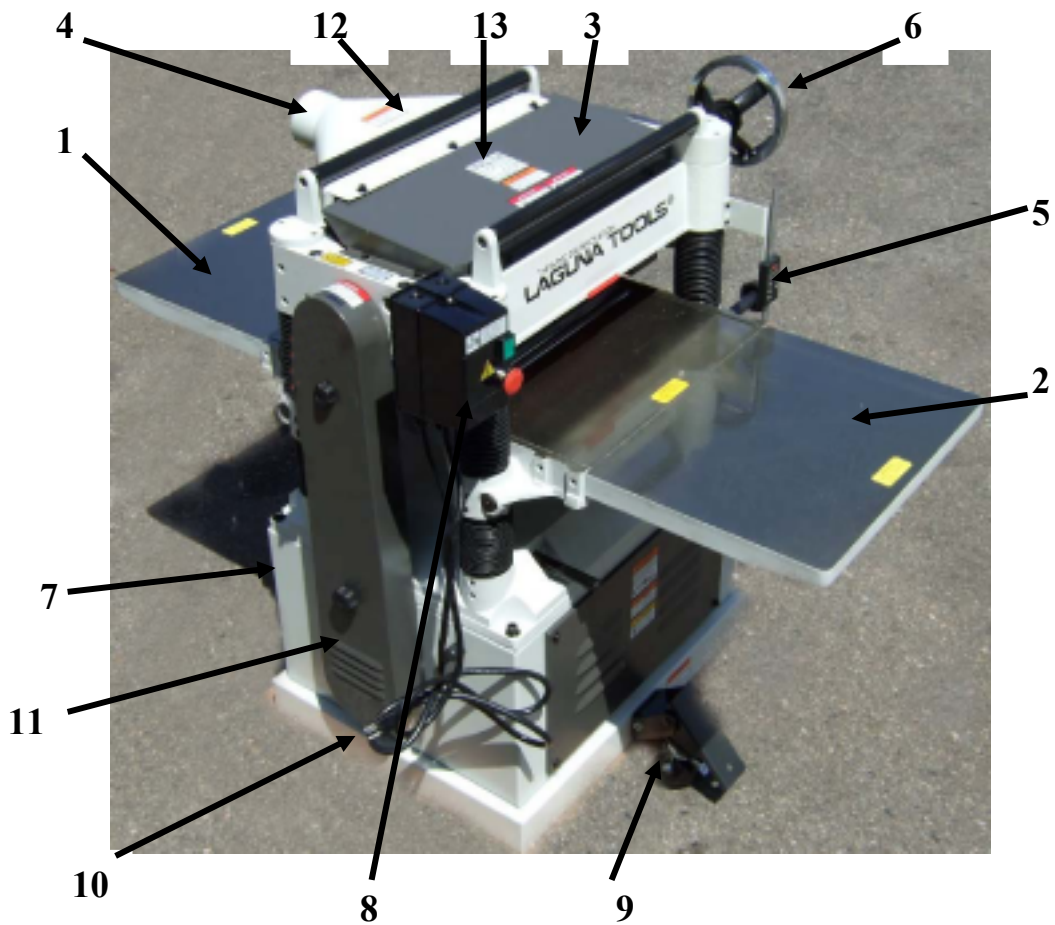
1. Dust hood.



- 2. Depth gauge.
- 3. Screws and washers.
- 4. Handles.
- 5. Sanding spindle and sanding drum.
- 6. Handle.
- 7. Tools.
- 8. Fixed wheels.
- 9. Lift wheel.
- 10. Screws.
- 11. Leveling feet.
- 12. Extension tables.

**Parts of the planer**

The planer has few parts. The major parts are discussed in this manual. If you are not familiar with the planer, take the time to read this section and become familiar with the machine.



- 1. Out feed Table.**
- 2. In feed Table.**
- 3. Cutter head Guard.**
- 4. Dust port.**
- 5. Depth Scale.**
- 6. Planer Table Height Hand wheel.**
- 7. Body.**
- 8. Start & stop switches.**
- 9. Mobility wheel.**
- 10. Power cable.**
- 13. Belt guard.**
- 14. Return rollers.**
- 15. Serial and data plate.**

### **1. Out feed Table.**

The function of the out feed table is to support the job once it has been machined by the cutter head.

### **2. In feed Table.**

The function of the in feed table is to support the job, prior to cutting the job.

**Note.** Never exceed the maximum depth of cut specified for your machine. It is far safer to take many small cuts rather than one large cut.

### **3. Cutter Head Guard.**

The guard is there to protect you.

### **4. Dust port.**

The dust port is designed to allow maximum extraction of saw dust and wood chippings. Connect a 4" flexible dust collection hose between the machine and your dust extraction system.

**Note.** The stronger the dust collector the better the dust collection.

### **5. Depth Scale.**

The depth scale indicates the distance between the planer table and the bottom of the cutter head.

**6. Planer Table Height Hand wheel.**

The hand wheel adjusts the planer table to the required distance between the bottom of the cutter head and the planer table.

**7. Body.**

The body of the machine supports all the tables. It is manufactured from heavy gauge steel and provides a heavy base that is designed for rigidity.

**8. Start & stop switches.**

The switches are used to start and stop the machine.

**9. Mobility wheel**

The mobility wheel can be lowered to lift the machine off the leveling feet and allow the machine to be moved to a different location.

**10. Power cable.**

The machine is provided with a power cable for connection to your power outlet.

**13. Belt guard.**

The belt guard is provided to protect the operator from harm. Never operate the machine with the belt guard removed.

**14. Return rollers.**

Return rollers are provided to allow jobs to be passed back to the in feed operator.

**15. Serial and data plate.**

This plate is mounted on the cutter guard.

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### Where to locate your Machine.

Before you remove your machine from the pallet, select the area where you will use your machine. There are no hard and fast rules for its location but, below are a few guidelines.

1. There should be an area at the front and back of the machine suitable for the length of wood that you will be machining.
2. Adequate lighting. The better the lighting, the more accurate and safely you will be able to work.
3. Solid floor. You should select a solid flat floor, preferably concrete or something similar.
4. Close to power source and dust collection.

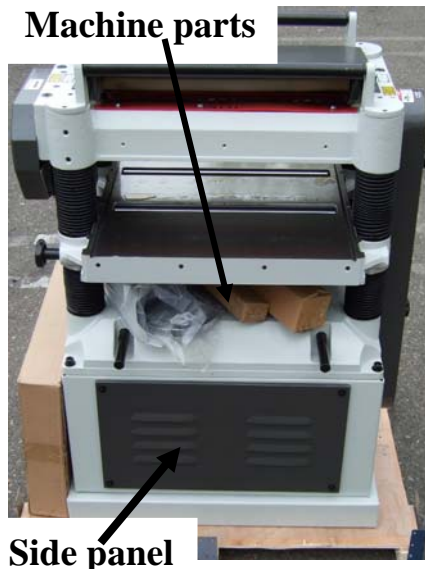
### Unpacking your machine.

To unpack your machine, you will need tin snips, knife and a wrench.

1. Using the tin snips, cut the banding that is securing the machine to the Pallet [if fitted].

**WARNING: EXTREME CAUTION MUST BE USED BECAUSE THE BANDING WILL SPRING AND COULD CAUSE INJURY.**

2. Lift the box off and discard.
3. Using the knife, cut the plastic wrap from the top. The accessories that were ordered could be attached to the side of the machine and extreme caution must be taken that the parts do not fall and cause injury or damage. Remove them and set aside.



4. Some of the parts supplied with the machine, may be shipped inside the machine. To access these parts, remove the machine side panels.

4. Remove the base mounting bolts that secure the machine to the pallet. The mounting bolts are accessed from underside of the pallet.

5. The machine can be lifted using a forklift truck or hoist. If no forklift

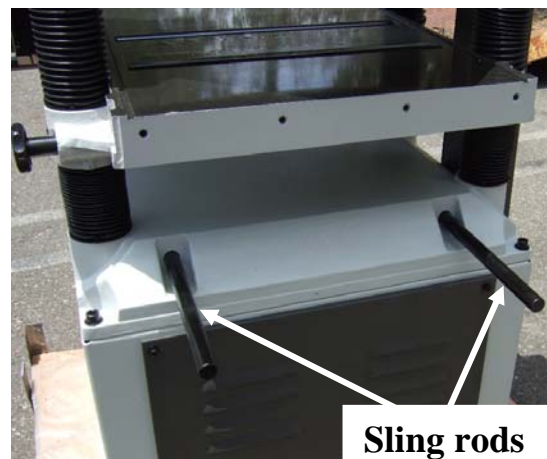
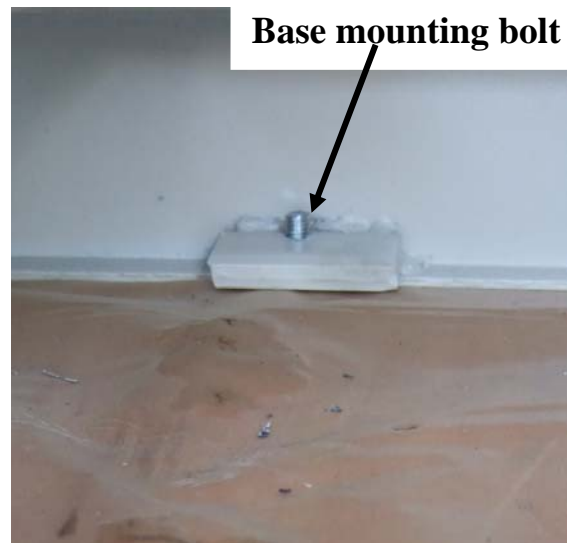
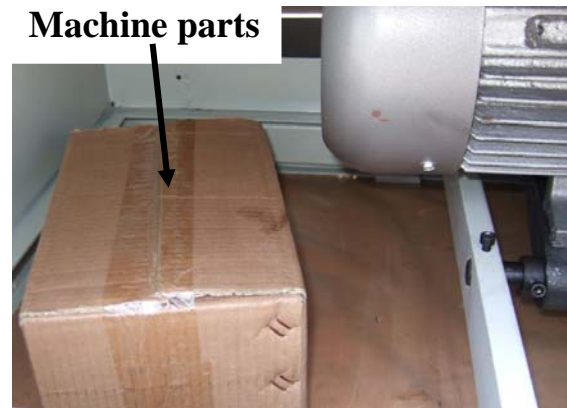
truck or hoist are available. The machine can be removed from the pallet as follows.

**Note.** The machine is heavy, and if you have any doubt about the described procedure, seek professional assistance. Do not attempt any procedure that you feel is unsafe, or that you do not have the physical capability of achieving.

With two or more people, move the machine so that the base of the machine is over the edge of the pallet. Tilt the machine away from the pallet so that the base of the machine touches the floor, slide the pallet from under the machine and then move the machine to the vertical position so that it is completely resting on the floor.

To lift the machine off the pallet using a sling, pull the sling rods out from the machine main casting. Fit the sling around the sling rods and lift the machine off the pallet with a hoist.

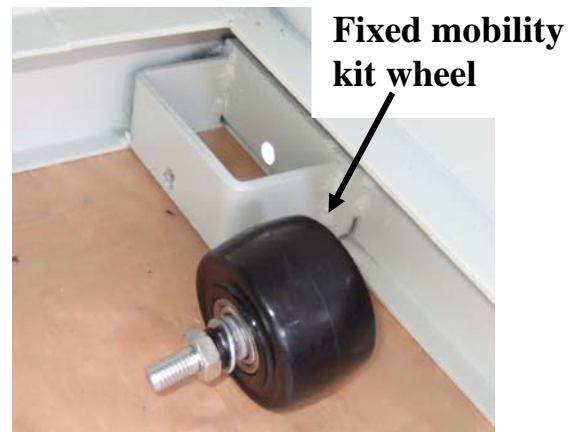
The hoist must have a lifting capacity of no less than 2000 lb. Remove the pallet and lower the machine to the floor.



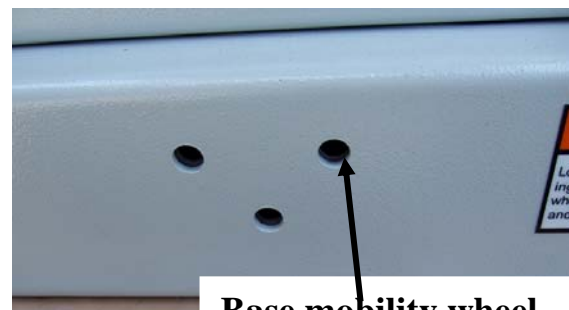
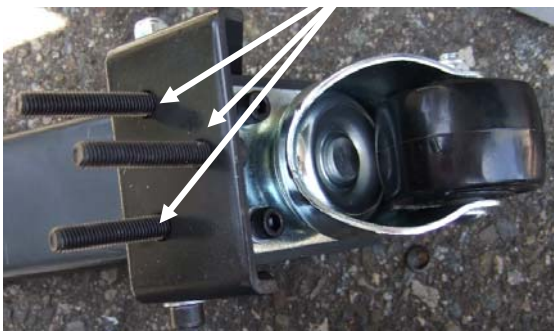
**Assembly & set up.**

**Fitting the leveling feet and the mobility kit.**

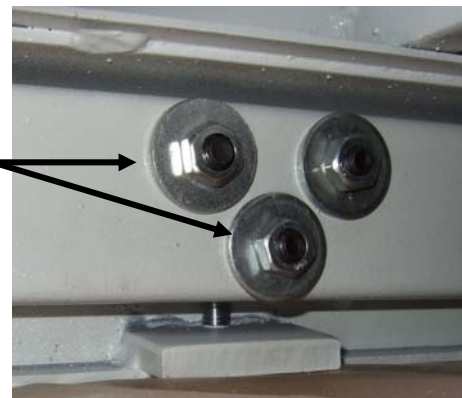
1. Raise the machine off the ground on to wooden blocks.
2. Fit a leveling bolt to the 2 corners of the machine.
3. Fit the two fixed mobility kit wheels to the opposite corners.
4. Lower the machine to the ground and place a spirit level on the table of the machine.
4. Adjust the leveling feet until the spirit level shows that the table is level in both directions and that the machine will not rock.
- Note.** If you move the machine you may find that the leveling bolts will need to be readjusted.
5. Fit the external mobility kit wheel to the base of the machine with the three fixing bolts.



**Fixing screws**



**External mobility kit wheel assembly fixing bolts**



## External mobility kit wheel assembly

6. To operate the mobility kit, press the external mobility kit wheel lever down. Move the machine to the required location, and then lift the lever to disengage the wheel from the floor.



### **Fitting the in and out feed tables.**

1. Attach the in and out feed tables to the main table with the clamping bolts. Do not over tighten, as the tables will need to be adjusted.

2. Adjust the table level to the main table by tapping with a non-metal mallet.

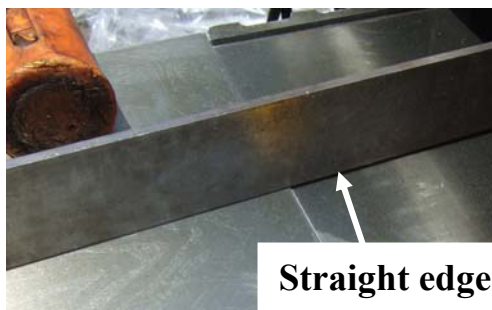
**Never hit the tables with a hammer as they are cast iron and will break.**

3. Using a straight edge, adjust the jacking screws so that the table it is parallel and level with the main table.

4. Fully tighten the table with the clamping screws. Recheck the tables for level and parallel. If fine adjustment is required, repeat the procedure.



**In and out feed tables**



**Straight edge**



**Jacking screws**

**Clamp screw**

**Fitting the dust chute.**

Attach the dust chute to the machine with the screws provided.



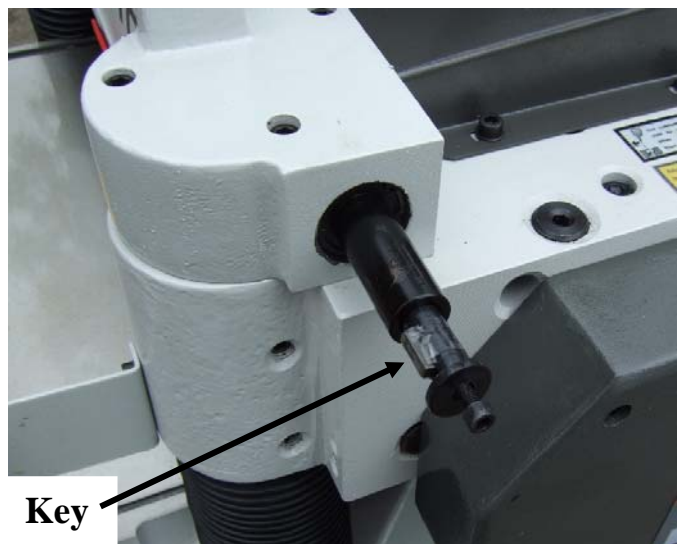
**Fitting the height adjusting handle.**

1. Remove the key and clean.

2. Fit the key into the shaft keyway, and slide the handle onto the shaft, ensuring that the key way in the handle lines up with the key.

3. Clamp the handle onto the shaft with the clamping screw.

4. Fit handle to the height adjusting handle.





**Fit the power feed handle.**

**Power feed handle**



**Note.** Only engage the power feed with the machine running. The power feed must be in neutral when starting the machine.

**Instruction label**



**Fitting the electrical control box.**

The electrical control box comes pre-wired. Fit as shown to the machine with the fixing screws.

**Control boxes fixing screws**



### **Fitting the depth gauge.**

Fit the depth gauge to the two brackets on the machine with the screws provided. Setting of the depth gauge is covered later in the manual.

**Depth gauge brackets**



**Depth gauge**

### **Connecting the electrical supply.**

**Note. A qualified electrician must carry out the installation.**

Ensure that the main supply corresponds with that of the machine [Single phase 220 V].

It is recommended that you use a 30-amp main breaker.

If you need a longer cable than that supplied on the machine, you can connect a new cable into the internal power termination.

**Note. The machine is not normally supplied with an electrical plug, as the type of plug will be dependent on the installation.**

### **Connecting the dust collection.**

Connect a 4 inch flexible hose between the dust collection hood and your dust collector.

Once fitted pull on the hose to ensure that the connection is tight. You do not want it to come off during production.

**Note.** You will need a dust collection system with a minimum of 1000 cubic feet per minute capacity. The stronger the dust collection the better, as the machine is capable of producing a lot of waste.

**Adjusting the planer table height.**

Unlock the table and move the table to the thickness that you require. Lock the table.

**Note.** Until you get experience with the machine, it is suggested that after setting the planer thickness you machine a scrap piece of wood and check that the thickness is correct before you machine your production.

## **Running and adjusting the machine.**

### **Cleaning the machine.**

The machine is shipped with the non-painted surfaces protected from rust by a film of grease.

The grease must be removed with WD40 or similar as it attracts saw dust and dirt. The surfaces should then be coated with a Teflon lubricant or similar. Teflon tends to dry and will not attract saw dust and dirt.

### **Test Run**

Now that the assembly is complete it is time to conduct a test run.

During the test run you will check the following points.

1. Motor starts and runs smoothly.
2. That the stop buttons function correctly.

#### **Before you run the machine check the following.**

1. All the tools have been removed from the machine.
2. All the guards are in place.
3. You are wearing the appropriate safety equipment.
4. You have read and understood the instruction manual.

**Note.** If any of the below functions fail to operate correctly, the fault must be corrected prior to continuing to the next test. Any investigation to find or correct a fault must be conducted with the power disconnected.

**Note.** The stop button, when pressed in, will remain in the off position until reset. To reset the stop button twist. Check that the stop button is in the out position prior to conducting the below tests.

1. Start the machine by pressing the green start button.  
The machine should run smoothly with little or no vibration.
2. Press the red stop button. The machine should slow down and stop.



**Green start button**

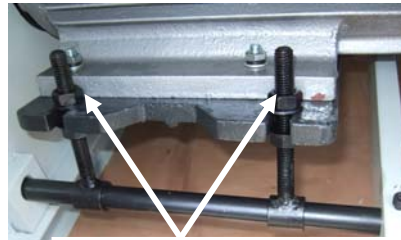
**Red stop button**

## Adjustments

**Note.** The machine has had all its functions calibrated at the factory, but due to shipping conditions, some movement may have taken place. This is unavoidable and it is therefore recommended that the following checks are made prior to starting production. As the machine is used some functions may move, and it is therefore good practice to become know the process for adjusting the machine prior to production.

### Adjusting the drive belts.

The drive belts should be checked after running the machine for approximately 10 hours. The belts bed into the pulleys and will slacken off slightly. If they are not



**Motor tension nuts**

adjusted slippage may accrue and this will cause early belt failure. There should be a 3/16" deflection when the belt is pressed with moderate finger pressure.

To increase the tension on the belts, loosen the lower nuts and tighten the upper nuts. Ensure that both left and right hand nuts are tensioned the same amount.



**Drive belts**

**Note.** To access the drive belts, remove the Belt guard.

**Note.** To access the motor, remove one of the side panels.

**Note.** Disconnect the power to the machine prior to conducting machine adjustments or repairs.

### Setting the planer depth Scale digital read out.

1. With the table locked, plane a piece of wood and measure the thickness.

Do not move the table height or unlock the height adjustment after planing the wood.

2. Set the depth scale to either inches or mm by pressing the **mm/in** button.

3. Press the **set** button and hold. The display will flash each digit in turn.

4. Hold the **set** button in until the digit that requires



**Depth scale digital read out**

adjustment flashes then release the button.

**5.** Press the **set** button. Each time the set button is pressed the digit displayed will change. Repeatedly press the set button until the correct digit is displayed.

**6.** Press the **set** button and hold until the next digit flashes, and repeat the procedure as per **5**.

**7.** Continue until all the digits display the correct dimension of the planed wood.

**8.** Press the set button and hold. The gauge is now set.

**9.** To check that the setting is correct. Unlock the table and adjust so that the wood will be planed to a new dimension. Plane the wood and measure. Check that the display is the same as the planed wood. If fine adjustment is required repeat setting procedure.

### **Anti kick back teeth**

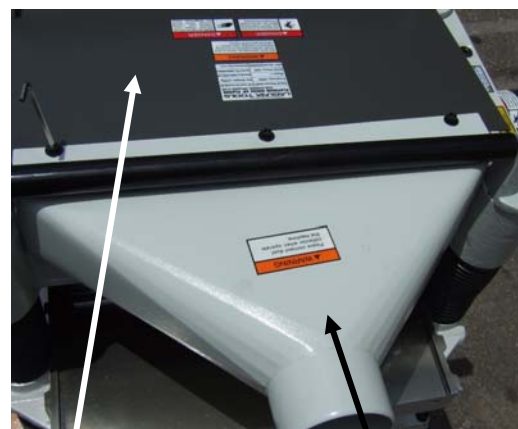
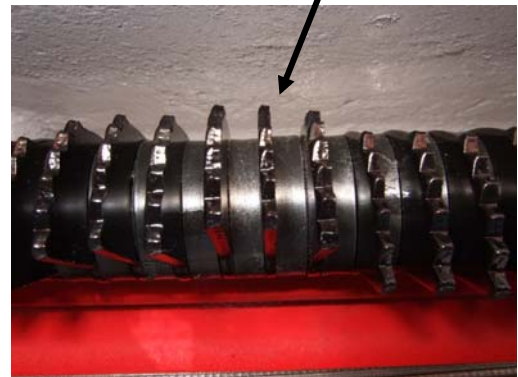
The anti kick back teeth must be free to move or they will not fulfill their function. With the power disconnected, check that all the teeth move freely. If they do not lubricate with Teflon based lubricant.

### **Fitting teeth to the Sher-tec cutter head**

The carbide cutter head [Sher-Tec] has multiple teeth which have 4 cutting edges. The teeth can be rotated as follows when they are blunt or damaged.

**Note.** You will notice that each cutter tooth has a registration dot to enable you to ensure that the teeth are moved round in the same direction.

**Anti kick back teeth**



**Cutter head guard**

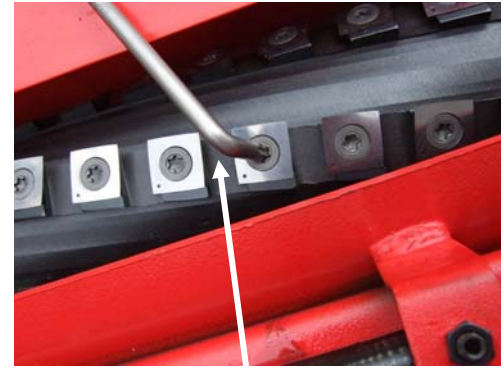
**Dust chute guard**

1. With the power disconnected from the machine, Remove the cutter head guard and the dust chute.

2 Loosen the tooth with the special allen key

2. Lift the tooth and rotate to the new cutting face.

**Note.** Take special care to clean the tooth and its mating surface. Any dirt or sawdust that is trapped under the tooth will cause it to be at a



**Special allen key**

different height to the other teeth and degrade the surface finish when you start machining. This will result in you having to take all the teeth out and clean the teeth and the mating surfaces again. This is very frustrating and a waste of time, take your time and ensure that you are very thorough with cleaning.

3. Lower the tooth into the cutter head and clamp with the allen key.

**Note.** Only move all the teeth to a new cutting edge. Do not move less than all the teeth.

**Note.** The carbide cutter head has several advantages over the parallel blade type cutter head.

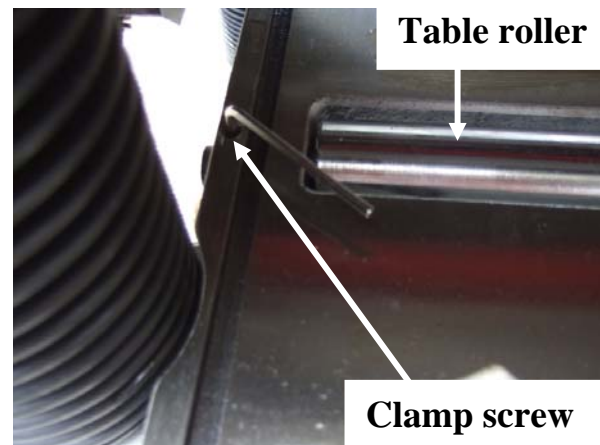
1. The teeth are carbide and will last longer than high speed steel parallel blades.

2. There is less chance of tear out.

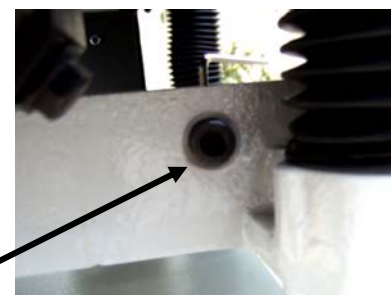
The disadvantage is that they are initially more expensive and that the surface finish is slightly wavy. This is caused because the teeth have a very slight radius. This waviness is easily removed by a light sanding.

### **Adjusting the table rollers.**

The table rollers come factory set. Adjustment is provided should it be needed.



1. Checking the height of the rollers is achieved by placing a straight edge across both rollers and checking the distance between the rollers and the table with feeler gauges. The rollers should be 0.002



**Side adjustment screw**

inches above the table. The rollers must be checked at both sides of the table.

2. To adjust the rollers, loosen the clamp screw on the top of the table, and rotate the side adjustment screw until the 0.002 inch is achieved. Retighten the clamp screw and recheck.

### **Drive and pressure roller tension adjustment.**

The spring tension of the drive and pressure rollers comes factory set to suit general work. If the tension needs to be adjusted for delicate or very hard work this can be achieved by adjusting the screws on either

side of the machine. When adjusting, ensure that all four screws are adjusted exactly the same amount.



**Roller tension screws**



## **Maintenance**

As with any machine, to ensure optimal performance you must conduct regular maintenance.

### **Daily checks.**

1. Clean the machine and lubricate unpainted surfaces with a Teflon lubricant. Wipe off any excess and buff with a dry polishing cloth. This will reduce the likelihood of rust forming and reduce the friction on the tables as the wood is machined.
2. Check cutter teeth for chips and dullness.
3. Generally inspect the machine for damage and loose or worn parts.

### **Weekly checks.**

1. Clean the cutter head.
2. Check cutter teeth for chips and dullness.
3. Generally inspect the machine for damage and loose or worn parts.
4. Check the dust extraction for blockages and any large bits that could cause blockages.

### **Monthly checks.**

1. Check the motor drive belts for wear, splits and cuts.
  2. Clean the motor compartment and the motor to ensure that the motor cooling fins work efficiently.
  3. Clean and lubricate the drive chains and cogs.
  4. Generally inspect the machine for damage and loose or worn parts.
- Note.** It is recommended that you use a Teflon based lubricant.

### **Drive belt replacement.**

**Note.** If your machine is fitted with a multi-drive belt system, always replace all the belts with a matched set. **Never** replace only one belt as this will cause vibration, excessive wear to bearings and result in a poor work finish.

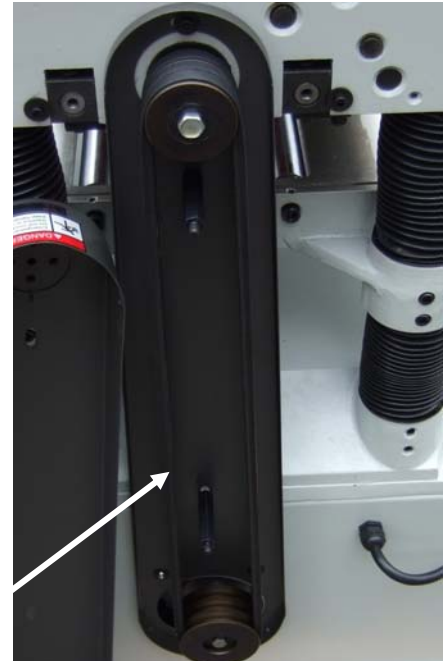
**Note.** Disconnect the power to the machine before conducting any maintenance on the machine.

1. Remove the side cover to access the motor. Remove the belt guard.
2. Loosen the motor clamping nuts as detailed earlier in the manual.
3. Remove the drive belts.
4. Fit the new belts.

5. Retension the belts. There should be a 3/16" deflection when the belt is pressed with moderate finger pressure. Tighten the motor clamping nuts.

6. The drive belts should be checked after running the machine for approximately 10 hours. The belts bed into the pulleys and will slacken off slightly. If they are not adjusted slippage may occur and this will cause early belt failure. There should be a 3/16" deflection when the belt is pressed with moderate finger pressure.

7. Refit the side cover and belt guard before running the machine.



**Drive belts**

### **Table vertical adjustment chain tension.**

The table is moved vertically by a chain that rotates four cogs. The chain needs to have little or no slack to ensure that the table moves vertically parallel. The tension on the chain is maintained by an idler cog attached to a bracket. To access this mechanism, remove a side cover. To adjust loosen the two screws and move the cog to remove the slack. Retighten the fixing screws.



**Tension bracket**

### **Lubricating the machine.**

**Note.** All the bearings are sealed for life and do not require lubrication. If a bearing is noisy do not try to relubricate just replace it.

**Note.** It is recommended that you use a Teflon based lubricant as it tends to dry and therefore will attract less saw dust and dirt.

1. Lubricate the drive chains and cogs. To gain access to the drive system remove the side cover.

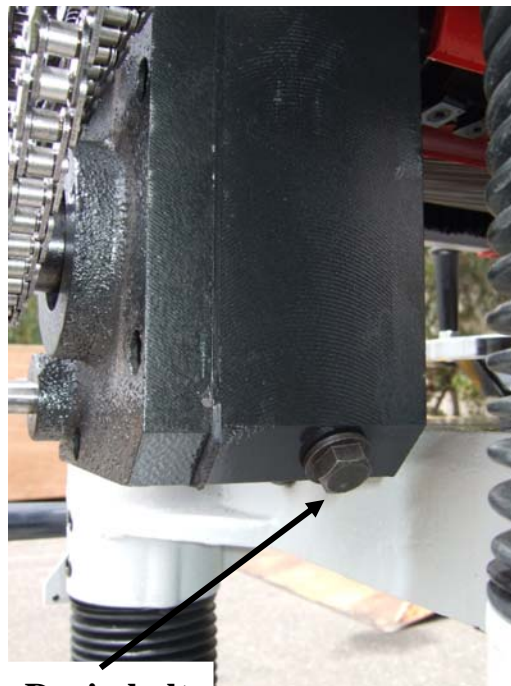
## 2. Gear box

The gear box oil must be drained and refilled with gear box oil, after running the machine for 30 hours.

Remove the drain bolt and remove one of the fixing bolts. Once all the oil has drained, replace the drain bolt and fill the gear box with new oil. Replace the fixing bolt.

The gear box oil should be topped up every 100 hours of use.

**Fixing bolt**



**Drain bolt**

### **Troubleshooting and fault finding.**

<b>Problem</b>	<b>Cause</b>	<b>Corrective action</b>
Motor will not start or fuses or circuit breakers blow.	1. Emergency button depressed.	1. Rotate until the switch returns to out position
	2. Short circuit	2. Repair or replace short circuit item.
	3. Start capacitor faulty.	3. Fit new capacitor.
	4. Motor thermal protection circuit breaker faulty, or motor is at fault.	4. Replace thermal protection circuit breaker in motor or replace motor.
	5. Open circuit in motor or loose connections.	5. Replace or repair motor or loose connection
Fuses or circuit breakers blow.	1. Motor drawing excessive current	1. Repair or replace motor.
	2. Cutter head or motor jammed	2. Remove jam.
	3. Short circuit	3. Repair or replace short circuit item.
Motor will not develop full power or motor speed slows with load, overheats, or stalls.	1. Motor run capacitor, faulty.	1. Replace the capacitor.
	2. Machine overloaded.	2. Take smaller cuts.
	3. Motor overheating.	3. Clean motor, taking care to make sure that all the cooling fins are clean.
	6. Short circuit in motor or loose connections.	6. Repair or replace motor / loose

		connections.
Cutter head slows or belt squeals when cutting	1. V-belts loose	1. Tighten V-belts
	2. V-belts worn out	2. Replace V-belts
Loud noise coming from machine	1. Motor pulley set screws or keys are missing or loose	1. Replace or tighten if necessary
	2. Drive belts are damaged	2. Replace drive belts
Tables are hard to adjust	1. Table spindles are tight	1. Clean and lubricate spindles
Job stops or slows during cut	1. Taking too deep cut	1. Take a smaller cuts
	2. Pitch or build up on planer components.	2. Clean the tables and cutter head components
Chipping or marks (consistent pattern)	1. Knots or conflicting grain direction in wood	1. Inspect job for knots and grain direction; only use good material
	2. Nicked or chipped tooth	2. Replace/ rotate affected tooth
	3. Taking too deep cut	3. Take smaller cuts. Take small cuts on hard woods
Furry finish on the grain	1. Wood has high moisture content or surface wetness	1. Check moisture content and allow to dry
	2. Blunt teeth	2. Rotate/replace the teeth
Lines or ridges that run along the board	1. Nicked or chipped teeth	1. Replace/rotate teeth
Chatter marks across the face of the board. Uneven teeth marks	1. Teeth not installed evenly	2. Check that there is no dirt under the teeth and that they are evenly tight
	2. Worn cutter head bearings	3. Replace cutter head bearings
Shiny finish	1. Teeth are blunt	1. Rotate/replace the

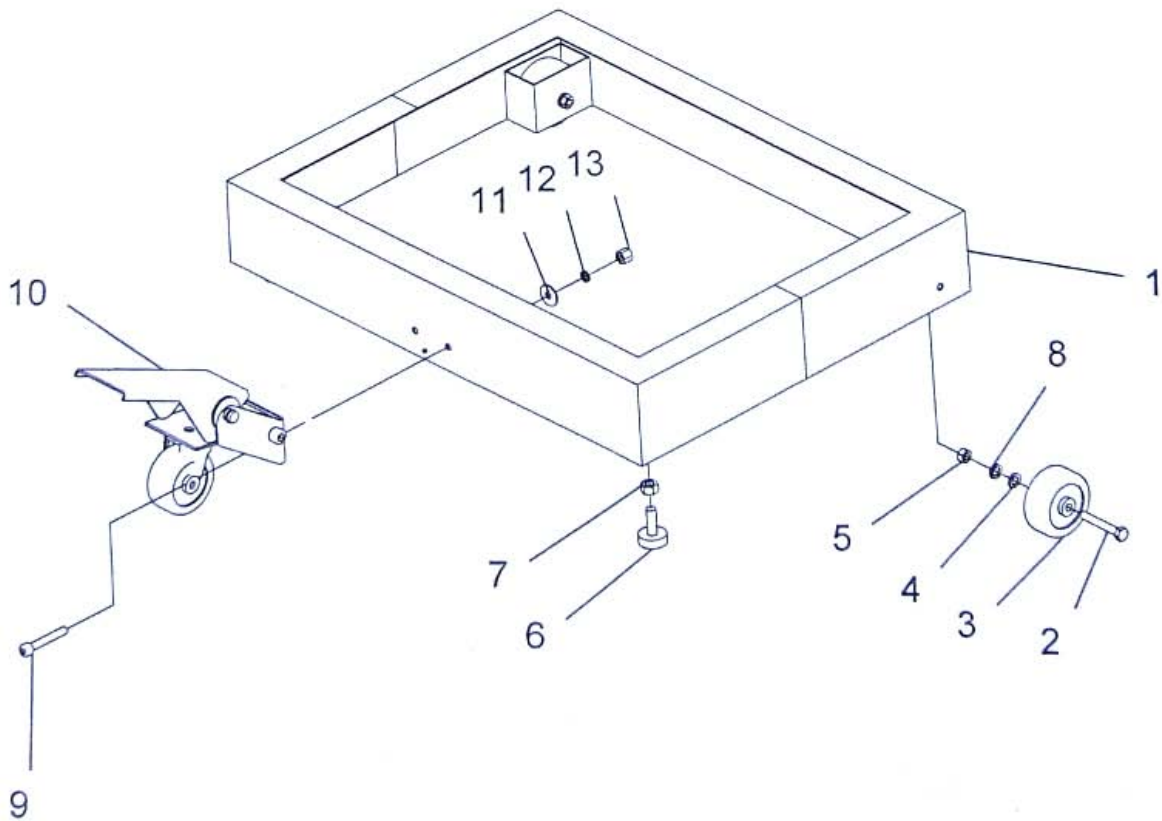
		teeth
	2. Too fine a cut	2. Increase the depth of cut.
Chip Marks Random pattern	1. Chips not removed from cutter head	1. Use a dust collection system. Or a stronger dust collection system

## **THE ELECTRICAL DIAGRAM**





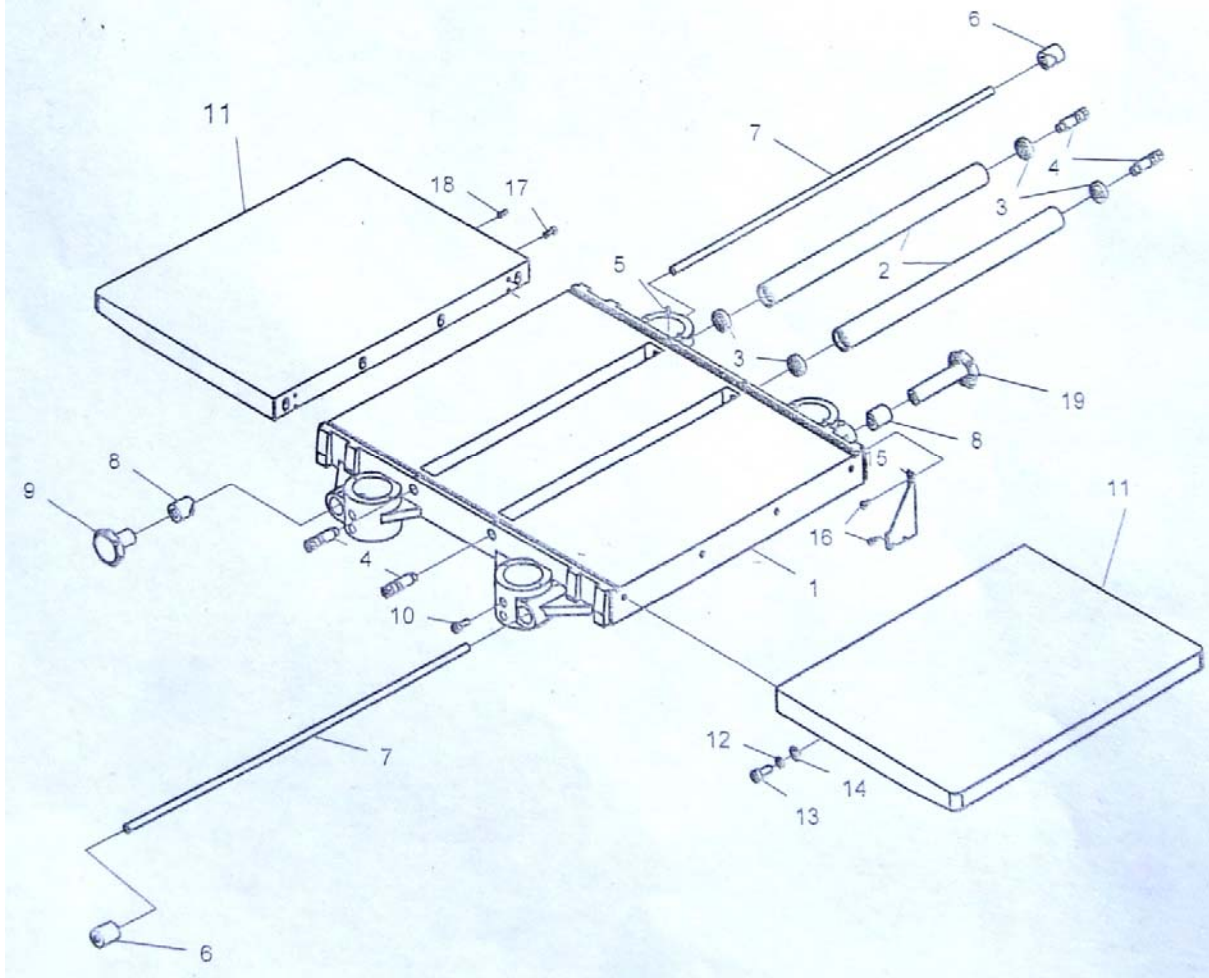
ITEM	DESCRIPTION	NUM
1	STAND	1
2	HEX SCREW M10*80	2
3	WHEEL	2
4	FLAT WASHER $\phi$ 10	2
5	SPECTICAL NUT M10	2
6	RUBBER FOOT	2
7	NUT M10	2
8	LOCK WASHER $\phi$ 10	2
9	SCREW M8*50	3
10	CASTER ASSEMBLY	1
11	BIG WASHER $\phi$ 8	3
12	LOCK WASHER $\phi$ 8	3
13	NUT M8	3





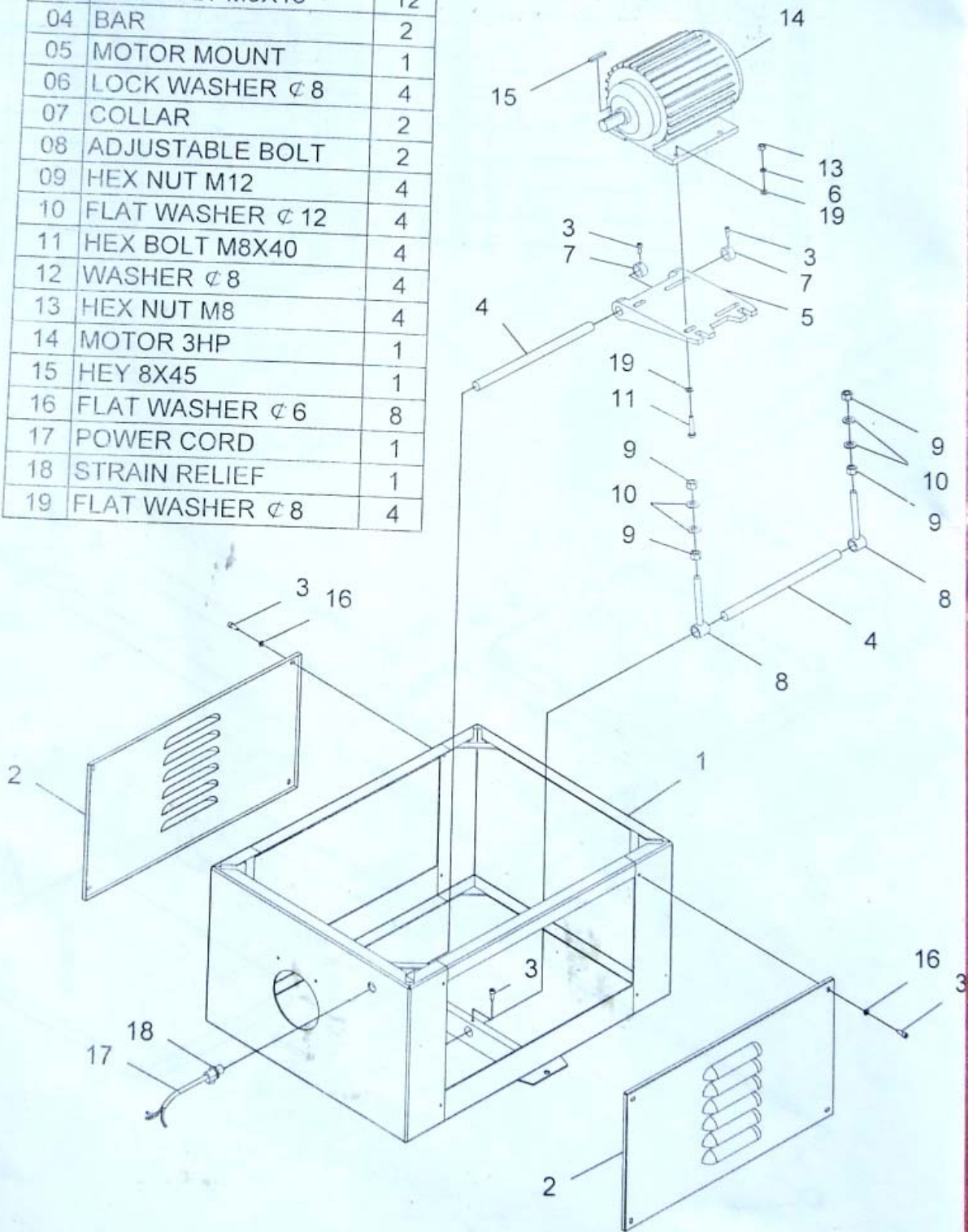
REF	DESCRIPTION	QTY
01	MIDDLE TABLE	1
02	ROLLER	2
03	BEARING 6201	4
04	ECCENTRIC SHAFT	4
05	SETSCREW M6X12	4
06	TREADED GIB	2
07	LOCK ROD	2
08	GIB	2
09	KNOB	1

REF	DESCRIPTION	QTY
10	CAP SCREW M8X20	8
11	AUXILIARY TABLE	2
12	LOCK WASHWER $\varnothing$ 10	8
13	CAP SCREW M10X25	8
14	FLAT WASHER $\varnothing$ 10	8
15	BRACKET	1
16	CAP SCREW M5X10	4
17	HEX BOLT M6X16	4
18	SETSCREW M6X16	4
19	KNOB	1

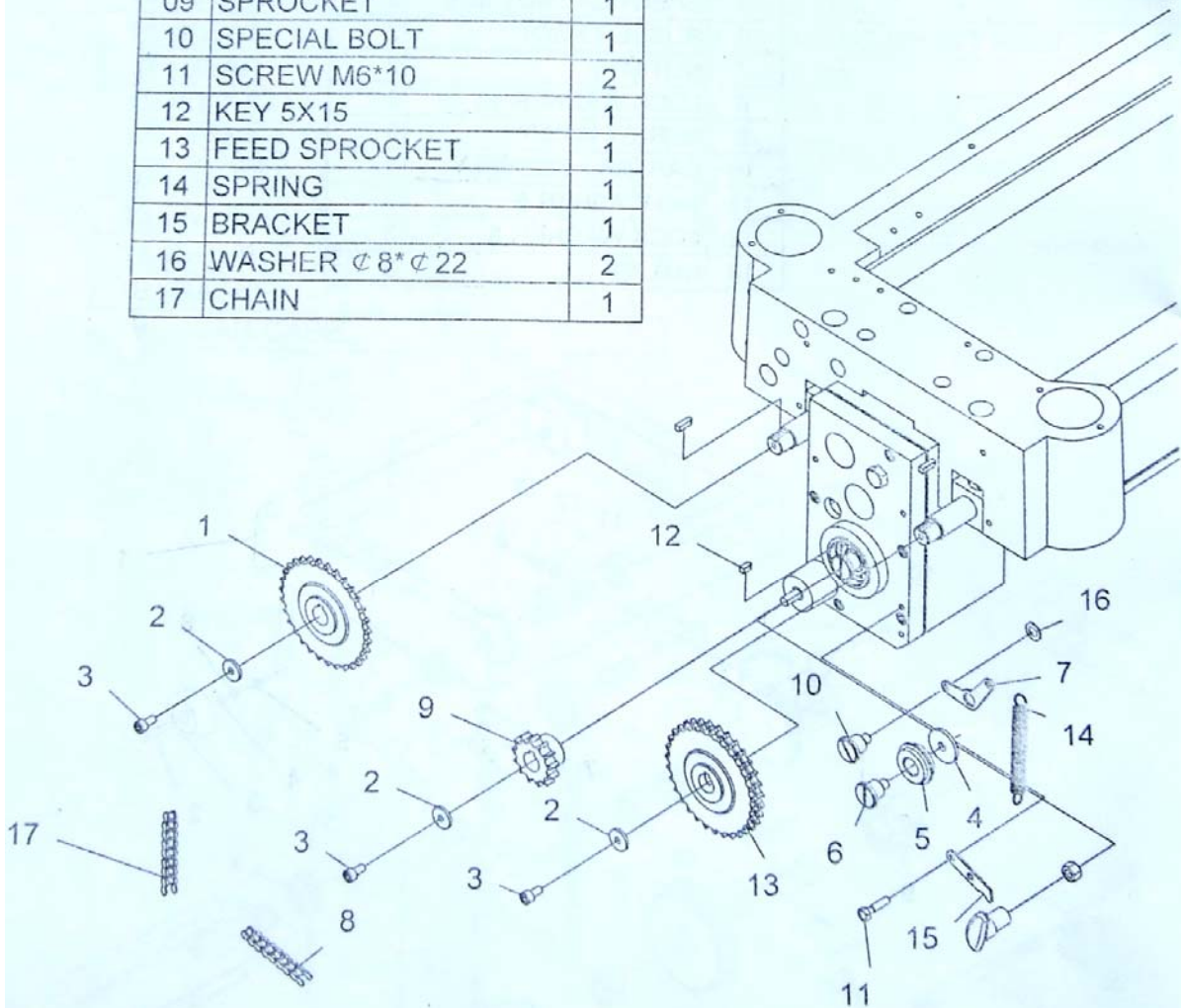




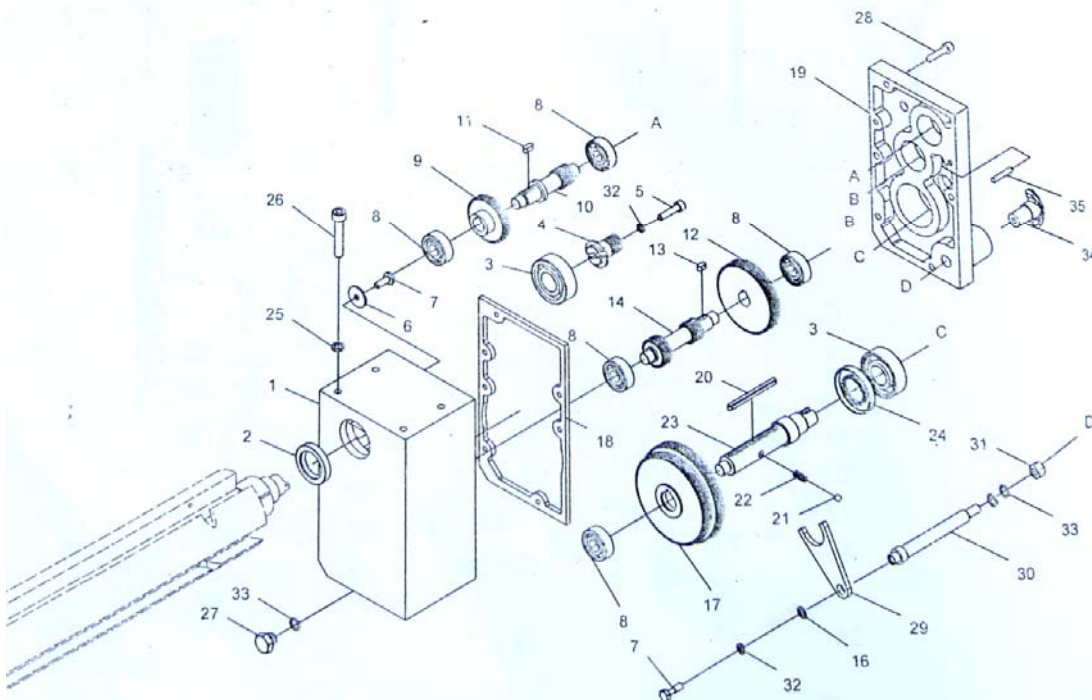
REF	DESCRIPTION	QTY
01	STAND	1
02	COVER	2
03	HEX BOLT M6X16	12
04	BAR	2
05	MOTOR MOUNT	1
06	LOCK WASHER $\phi$ 8	4
07	COLLAR	2
08	ADJUSTABLE BOLT	2
09	HEX NUT M12	4
10	FLAT WASHER $\phi$ 12	4
11	HEX BOLT M8X40	4
12	WASHER $\phi$ 8	4
13	HEX NUT M8	4
14	MOTOR 3HP	1
15	HEY 8X45	1
16	FLAT WASHER $\phi$ 6	8
17	POWER CORD	1
18	STRAIN RELIEF	1
19	FLAT WASHER $\phi$ 8	4



REF	DESCRIPTION	QTY
01	SPROCKET	1
02	WASHER	3
03	CAP SCREW M6X16	3
04	FLAT WASHER $\varnothing$ 10	1
05	CHAIN TENSIONER	1
06	SHAFT	1
07	BRACKET	1
08	CHAIN	1
09	SPROCKET	1
10	SPECIAL BOLT	1
11	SCREW M6*10	2
12	KEY 5X15	1
13	FEED SPROCKET	1
14	SPRING	1
15	BRACKET	1
16	WASHER $\varnothing$ 8* $\varnothing$ 22	2
17	CHAIN	1



REF	NAME	QTY	REF	NAME	QTY
01	GEAR BOX	1	20	KEY 5X40	1
02	OIL SEAL 25X40X7	1	21	STEEL BALL $\phi 6$	1
03	BALL BEARING 6204	2	22	TENSION SPRING	1
04	GEAR	1	23	SHAFT	1
05	CAP SCREW M6X25(LEFT)	1	24	OIL SEAL 25X47X7	1
06	FLAT WASHER $\phi 6 \times \phi 22$	1	25	LOCK WASHER $\phi 8$	4
07	PHILLIPS HEAD BOLT M6X12	2	26	HEX HEAD BOLT M8X45	4
08	BEARING 6201	5	27	SCREW M12X1.25X16	2
09	GEAR	1	28	HEX HEAD BOLT M6X25	5
10	GEAR AND SHAFT	1	29	SHIFTER	1
11	KEY 5X12	1	30	SHIFTING SHAFT HADNLE	1
12	GEAR	1	31	NUT M8	1
13	KEY 5X10	1	32	LOCK WASHER $\phi 6$	2
14	GEAR 2-SPEED	1	33	OIL SEAL 9X1.8	2
15	OIL SEAL 11.8X2.65	1	34	KNOB	1
16	WASHER 6	1	35	ROLL PIN 5X25	2
17	DOUBLE GEAR	1			
18	GASKET	1			
19	GEAR CASE	1			

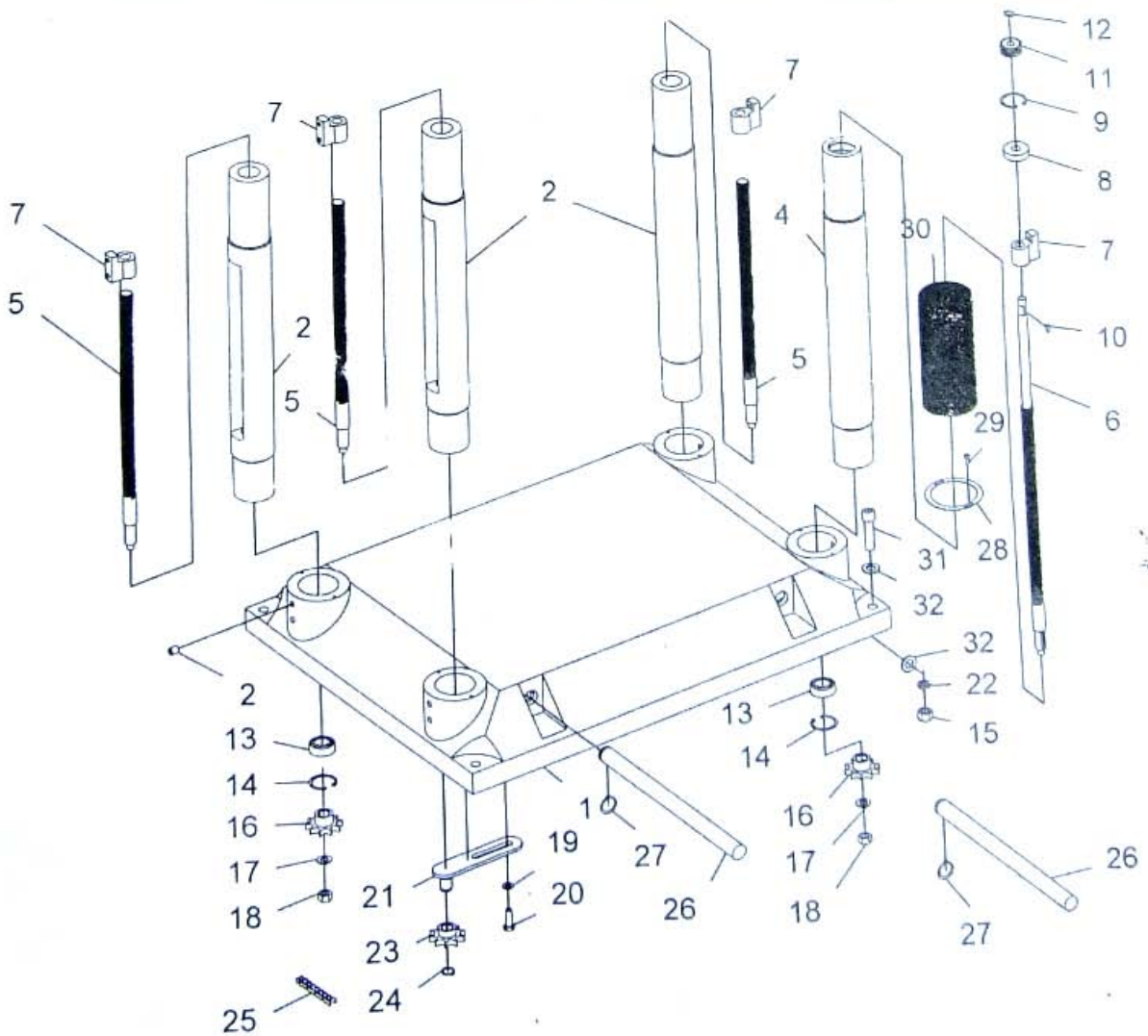






## COLUMN

REF	DESCRIPTION	QTY	REF	DESCRIPTION	QTY
01	BASE	1	17	WASHER $\phi$ 10	4
02	SET SCREW M10X12	8	18	HEX NUT M10	4
03	COLUMN	3	19	FLAT WASHER $\phi$ 8	2
04	COLUMN	1	20	HEX BOLT M8X25	2
05	LEAD SCREW	3	21	BRACKET	1
06	LEAD SCREW	1	22	LOCK WASHER $\phi$ 12	4
07	LEAD SCREW NUT	4	23	SPROCKET	1
08	BUSHING	1	24	SNAP RING $\phi$ 15	1
09	INT RETAINING RING $\phi$ 38	1	25	CHAIN	1
10	KEY 5X12	1	26	CRANE POST	4
11	GEAR	1	27	EXT RETAINING RING $\phi$ 22	4
12	SNAP RING $\phi$ 12	1	28	PIPE BAND	16
13	BALL BEARING 6202	4	29	PANHEAD SCREW M4X12	32
14	SNAP RING $\phi$ 35	4	30	EXPANSION BAND	8
15	HEX NUT M12	4	31	HEX BOLT M12X50	4
16	SPROCKET	4	32	FLAT WASHER $\phi$ 12	8



## LIMITED WARRANTY

New woodworking machines sold by Laguna Tools carry a one-year warranty effective from the date of shipping. Laguna Tools guarantees all new machine sold to be free of manufacturers' defective workmanship, parts and materials. We will repair or replace, without charge, any parts determined by Laguna Tools, Inc. to be a manufacturer's defect. We require that the defective item/part be returned to Laguna Tools with the complaint. In the event the item/part is determined to be damaged due to lack of maintenance, cleaning or misuse/abuse, the customer will be responsible for the cost to replace the item/part, plus all related shipping charges. 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, lack of or inadequate dust collection, misuse/abuse or damage caused where repair or alterations have been made or attempted by others.

Laguna Tools, Inc. is not responsible for additional tools or modifications sold or performed (other than from/by Laguna Tools, Inc.) on any Laguna Tools, Inc. woodworking machine. Warranty maybe voided upon the addition of such described tools and/or modifications, determined on a case-by-case basis.

Normal user alignment, adjustment, tuning and machine settings are not covered by this warranty. It is the responsibility of the user to understand basic woodworking machinery settings and procedures and to properly maintain the equipment in accordance with the standards provided by the manufacturer.

Parts, under warranty, are shipped at Laguna Tools, Inc.'s cost either by common carrier, FEDEX ground service or a similar method. Technical support to install replacement parts is primarily provided by phone, fax, e-mail or Laguna Tools Customer Support Website. The labor required to install replacement parts is the responsibility of the user.

Laguna Tools is not responsible for damage or loss caused by a freight company or other circumstances not in our control. All claims for loss or damaged goods must be notified to Laguna Tools within twenty-four hours of delivery. Please contact our Customer Service Department for more information.

Only new machines sold to the original owner are covered by this warranty. For warranty repair information, call 1-800-332-4094.