

POWERMATIC®

Operating Instructions and Parts Manual 15-inch Planer Models 15S and 15HH



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Warranty and Service

WMH Tool Group, Inc., warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these WMH Tool Group Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your POWERMATIC® tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

MORE INFORMATION

WMH Tool Group is consistently adding new products to the line. For complete, up-to-date product information, check with your local WMH Tool Group distributor, or visit powermatic.com.

WARRANTY

POWERMATIC products carry a limited warranty which varies in duration based upon the product.

	Industrial Products Horizontal Panel Saws Cut Off Saws Rip Saws Bandsaws Jointers Planers Oscillating Edge Sanders	Belt Sanders Shapers Power Feeders Mortisers Dovetailers		Non-Industrial Products Tablesaws Vertical Panel Saws Bandsaws Jointers Planers Planer/Molder Dust Collection	Disc Sanders Edge Sanders Drum Sanders Shapers Drill Press's Mortisers Dovetailers
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Warranty reverts to 1 Year if above products are used for commercial, industrial or educational purposes

WHAT IS COVERED?

This warranty covers any defects in workmanship or materials subject to the exceptions stated below. Cutting tools, abrasives and other consumables are excluded from warranty coverage.

WHO IS COVERED?

This warranty covers only the initial purchaser of the product.

WHAT IS THE PERIOD OF COVERAGE?

The general POWERMATIC warranty lasts for the time period specified in the product literature of each product.

WHAT IS NOT COVERED?

The Five Year Warranty does not cover products used for commercial, industrial or educational purposes. Products with a Five Year Warranty that are used for commercial, industrial or education purposes revert to a One Year Warranty. This warranty does not cover defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair or alterations, or lack of maintenance.

HOW TO GET SERVICE

The product or part must be returned for examination, postage prepaid, to a location designated by us. For the name of the location nearest you, please call 1-800-274-6848.

You must provide proof of initial purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will repair or replace the product, or refund the purchase price, at our option.

We will return the repaired product or replacement at our expense unless it is determined by us that there is no defect, or that the defect resulted from causes not within the scope of our warranty in which case we will, at your direction, dispose of or return the product. In the event you choose to have the product returned, you will be responsible for the handling and shipping costs of the return.

HOW STATE LAW APPLIES

This warranty gives you specific legal rights; you may also have other rights which vary from state to state.

LIMITATIONS ON THIS WARRANTY

WMH TOOL GROUP LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

WMH TOOL GROUP SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

WMH Tool Group sells through distributors only. The specifications in WMH catalogs are given as general information and are not binding. Members of WMH Tool Group reserve 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.

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Warnings

As with all machines, there is a certain amount of hazard involved with the use of this planer. Use the machine with the respect and caution demanded where safety precautions are concerned. When normal safety precautions are overlooked or ignored, personal injury to the operator can result.

Read, understand and follow the safety and operating instructions found in this manual. Know the limitations and hazards associated with this machine.

Electrical grounding. 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 plug are used, make certain that the grounding plug connects to a suitable ground. Follow the grounding procedure indicated in the National Electrical Code.

Eye safety. Wear an approved safety shield, goggles, or glasses to protect eyes. (NOTE: Common eyeglasses are only impact-resistant, they are not safety glasses.)

Personal protection. Before operating the machine, remove tie, rings, watch and other jewelry and roll up sleeves above the elbows. Remove all loose outer clothing and confine long hair. Protective type footwear should be used. Where the noise exceeds the level of exposure allowed in Section 1910.95 of the OSHA Regulations, use hearing protective devices. Do not wear gloves.

Guards. Keep the machine guards in place for every operation for which they can be used. If any guards are removed for maintenance, DO NOT OPERATE the machine until the guards are reinstalled.

Placement. Place machine so that potential kickback area is not in line with aisles, doorways, wash stations, or other work areas.

Work area. Keep the floor around the machine clean and free of scrap material, saw dust, oil and other liquids to minimize the danger of tripping or slipping. Be sure the table is free of all scrap, foreign material and tools before starting to cut. Make certain the work area is well lighted and that a proper exhaust system is used to minimize dust. It is recommended that anti-skid floor strips are used on the floor area where the operator normally stands and that each machine's work area be marked off. Provide adequate work space around the machine.

Avoid accidental starting: Make certain motor switch is in off position before connecting power to the machine.

Operator position. Maintain a balanced stance and keep your body under control at all times. Stand to one side out of line with the table and make sure no one else is standing in line with the table.

Housekeeping. Before turning on machine, remove all extra equipment such as keys, wrenches, scrap, and cleaning rags away from the machine

Careless acts. Give the work you are doing your undivided attention. Looking around, carrying on a conversation, and "horseplay" are careless acts that can result in serious injury.

Disconnect machine before performing any service or maintenance or when changing blades. A machine under repair should be RED TAGGED to show it should not be used until the maintenance is complete.

Maintain tools in top condition. Keep tools sharp and clean for safe and best performance. Dull tools increase noise levels and can cause kickbacks and glazed surfaces. Check the condition and adjustment of the tools before making any cuts. Follow the sharpening instructions on knife grinding and jointing, installing and adjustments.

Hand safety. Keep hands outside the machine. NEVER reach under the guards to try to clear stock that stops feeding. Do not clear chips and sawdust with hands; use a brush. Do not have any part of the hands under that part of the board that is over the table when starting a cut; the infeed roll will engage the board and force it down against the table causing a pinching action. Do not operate machine while the gear cover is open.

Cutterhead rotation: Be sure cutterhead rotates under power in a counterclockwise direction when viewed from the main drive motor side.

Material condition: Do not plane boards with loose knots or with nails or any foreign material on its surface. Knife impact on these objects can cause the knives to be pulled out and cause them to shatter against the chipbreaker or pressure bar. Twisted, warped, or in wind stock should first be jointed on one surface before attempting to plane a parallel surface on the planer. Serious stock flaws cannot be removed by use of a planer alone.

Machine adjustments: Make all machine adjustments with power off except feed rate.

Job completion. If the operator leaves the machine area for any reason, the planer should be turned "off" and the cutterhead should come to a complete stop before his departure. In addition, if the operation is complete, he should clean the planer and the work area. Never clean the planer with power "on" and never use the hands to clear sawdust and debris; use a brush.

Replacement parts. Use only Powermatic or factory authorized replacement parts and accessories; otherwise the warranty and guarantee is null and void.

Misuse. Do not use this Powermatic planer for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless for any injury or damage which may result from that use.

If you are not thoroughly familiar with the operation of planers, obtain advice from your supervisor, instructor or other qualified person.

Drugs, alcohol, medication. Do not operate this machine while under the influence of drugs, alcohol, or any medication.

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

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

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

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

CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

WARNING This means that if precautions are not heeded, it may result in serious injury or possibly even death.

Features

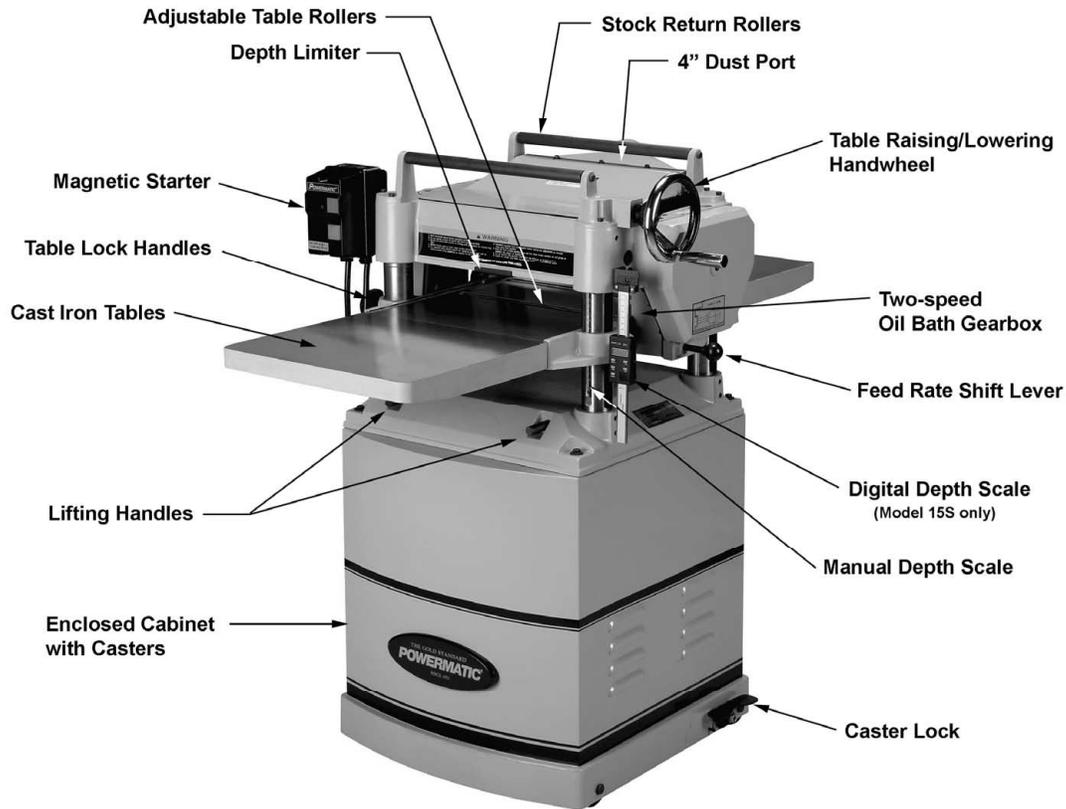


Figure 1

Specifications

Model Number.....	15S	15HH
Stock Number.....	1791210.....	1791213
Maximum Cutting Width (in.).....	14-7/8.....	14-7/8
Maximum Cutting Thickness (in.).....	6.....	6
Full Width Cutting Depth (in.).....	1/8.....	1/8
Minimum Planing Length (in.).....	8.....	8
Knives.....	3.....	98 four-sided inserts
Cutterhead Speed (RPM).....	4,500.....	4,500
Cuts per Minute.....	13,500.....	not applicable
Cutterhead Diameter (in.).....	2-7/8.....	2-7/8
Sound Rating @ 2" distance (dB).....	82 to 85.....	80 to 84
Feed Rate (FPM).....	16 and 20.....	16 and 20
Motor.....	TEFC, 3HP, 1Ph, 230V, 60Hz.....	TEFC, 3HP, 1Ph, 230V, 60Hz
Dust Chute Diameter (in.).....	4.....	4
Overall Dimensions (LxWxH)(in.).....	48 x 28 x 43-1/2.....	48 x 28 x 43-1/2
Net Weight (lbs.).....	507.....	502
Shipping Weight (lbs.).....	573.....	568

The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, WMH Tool Group reserves the right to change specifications at any time and without prior notice, without incurring obligations.

Unpacking

Open container and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Planer is assembled and running properly.

Compare the contents of your container with the following list to make sure all parts are intact. Report any missing parts to your distributor. Read this owner's manual thoroughly for assembly, maintenance and safety instructions.

Crate Contents (Figure 2):

- 1 Planer (not shown)
- 1 Dust hood
- 2 Cast iron extension tables
- 1 Handwheel
- 1 Handle
- 4 Hex wrenches (3, 4, 5 and 6mm)*
- 2 Open-end wrenches (8-10, 12-14mm)*
- 3 Bags of fasteners* – see below
- 1 Owner's manual (not shown)
- 1 Warranty card (not shown)

Model 15S only:

- 1 T-handle hex wrench (4mm)*
- 2 Adjustment pins*

Model 15HH ONLY (Figure 4):

- 1 1/4" Drive Screwdriver
- 1 T25 Torx Drive Socket Adaptor
- 1 Set of 10 Knife Inserts

Contents of fastener bags* (Figure 3):

A – (for installing handwheel)

- 1 Direction label
- 1 Hex nut
- 1 Flat washer
- 1 Key

B – (for installing extension tables)

- 6 Hex cap screws, M8x25
- 6 Socket set screws, M8x20

C – (for installing dust hood)

- 3 Socket head cap screws, M6x12
- 3 Lock washers, M6
- 3 Hex cap screws, M5x10
- 3 Flat washers, M5

*indicates parts included in hardware kit 15S-HK

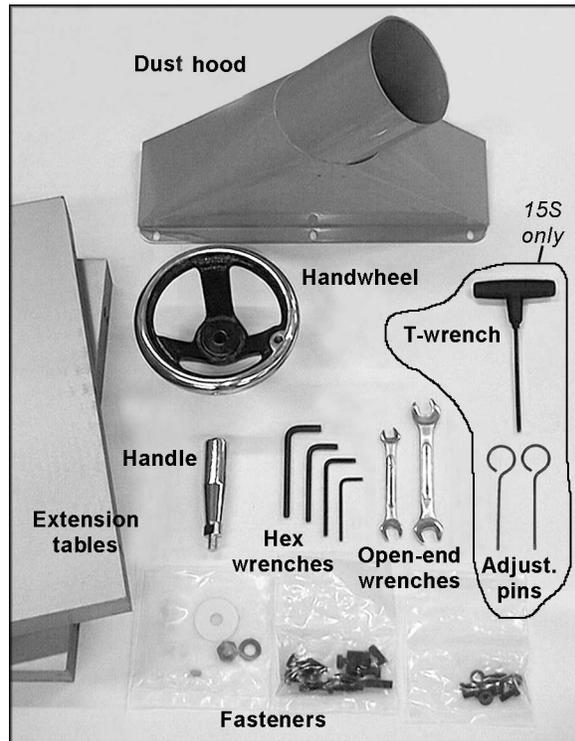


Figure 2

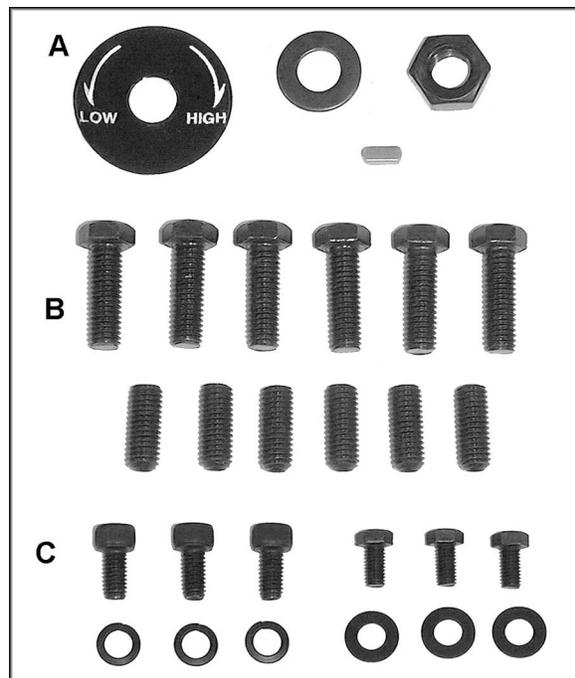


Figure 3

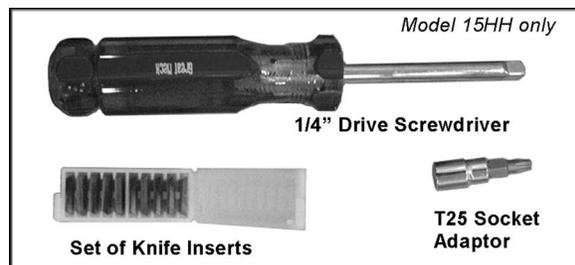


Figure 4

Installation and Assembly

Tools required for assembly:

- Forklift or hoist with slings
- 10-12, 12-14mm open-end wrenches (provided)
- 4 and 5mm hex wrenches (provided)
- 16mm open-end wrench

Remove the screws holding the planer to the pallet and use a forklift or hoist to lift the planer off the pallet. Forks and straps should always be placed under the four lifting handles when lifting this machine (Figure 5). The lifting handles can be pushed back in when not in use.

The planer should be operated in a well-lit area with good ventilation. It can be rolled on its casters to the desired location. Press the foot pedal (Figure 6) to prevent movement during operation or adjustments.

Exposed surfaces, such as tables, rollers, cutterhead, etc., have been given a protective coating at the factory. This should be removed with a soft cloth moistened with a good commercial solvent. Do not use acetone, gasoline, lacquer thinner, or other solvents with a low flash point. Do not use an abrasive pad because it may scratch the polished cast iron surfaces.

CAUTION Use care when cleaning around the cutterhead area – knives are extremely sharp!

Handwheel

1. Place the key into the slot on the shaft (Figure 7), and mount the handwheel to the shaft, making sure it is oriented so it slips over the key.
2. Peel off the backing of the directional label, and attach it to the center of the handwheel. Place flat washer and hex nut on shaft and tighten with 16mm wrench.
3. Mount the handle in the threaded hole in the handwheel, and tighten with a 12mm wrench placed over the flat on the handle.

Starter Box

Mount the controls as shown in Figure 8, with the two socket head cap screws which you'll find mounted to the head casting. Use a 5mm hex wrench.

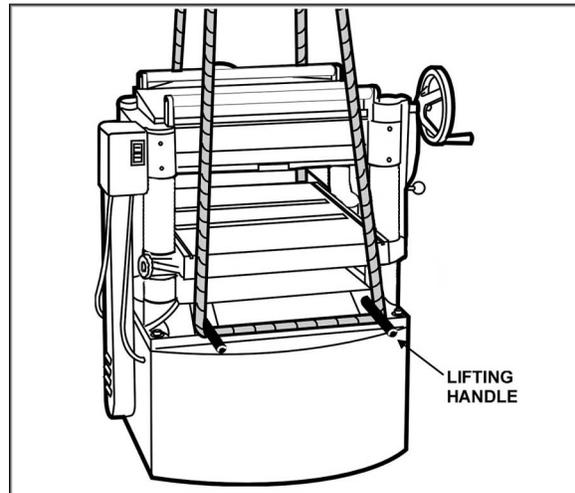


Figure 5

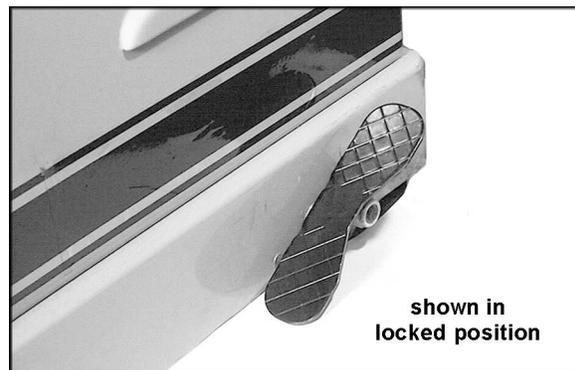


Figure 6

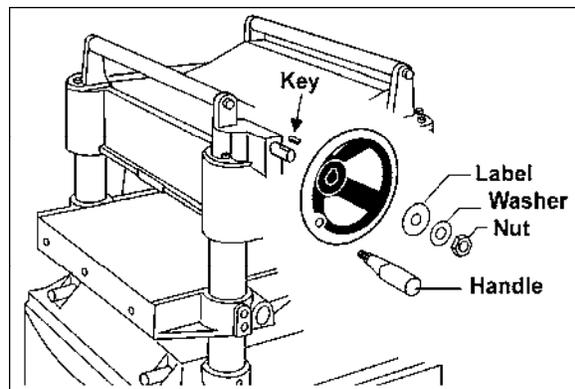


Figure 7

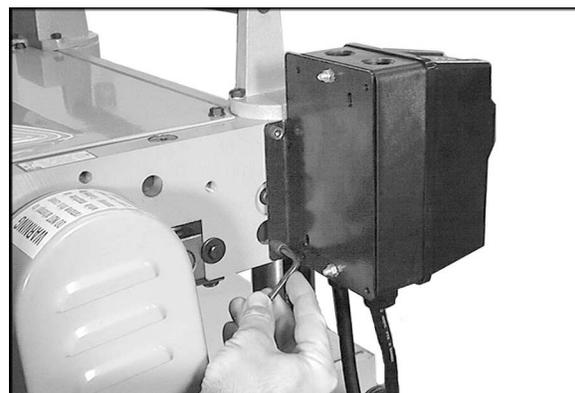


Figure 8

Extension Tables

1. Mount a cast iron table to the edge of the main table with three M8 x 25 hex cap screws (Figure 9) using a 12mm wrench. Do not fully tighten yet.
2. The extension table must be leveled with the main table. Place a straight edge (such as a jointed board) across the extension table and the main table.

NOTE: The straight edge should not lie over the raised table rollers, as this would distort the leveling process. Either place the straight edge just short of the table rollers, or lower the table rollers completely into the table (see page 11) while mounting the extension tables.

3. Insert three socket set screws with a 4mm hex wrench, and screw them in or out as needed until tables are level.
4. Securely tighten the hex cap screws.
5. Mount the second extension table to the opposite side of the planer table, using the same procedure.

Dust Hood

Mount the dust hood to the rear of the head casting with three M6 x 12 socket head cap screws with lock washers, and three M5 x 10 hex cap screws with flat washers. See Figure 10.

It is recommended that you use a dust collection system with this planer. If you are not using a dust collection system, do not attach the dust hood to the planer, as the accumulation of dust inside the hood may create a safety hazard, or eventually cause jamming of the rollers.

Electrical Connections

⚠WARNING Electrical connections must be made by a qualified electrician in compliance with all relevant codes. The machine must be properly grounded to help prevent electrical shock and possible fatal injury.

A power plug is not provided with the 15S or 15HH planers. You may either connect a 230 volt plug or "hard-wire" the machine directly to your electrical panel provided there is a disconnect near the machine. Consult electrical schematic on page 38 for further clarification of wiring setup.

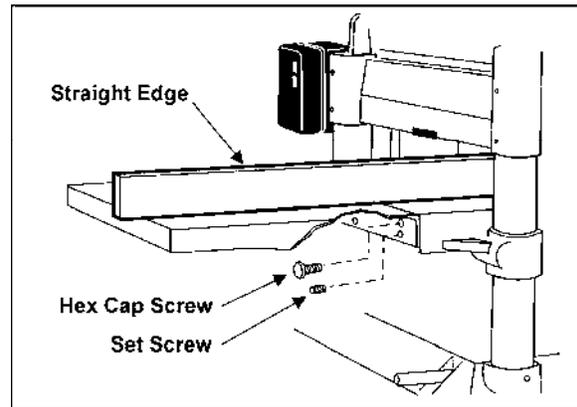


Figure 9

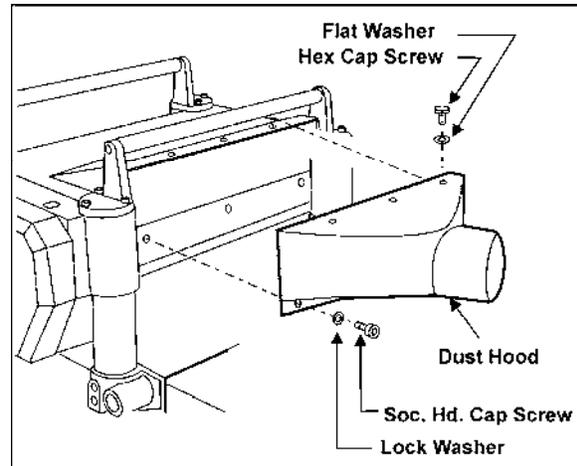


Figure 10

This machine must be grounded. Grounding provides a path of least resistance to help divert current away from the operator in case of electrical malfunction.

Make sure the voltage of your power supply matches the specifications on the motor plate of the machine.

Extension Cords

The use of an extension cord is not recommended for this machine, but if one is necessary make sure the cord rating is suitable for the amperage listed on the machine's motor plate. An undersize cord will cause a drop in line voltage resulting in loss of power and overheating.

The chart in Figure 11 shows the correct size cord to use based on cord length and motor plate amp rating. If in doubt, use the next heavier gauge. The smaller the gauge number the heavier the cord.

Recommended Gauges (AWG) of Extension Cords

Amps	Extension Cord Length *					
	25 feet	50 feet	75 feet	100 feet	150 feet	200 feet
< 5	16	16	16	14	12	12
5 to 8	16	16	14	12	10	NR
8 to 12	14	14	12	10	NR	NR
12 to 15	12	12	10	10	NR	NR
15 to 20	10	10	10	NR	NR	NR
21 to 30	10	NR	NR	NR	NR	NR

*based on limiting the line voltage drop to 5V at 150% of the rated amperes.

NR: Not Recommended.

Figure 11

Adjustments

Tools required for assembly:

- 10, 12 and 17mm open-end wrenches
- 3, 5 and 6mm hex wrenches
- 0.2" (0.5mm) feeler gauge
- straight edge
- gauge block
- cross-point screwdriver

⚠WARNING Disconnect machine from power source before making any adjustments (except feed rate).

Belt Tension

Inspect the tension of the belts frequently during the first few times you use the planer. Belts often stretch during this trial period. If they require tightening, proceed as follows:

1. Remove the belt guard and the rear panel.
2. Loosen the bottom nut on the motor adjustment screw (Figure 12) with a 17mm wrench.
3. Turn the top nut on the adjustment screw to lower the motor plate, which will increase the belt tension.
4. Proper tension is achieved when there is slight deflection in the belt midway between the pulleys, using moderate finger pressure.
5. Tighten the bottom nut on the adjustment screw (Figure 12).

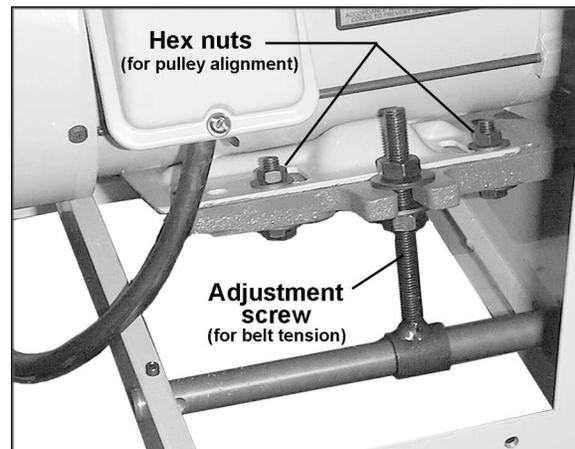


Figure 12

Pulley Alignment

The pulleys should be in line for proper belt operation.

1. Remove the belt guard and place a straight edge against the faces of both pulleys (Figure 13).
2. If the straight edge does not lie flat on both pulley faces, open the rear panel and loosen the four hex nuts on the motor plate (see Figure 12) with a 12mm wrench.
3. Nudge the motor left or right until the pulleys are in alignment.
4. Tighten hex nuts and replace covers.

Table Rollers

Your planer is supplied with two table rollers (Figure 14) which turn as the stock is fed into the machine, thus reducing friction. It is not possible to give exact dimensions on the proper height setting of the table rollers because each type of wood behaves differently. As a general rule, however, when planing rough stock the table rollers should be set at high position. When planing smooth stock the rollers should be set at low position.

NOTE: When raising the roller higher above the table, the range is from zero to 0.06" (Figure 15).

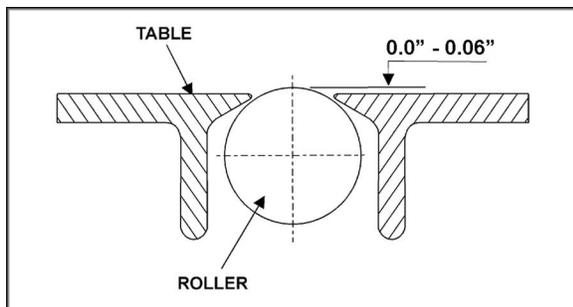


Figure 15

The table rollers are factory set for average planing and are parallel to the table surface. If you desire to adjust the table rollers higher or lower, proceed as follows:

1. Disconnect machine from power source.
2. Lay a straight edge across both rollers.
3. On one side of the table, loosen the set screws (Figure 16) with a 3mm hex wrench, and turn the eccentric shafts to raise or lower the rollers.
4. When proper height is achieved, tighten set screws.
5. Adjust the rollers from the opposite side of the table in the same manner.

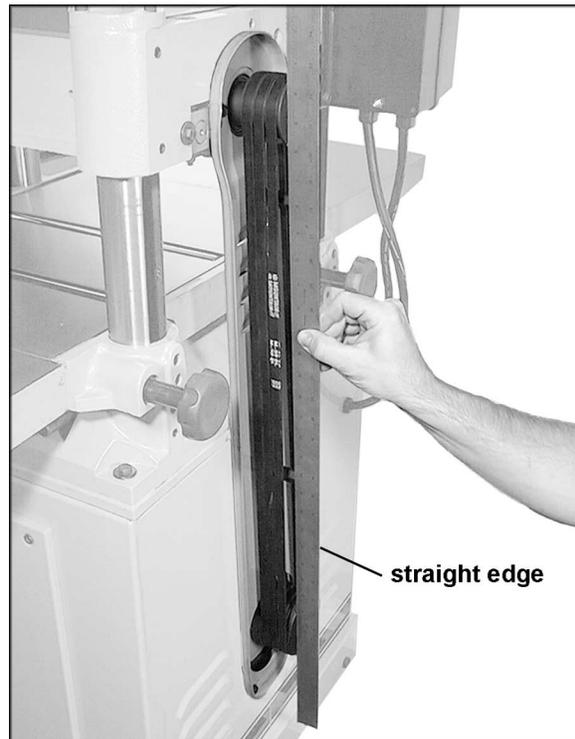


Figure 13



Figure 14

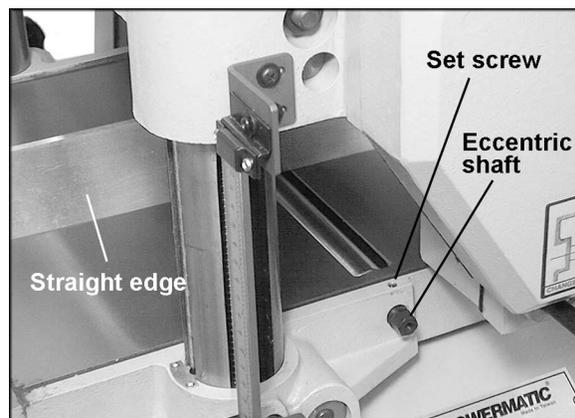


Figure 16

IMPORTANT: Be sure that the height of front and rear rollers are the same. And the table rollers must always be set parallel to the table.

Cutterhead

Although your planer was carefully adjusted at the factory, it should be checked before being put into operation. Any inaccuracies due to rough handling in transit can be corrected by following the directions in this manual.

To check the adjustments you will need feeler gauges, and a dial gauge or home-made gauge block made of hardwood. This gauge block can be made by following the dimensions shown in Figure 17.

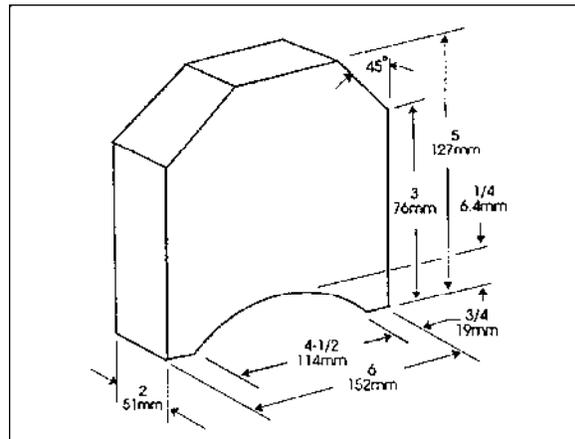


Figure 17

Replacing Knives (Model 15S only)

⚠WARNING Use caution and proceed slowly when working with and around the knives – they are extremely sharp!

When dull knives are replaced, care must be exercised in setting the new knives into the cutterhead. There is a certain procedure to follow which will ensure a proper setting of knives on the 15S Planer. Proceed as follows:

1. Disconnect machine from power source.
2. Remove the dust hood and the top cover. Remove the chip deflector (Figure 28 shows the chip deflector). Remove the belt guard so you can rotate the cutterhead using the pulley.
3. Remove the gib screws with the T-handle hex wrench, as shown in Figure 18, and remove each gib one at a time.
4. Carefully remove the knife, and clean the cutterhead slot of any dust or debris.
5. Place the new knife into the cutterhead slot.
6. **IMPORTANT:** As you proceed with knife installation, make sure the wings on both ends of each hole (see Figure 18) are completely inserted into the groove in the cutterhead. Failure to do this may result in knife breakage during operation.
7. There are a total of three short gibs and twelve long gibs on the cutterhead. It is not important whether long or short gib is used in any particular location along the knife. Of course, each knife must use one short gib.
8. Put the first gib in place at the end of the cutterhead. Use the knife adjustment pins shown in Figure 19. The adjustment pins fit down through the smaller holes in the gib, knife, and cutterhead, helping to align them.

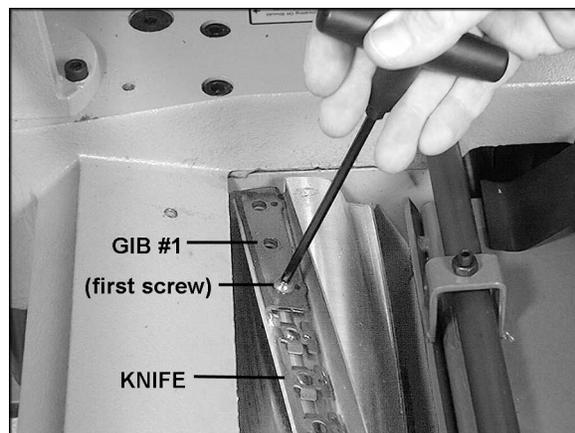


Figure 18 – Model 15S only

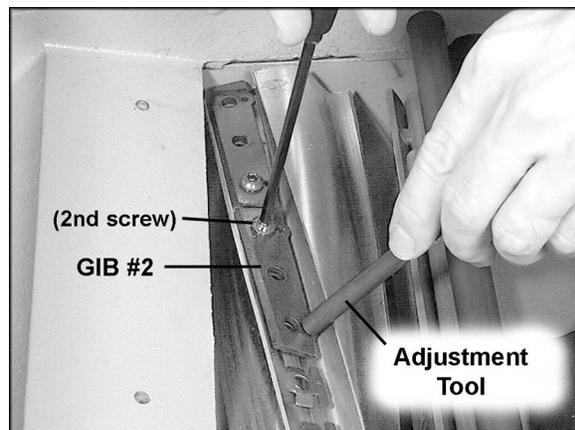


Figure 19 – Model 15S only

(You can also use any 3mm diameter tool, such as a hex wrench or drill bit for this purpose.)

9. Insert the screws for the first gib, turning them with the T-handle wrench. Do not fully tighten the screws; make them only snug enough to hold the knife in the groove.
10. Put the next gib in place, and repeat the process. See Figure 19. Use the adjustment pins and make sure the wings of the knife are completely in the cutterhead groove. Continue sequentially from one end of the cutterhead to the other end. Again, only make the screws snug enough to hold the knife in the groove.
11. When all gibs are loosely installed for one knife, rotate the cutterhead and repeat the process for each of the remaining two knives, working from one end to the other.
12. Now fully tighten all gib screws on one knife. Do this in sequential order, beginning at one end of the knife and working your way across to the other end, tightening each screw in turn.
13. Tighten all gib screws on the other two knives in the same fashion, until all gib screws on the cutterhead are firmly tightened.

(NOTE: The purpose of this incremental tightening process is to prevent any slight deflection or warpage of the cutterhead, and to ensure that the knife is completely seated into the groove.)

⚠WARNING After installing knives, check again carefully. Make certain all gib screws are tightened securely. Failure to heed may result in personal injury.

14. Re-install chip deflector (see “Chip Deflector”, page 17). Re-install cover with the four washer head screws, and re-install belt guard.

Replacing or Rotating Knife Inserts (Model 15HH only)

The knife inserts on the model 15HH are four-sided. When dull, simply remove each insert, rotate it 90° for a fresh edge, and re-install it.

Use the provided screwdriver with the socket adaptor to remove the knife insert screw. See Figure 20. 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.

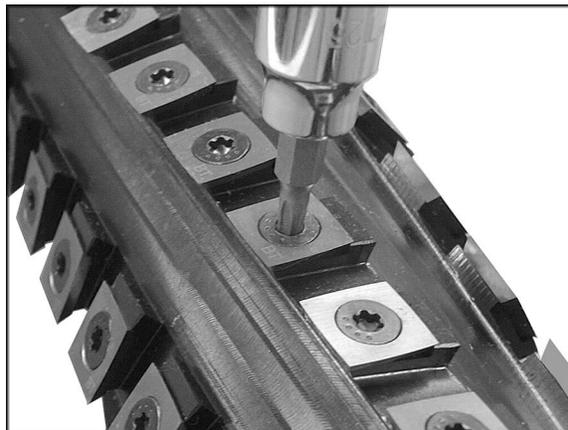


Figure 20 – Model 15HH only

Each knife insert has an etched reference mark so you can keep track of the rotations.

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 planer!

⚠WARNING Make sure all knife insert screws are tightened securely. Loose inserts can be propelled at high speed from a rotating cutterhead, causing injury.

Work Table Parallel to Cutterhead

The work table is set parallel to the cutterhead at the factory and no further adjustment should be necessary. If your machine is planing a taper, first check to see if the knives are set properly in the cutterhead. Then check to see if the work table is set parallel to the cutterhead. Proceed as follows:

1. Disconnect machine from power source.
2. Place the gauge block (Figure 21) on the work table directly under the edge of a knife as shown. Make slight contact by gently raising table.
3. Move the gauge block to the opposite end of the work table. NOTE: Distance from the work table to edge of knife should be the same.
4. If the work table is not parallel to the cutterhead, perform the adjustment procedure as follows.
5. Remove bolts holding the planer to the stand. Carefully tilt planer on its side to expose underside of base (Figure 22).
6. Remove bolt (A, Figure 22) and loosen bolt (B, Figure 22) which will allow you to move the idler sprocket assembly (C, Figure 22) far enough to release tension on the chain.
7. Remove the chain from the particular sprocket on the corner of the base that you need to adjust.
8. Turn the sprocket by hand to bring that corner into adjustment with the other three corners. NOTE: Turning sprocket clockwise will increase the distance between the working table and the head casting; counterclockwise will decrease the distance. This adjustment is very sensitive and it should not be necessary to turn the sprocket more than one or two teeth.
9. When adjustments are correct, replace chain around corner sprocket, slide idler sprocket (C, Figure 22) back to re-tension chain, tighten bolt (B, Figure 22) and insert and tighten bolt (A, Figure 22).

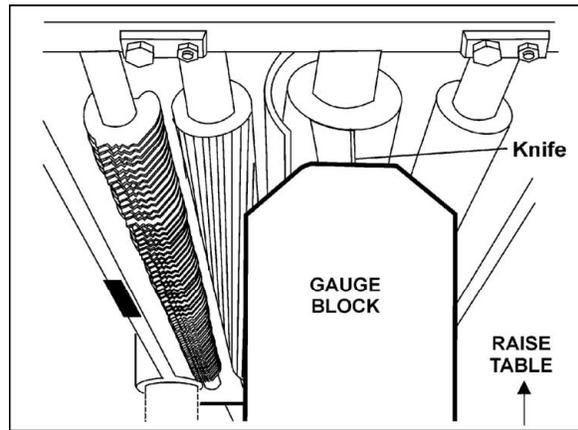


Figure 21

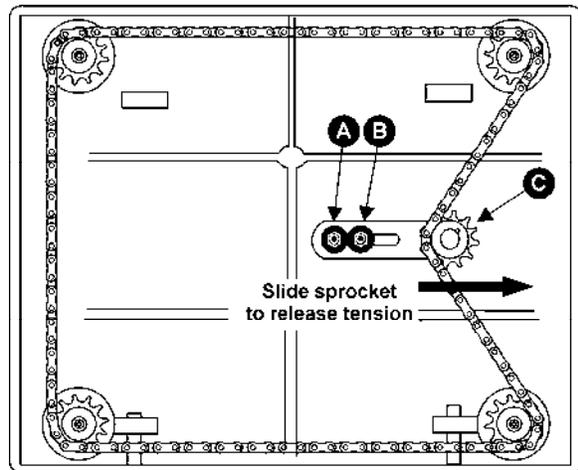


Figure 22

Know the Transmitting Rollers of Your Planer

(Figure 23)

- A. Anti-Kickback Fingers
- B. Infeed Roller
- C. Chipbreaker
- D. Cutterhead
- E. Outfeed Roller

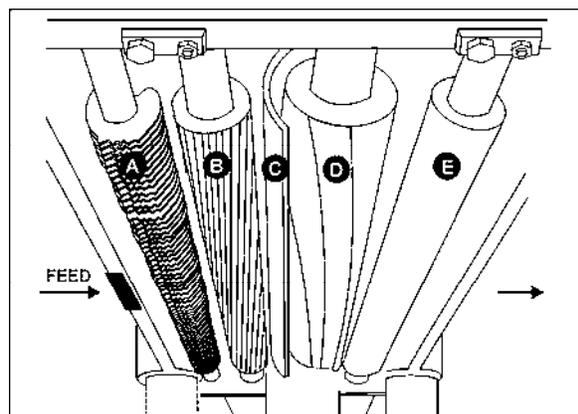


Figure 23

Anti-Kickback Fingers

The anti-kickback fingers (A, Figure 23) are an important safety feature, as they help prevent kickback of stock. They operate by gravity and should be inspected frequently to make sure they are free of gum and pitch, so that they move independently and operate correctly.

Infeed and Outfeed Roller Spring Tension

The infeed roller (B, Figure 23) and outfeed roller (E, Figure 23) are those parts of your planer that feed the stock while it is being planed. The infeed roller and the outfeed roller are under spring tension and this tension must be sufficient to feed the stock uniformly through the planer without slipping but should not be so tight that it causes damage to the board. The tension should be equal at both ends of each roller.

To adjust the spring tension of the infeed and outfeed rollers, turn screws (Figure 24) with a hex wrench. Turn screws on both ends of infeed/outfeed rollers in the same manner.

Height of Infeed Roller, Chipbreaker and Outfeed Roller

The infeed roller, chipbreaker and outfeed roller are adjusted at the factory. The height relationship between these items and the cutterhead is crucial for accurate and safe planing. The infeed roller, chipbreaker, and outfeed roller should each be set at 0.02" (0.5mm) below the cutting circle. See Figure 25.

If any adjustments are necessary for the infeed roller, chipbreaker, or outfeed roller, they should be done carefully. Use the following steps as an example of procedure.

NOTE: This procedure uses a home-made gauge block and feeler gauges, which should be sufficient for most planer operations. If extra precise measurements are desired, however, use a dial indicator device. A bed and feed roller gauge with dial indicator (stock # 2230002) is available as an accessory for this machine, and may be purchased through our customer service department.

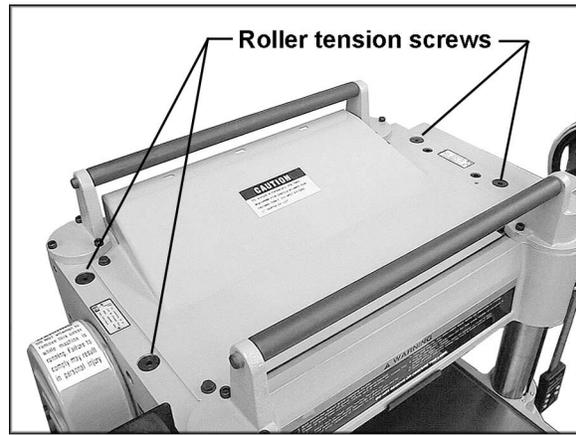


Figure 24

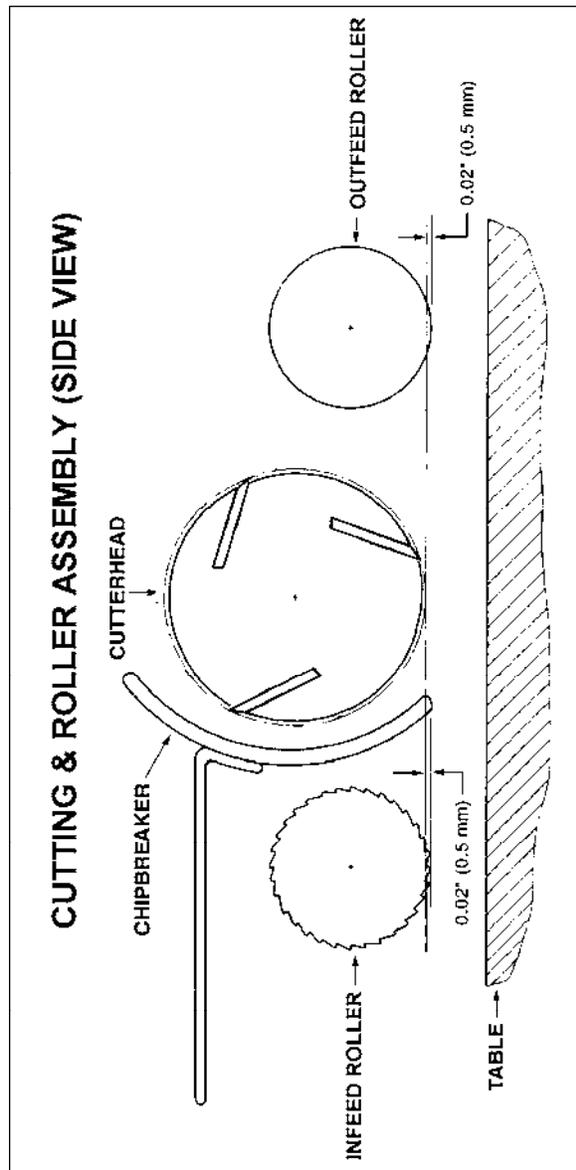


Figure 25

Outfeed Roller Height

1. Disconnect machine from power source.
2. Make sure the knives are set properly as previously explained under "Knife Adjustment."
3. Place the gauge block (F, Figure 26) on the table directly beneath the cutterhead (D, Figure 26).
4. Using a 0.02" (0.5mm) feeler gauge (G, Figure 26) placed on top of the gauge block, raise the work table until the knife just touches the feeler gauge when the knife is at its lowest point. Do not move the work table any further until the outfeed roller is adjusted.
5. Remove the feeler gauge and move the gauge block (F, Figure 27) under one end of the outfeed roller. The bottom of the outfeed roller should just touch the top of the gauge block. If an adjustment to the outfeed roller is necessary, loosen the lock nut (J, Figure 27) and turn screw (H, Figure 27) until the outfeed roller just touches the gauge block. Then tighten lock nut (J, Figure 27).
6. Check and adjust the opposite end of the outfeed roller in the same manner.

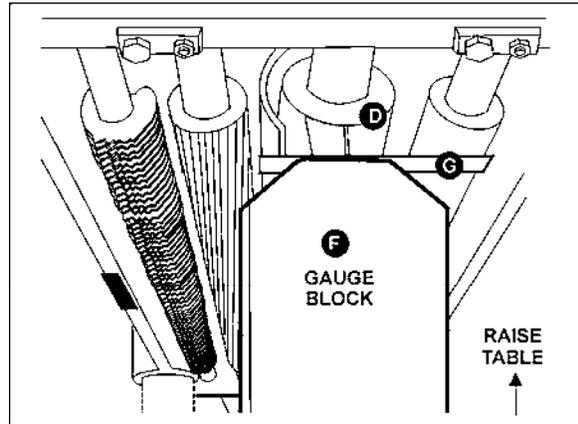


Figure 26

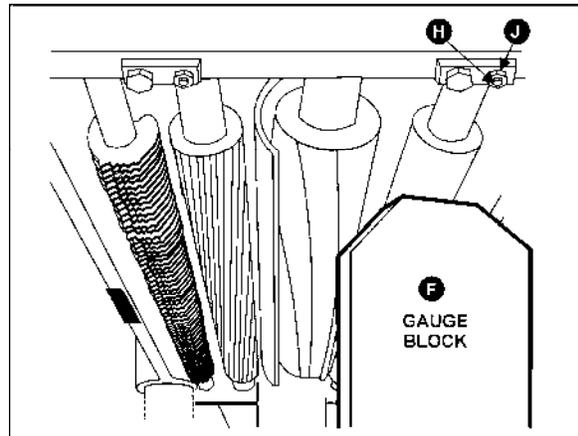


Figure 27

Infeed Roller Height

Use the exact same procedure for checking the infeed roller as you did for the outfeed roller. Use the .02" (0.5mm) feeler gauge atop the gauge block. If adjustment is necessary, use the lock nut and screw on each end of the infeed roller.

Chipbreaker Height

The chipbreaker breaks off the larger chips before the stock reaches the cutterhead. Use the gauge block and a .02" (0.5mm) feeler gauge to check the height of the chipbreaker, following the same procedure as above. If adjustment is needed:

1. Remove top cover.
2. Loosen the lock nuts (A, Figure 28) at both ends of the chipbreaker, and turn the set screws to raise or lower the chipbreaker as needed. The set screws should be turned the same amount.
3. When the chipbreaker contacts the gauge block, tighten both lock nuts (A, Figure 28).

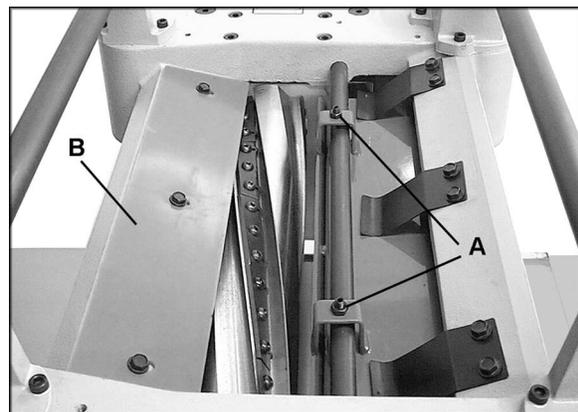


Figure 28

Chip Deflector

The chip deflector (B, Fig. 28) keeps wood chips from falling into the outfeed roller. The deflector should be set approximately 1/16" to 1/8" from the tip of the knives. Make sure the deflector is oriented so the bevel on its front edge matches the shape of the cutterhead.

Feed Speed Control

Your machine is equipped with a spiral, serrated infeed roller and a solid steel outfeed roller. When the feed rollers are engaged, they turn to feed the stock. The feed rollers slow automatically when the machine is under heavy load for best planing in all conditions. The feed rollers are driven by chains and sprockets (see Figure 29) which take power directly from the cutterhead through the oil bath gear box. The drive chain does not need tensioning, as a tension device (Figure 29) maintains proper tension at all times.

To gain access to the chain and sprockets:

1. Remove the handwheel from the machine.
2. Remove the socket head cap screw from the center of the cover, and remove the left triangular back plate. See Figure 30.
3. Pull the cover off the machine.

⚠WARNING Always re-install cover over the chain and sprockets before operating planer.

The gear box has two feed speeds. These are set by pulling out or pushing in the shift lever (Figure 31). Always change feed speed while the machine is running. A label showing the lever positions is affixed just above the lever. It is also shown in Figure 32.

⚠CAUTION Do not attempt to change feed speed while stock is passing through the machine. Damage to the gearbox may result.

Stock Return Rollers

The two rollers on top the machine serve as a convenient rest for stock. They save time and motion for the operator as the stock is returned to the infeed side.

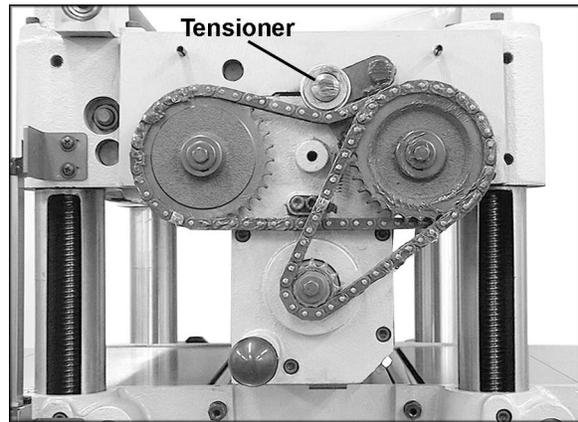


Figure 29

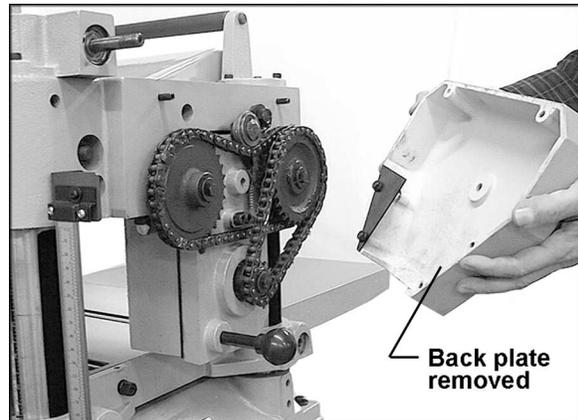


Figure 30

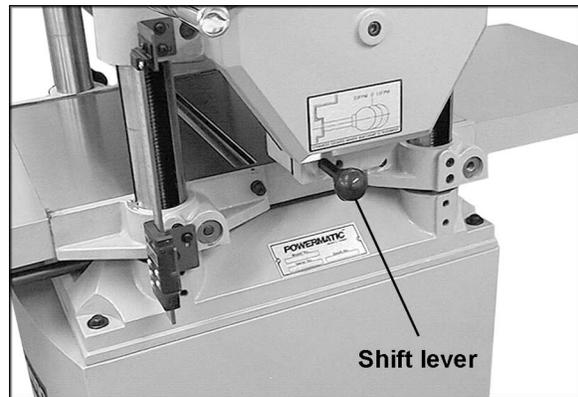


Figure 31

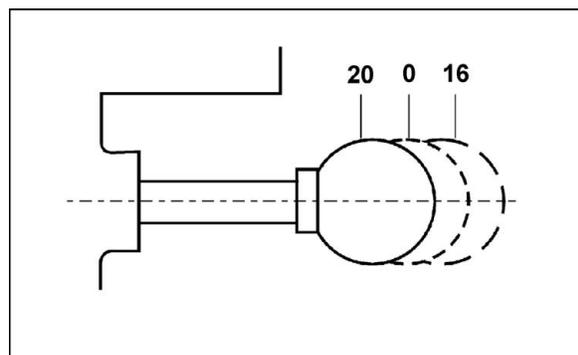


Figure 32

Depth of Cut

The cutting depth scale is a combination inch/metric scale (Figure 33), with a cutting range from 0 to 6" (152.4mm). A manual scale is mounted directly to the front column. The model 15S planer also features a digital scale for easier, more precise depth readings.

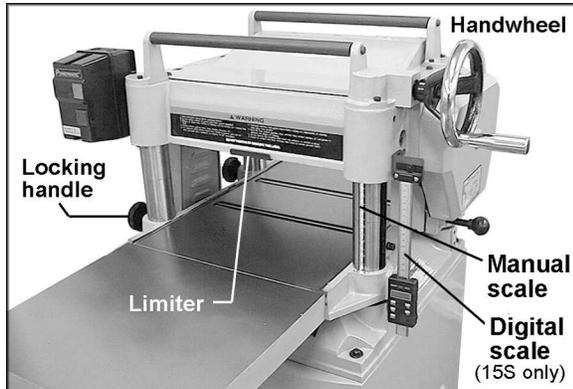


Figure 33

The distance of upward or downward movement is controlled by the handwheel (Figure 33). Before moving the table up or down, loosen the locking handles (Figure 33). After obtaining proper table position, tighten the locking handles.

Maximum depth of cut is 3/16". A limiter (Figure 33) on the front of the head casting limits the depth of cut on full width planing under 1/8".

The digital scale should be calibrated before operating the planer. Refer to page 21.

Maintenance

⚠WARNING Disconnect machine from power source before performing any maintenance.

Periodic or regular inspections are required to ensure that the machine is in proper adjustment, that all screws are tight, that belts are in good condition, that dust has not accumulated in the electrical enclosures, and that there are no worn or loose electrical connections.

Buildup of sawdust and other debris can cause your machine to plane inaccurately. Periodic cleaning is not only recommended but mandatory for accurate planing.

Close-fitting parts, such as the cutterhead slot and gibs, should be cleaned with a cloth or brush and non-flammable solvent, and freed from clinging foreign matter.

Remove resin and other accumulations from feed rollers and table with a soft rag and non-flammable solvent.

Periodically check all the chains for proper tension and adjust accordingly if required.

The table should be kept clean and free of rust. Some users prefer a paste wax on exposed steel and cast iron surfaces. The wax provides a layer of protection as well as reducing friction between lumber and the table, making cuts faster and smoother. Avoid any wax that contains silicone or other synthetic ingredients. These materials can find their way into lumber and can make staining and finishing difficult.

Another option is talcum powder applied with a blackboard eraser rubbed in vigorously once a week; this will fill casting pores and form a moisture barrier. This method provides a table top that is slick and allows rust rings to be easily wiped from the surface. Important also is the fact that talcum powder will not stain wood or mar finishes as some wax pickup does.

Lubrication

The bearings on the cutterhead are factory lubricated and sealed for life – no lubrication is required.

Gearbox Lubricant

The lubricant in the gear box must be replaced every 2,500 hours. Multi-purpose gear box lubricant will be suitable.

To replace the lubricant:

1. Remove the drain plug (A, Figure 34) with a 14mm wrench, and remove filler cap (B, Figure 33). Drain dirty oil thoroughly.
2. Insert and tighten the drain plug (A, Figure 34).
3. Fill with clean lubricant through hole (B, Figure 34).
4. Install and tighten filler cap (B, Figure 34).

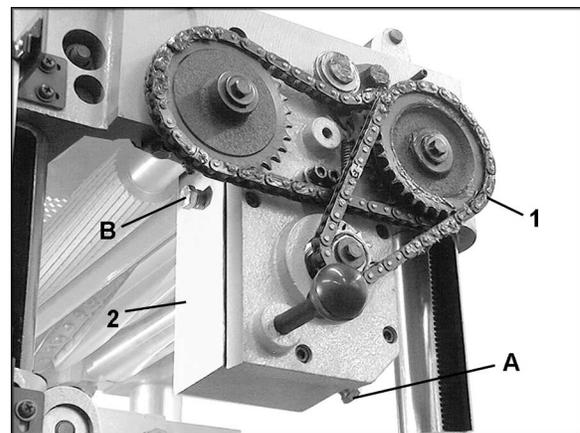


Figure 34

The item numbers on this chart are referenced to the surrounding illustrations.

No.	Position	Inspection Interval	Suitable Types of Lubricant	Figure No.
1	Drive Chain	Monthly	Grease	34
2	Gear Box	When operated more than 2,500 hours	Standard gear oil, 70-90 weight	34
3	Return Rollers	Frequently	SAE-30	36
4	Worm Gear	Monthly	Grease	37
5	Lead Screw	Monthly	Grease	37
6	Column	Weekly	Clean columns and apply SAE-30	37
7	Table Chain	Monthly	Grease, or good quality bicycle chain lubricant	38
8	Feed Rollers	Daily	SAE-30	39

Figure 35

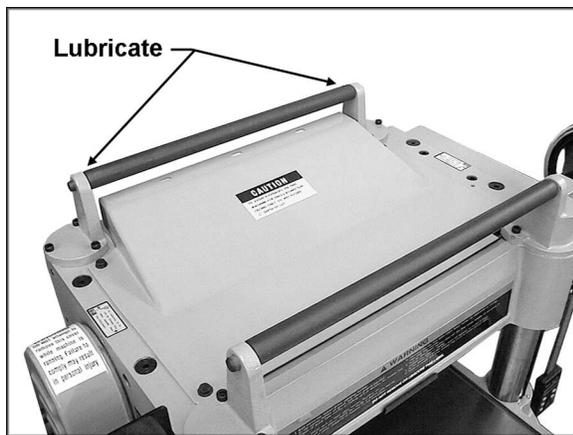


Figure 36

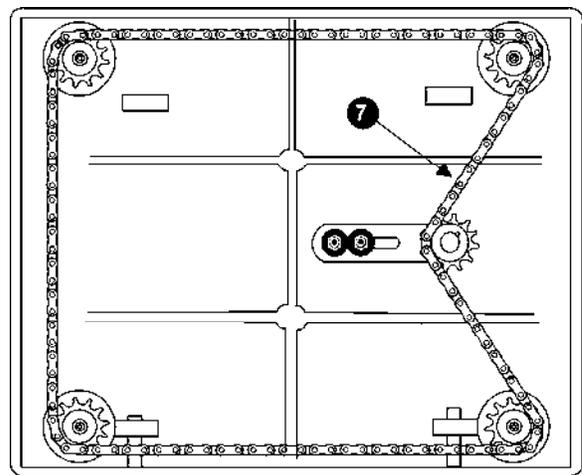


Figure 38

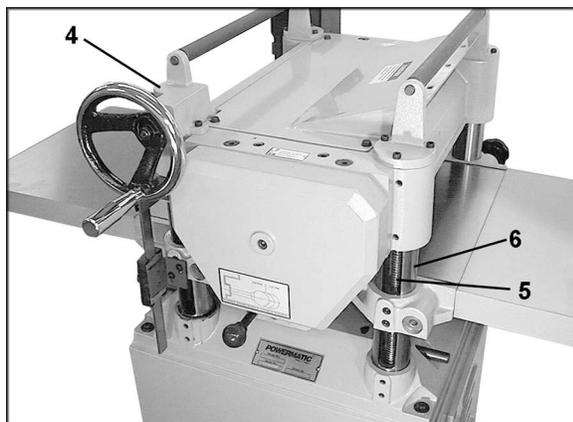


Figure 37

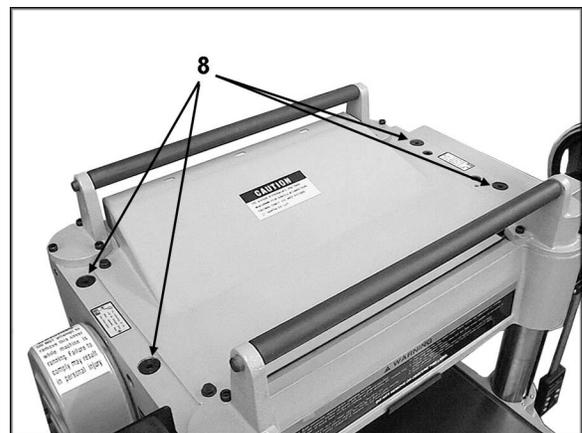


Figure 39

Functions of the Digital Scale (Model 15S only)

Figure 40 identifies the parts of the digital scale. The button functions are discussed below, followed by a section giving practical examples of how to calibrate your settings, and how these functions can be used for daily planer operations.

Before using the device, wipe down the vertical scale with a dry, soft cloth. Do not use cleaning solutions. Do not allow any liquids (such as machine oil) to contact the body of the digital display. Keep the device clean.

Data from the digital scale can be input into a computer via the port at the side of the device. Simply slide off the small port cover (see Fig. 40).

This device uses a 1.55 volt battery cell (SR44). If it needs replacing (see Troubleshooting on page 26 to determine this) slide off the battery cover and insert the battery, with the positive pole of the battery facing out. NOTE: After replacing a battery, the digital display setting defaults to zero and must be recalibrated.

now display relative measurement until you press ABS again to go back to absolute.

IMPORTANT: Always place the digital display in relative (“INC”) mode before turning it off. If you turn it off while in absolute (“ABS”) mode, your absolute setting will default to zero.

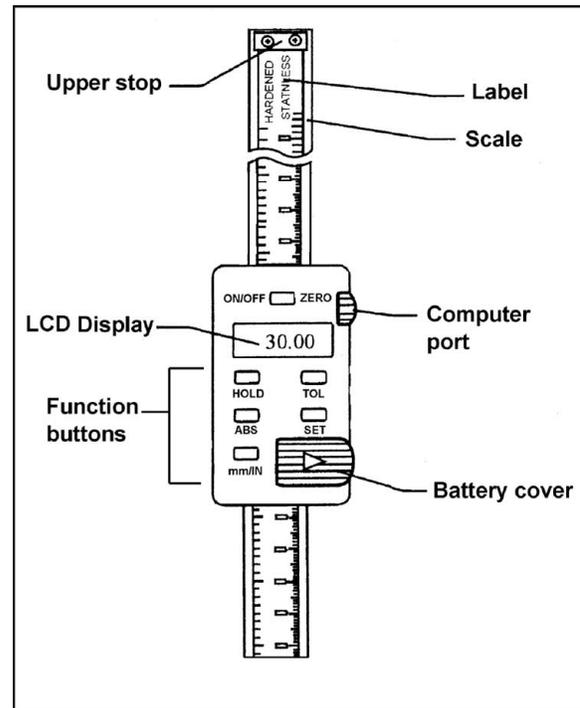


Figure 40

ON/OFF/ZERO – power and zero-setting

Press ON/OFF/ZERO button no longer than 3 seconds to power on.

Press ON/OFF/ZERO button at least 3 seconds to shut off the digital display.

While in relative mode, press ON/OFF/ZERO (no longer than 3 seconds) to set current position as relative zero point.

While in absolute mode, press ON/OFF/ZERO (no longer than 3 seconds) to set current position as absolute zero point.

MM/INCH – millimeters/inches

Pressing this button toggles back and forth between standard and metric, and can be done at any time without affecting saved settings.

ABS – relative/absolute modes

The device is in absolute mode as soon as power is turned on, and displays absolute zero. Moving the planer table up and down begins absolute measurement. Absolute measurement is set based upon the distance from cutterhead to table, and thus represents the thickness of your board.

Press ABS button (no longer than 3 seconds) to switch to relative mode. “INC” will appear on the display. The value shown is in relative mode; it is an incremental position that can be zeroed at any point and determines not the thickness of a board, but how much material will be removed from a board. Moving the table up and down will

HOLD – maintains data on the display.

Press this button to “freeze” a measurement on the display; it will remain even if the table is moved. Press HOLD again and it returns to normal measurements.

SET – preset a value

Press SET; the indicator will flash “SET”. Press and hold the SET button and each digit flashes in turn. When the digit you want flashes, release the SET button. Press SET button once (no longer than 1 second) and that digit will increase by one each time SET is pressed. When finished, press and hold SET button until indicator “SET” flashes, then press SET again (no longer than 1 second). The indicator “SET” disappears and the value you just input is displayed on the screen.

From this point on, any table movement will be based off this setting. The setting will be kept in the device's memory even when the digital display is turned off, and only needs re-setting after a battery has lost charge and needs replacing.

TOL – tolerance setting

This function is not generally used in planer operations, but is here explained for reference.

Press TOL, and an up-arrow indicator will appear, as well as a flashing "SET" indicator. You can now change the upper tolerance limit. Hold down the TOL button and each digit flashes in turn. When the digit you want flashes, release the TOL button.

Press TOL button once (no longer than 1 second) and that digit will increase each time TOL is pressed.

When finished, press and hold TOL button until indicator "SET" flashes. While indicator "SET" is flashing, press SET button to change the arrow to the down-arrow indicator. You can now change the lower tolerance limit in the same manner as you changed the upper tolerance limit.

When finished setting the lower tolerance limit, while indicator "SET" is flashing, press SET button (no longer than 1 second). The device is now in tolerance measuring mode. When the up-arrow indicator is displayed, it means the measured value is beyond the upper limit. When the down-arrow indicator is displayed, the measured value is below the lower limit. When the display shows an "OK" indicator, the measured value is within tolerance.

Calibrating & Using Digital Scale

Scale Alignment

The scale assembly has been mounted and aligned with the 15S Planer table at the factory. The scale should be in vertical position, and the digital device should slide smoothly along the full length of the scale. Check occasionally that the screws holding the device to the planer are tight. If any realignment of the scale should ever be needed, slots are provided in the mounting brackets (Fig. 41).

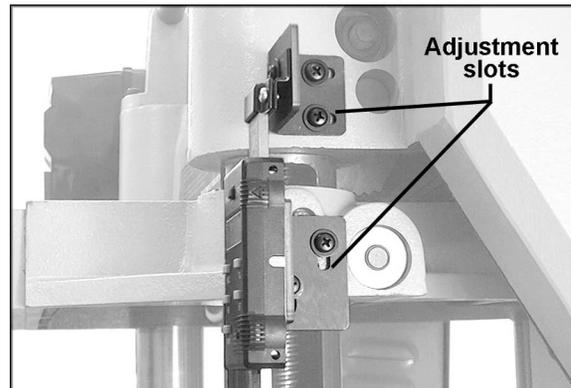


Figure 41

Establish Absolute Zero

One of your first steps should be to "zero" the digital scale in absolute mode. This is equivalent to finding the exact point of contact between the cutterhead knife and the table. This can't be done simply by raising the table, because the depth limiter on the head casting will prevent contact between table and cutterhead. However, there are two relatively easy methods of establishing zero in absolute mode:

Method 1 uses a gauge, such as a height gauge, or a home-made gauge block (see Fig. 17). If using a home-made gauge block, make sure it has been cut to exact specifications.

1. Disconnect machine from power source.
2. Turn on the digital display. It turns on in absolute mode.
3. Place the gauge upon the planer table and under the cutterhead. (Make sure the gauge lies solidly upon the table and not upon the table rollers.)
4. Raise the table until the gauge just touches the lowest point of a knife. Rock the cutterhead slightly (use the pulley to do this) to make certain the knife's high point is contacting the gauge.
5. The reading on the gauge, or the height of the gauge block, should now be input into the digital display. Refer to the instructions above involving the "SET" button function to input this number into your digital display.

Method 2 uses a scrap board and calipers.

1. Turn on the digital display. It turns on in absolute mode.
2. Plane one side of a scrap board at an appropriate and safe cutting depth (1/16" for example).
3. Raise the table by the same amount (1/16"), then turn the board over and plane the other side. Do not move the table from the current position.
4. Measure the planed board carefully with calipers. (Our example in Fig. 42 shows the calipers reading .850"). This measurement of the finished board is the equivalent of the distance from table to knife.
5. Input the measurement on the calipers into the digital display. Refer to the instructions above involving the SET button function to input this number into your digital display. (Figure 42 shows the .850" measurement now set in the digital display.)



Figure 42

Using Relative Measurement Mode

The absolute setting, for which you should have already established the zero point, gives the width of your finished board after cutting (distance from table to cutterhead).

The relative measurement mode is useful for measuring only the amount of stock that you wish to remove (i.e., depth of cut), and eliminates having to add or subtract to find the proper setting. It is especially helpful when planing many boards to the same thickness.

Here is an example using relative measurement:

1. You have planed a board at a setting of one inch at absolute measurement. Do not move the table from this position. You wish to increase the depth of cut on the next run by .063 inches.
2. Press ABS button to start relative measurement mode ("INC" will appear on the display).
3. Follow the previous instructions on using the SET button function. You would input zeros for all digits, thus establishing zero setting for relative measurement mode.
4. After setting relative zero, bring the table up until the digital display reads ".065" inches in relative measurement mode. You can now plane your board with exact results. Of course, you can now toggle back and forth between relative and absolute mode (by pressing ABS button) and get both stock thickness and depth of cut readings at the same time.

Clearing a Jammed Board

If you have to temporarily move the planer table (for example, to clear a jammed board) use the HOLD button to remember your original setting.

1. If a board jams, press the HOLD button. Your setting will be "frozen" on the display.
2. Lower the table and clear the jam.
3. Raise the table back up to the general location, and make a mental note of the number "frozen" on the display.
4. Press HOLD to return the display back to absolute measurement, and adjust the table until it matches the measurement previously frozen on the display.

NOTE: The HOLD button will not permanently save a setting. When the button is pressed a second time, the number disappears.

More Uses

The digital scale has been designed to save the operator time and energy, leading to increased productivity. As you become proficient with the use of the digital readout and explore how to use one function in conjunction with another, you'll be able to tailor its functions to suit your own work habits and planing needs.

Troubleshooting: Performance Problems

Trouble	Probable Cause	Remedy
Snipe. <i>(NOTE: Snipe cannot be eliminated, but can be so minimized as to be negligible.)</i>	Table rollers not set properly.	Adjust rollers to proper height.
	Inadequate support of long boards.	Support long boards with extension rollers.
	Uneven feed roller pressure front to back.	Adjust feed roller pressure.
	Dull knives or knife inserts.	15S: Sharpen or replace knives. 15HH: Rotate or replace inserts.
	Lumber not butted properly.	Butt end to end each piece of stock as they pass through.
Fuzzy grain.	Planing wood with high moisture content.	Remove moisture by drying, or use different stock.
	Dull knives or knife inserts.	15S: Sharpen or replace knives. 15HH: Rotate or replace inserts.
Torn grain.	Too heavy a cut.	Adjust proper depth of cut.
	Knives (or inserts) cutting against the grain.	Cut along the grain where possible.
	Dull knives or knife inserts.	15S: Sharpen or replace knives. 15HH: Rotate or replace inserts.
Rough/raised grain.	Dull knives or knife inserts.	15S: Sharpen or replace knives. 15HH: Rotate or replace inserts.
	Too heavy a cut.	Adjust proper depth of cut.
	Planing wood with high moisture content.	Remove moisture by drying, or use different stock.
Rounded, glossy surface.	Dull knives or knife inserts.	15S: Sharpen or replace knives. 15HH: Rotate or replace inserts.
	Feed rate too slow.	Increase feed rate.
	Cutting depth too shallow.	Increase cutting depth.
Poor feeding of lumber.	Inadquate feed roller pressure.	Adjust feed roller tension. If proper tension cannot be achieved, replace feed rollers.
	Planer table rough or dirty.	Clean pitch and residue from table, and apply paste wax.
	Belt slipping on pulleys.	Tighten belt.
	Surface of feed roller is clogged.	Clean pitch and residue off roller.

Troubleshooting: Mechanical and Electrical Problems

Trouble	Probable Cause	Remedy
Uneven depth of cut side to side.	Knife projection from cutterhead is incorrect (15S only).	Adjust knife projection.
	Table not parallel to cutterhead.	Adjust table/cutterhead parallelism.
Board thickness does not match depth of cut scale.	Depth of cut scale is incorrect.	Adjust depth of cut scale.
Chain is jumping.	Inadequate tension.	Adjust chain tension.
	Sprockets misaligned.	Align sprockets.
	Sprockets are worn.	Replace sprockets.
Machine will not start/restart or repeatedly trips circuit breaker or blows fuses.	No incoming power.	Verify power connections to planer.
	Overload automatic reset has not reset.	When planer overloads on the circuit breaker built into the motor starter, it takes time for the machine to cool down before restart. Allow unit to adequately cool before attempting restart. If problem persists, check amp setting on the motor starter inside the electrical box.
	Planer frequently trips.	One cause of overloading trips which is not electrical in nature is too heavy a cut. The solution is to take a lighter cut. If too deep a cut is not the problem, then check the amp setting on the overload relay. Match the full load amps on the motor as noted on the motor plate. If amp setting is correct then there is probably a loose electrical lead. Check amp setting on motor starter.
	Building circuit breaker trips or fuse blows.	Verify that planer is on a circuit of correct size. If circuit size is correct, there is probably a loose electrical lead. Check amp setting on motor starter.
	Loose electrical connections.	Go through all the electrical connections on the planer including motor connections, verifying the tightness of each. Look for any signs of electrical arcing which is a sure indicator of loose connections or circuit overload.

Trouble	Probable Cause	Remedy
<p>Machine will not start/restart or repeatedly trips circuit breaker or blows fuses. (cont.)</p>	<p>Motor starter failure.</p>	<p>Examine motor starter for burned or failed components. If damage is found, replace motor starter. If motor starter looks okay but is still suspect, you have two options: have a qualified electrician test the motor starter for function, or purchase a new starter and establish if that was the problem on changeout. If you have access to a voltmeter, you can separate a starter failure from a motor failure by first, verifying incoming voltage at 220+/-20 and second, checking the voltage between starter and motor at 220+/-20. If incoming voltage is incorrect, you have a power supply problem. If voltage between starter and motor is incorrect, you have a starter problem. If voltage between starter and motor is correct, you have a motor problem.</p>
	<p>Motor failure.</p>	<p>If electric motor is suspect, you have two options: Have a qualified electrician test the motor for function or remove the motor and take it to a quality electric motor repair shop and have it tested.</p>
	<p>Miswiring of the unit.</p>	<p>Check to confirm all electrical connections are correct and properly tight. Make any needed corrections.</p>
	<p>On/off switch failure.</p>	<p>If the on/off switch is suspect, you have two options: Have a qualified electrician test the switch for function, or purchase a new on/off switch and establish if that was the problem on changeout.</p>

Troubleshooting: Digital Scale – Model 15S only

Trouble	Probable Cause	Remedy
Flashing digits.	Low voltage.	Replace battery.
Locked digits.	Haphazard memory.	Take battery out, wait thirty seconds, then re-insert it.
No display.	Poor contact of battery.	Improve battery contact.
	Low voltage.	Replace battery.
Displays only '0000'.	Short-circuit of zero setting spring and slider signal source.	Remove frame and adjust spring.
Function buttons won't work.	Distortion of springs from over-pressing.	Remove frame and adjust springs.

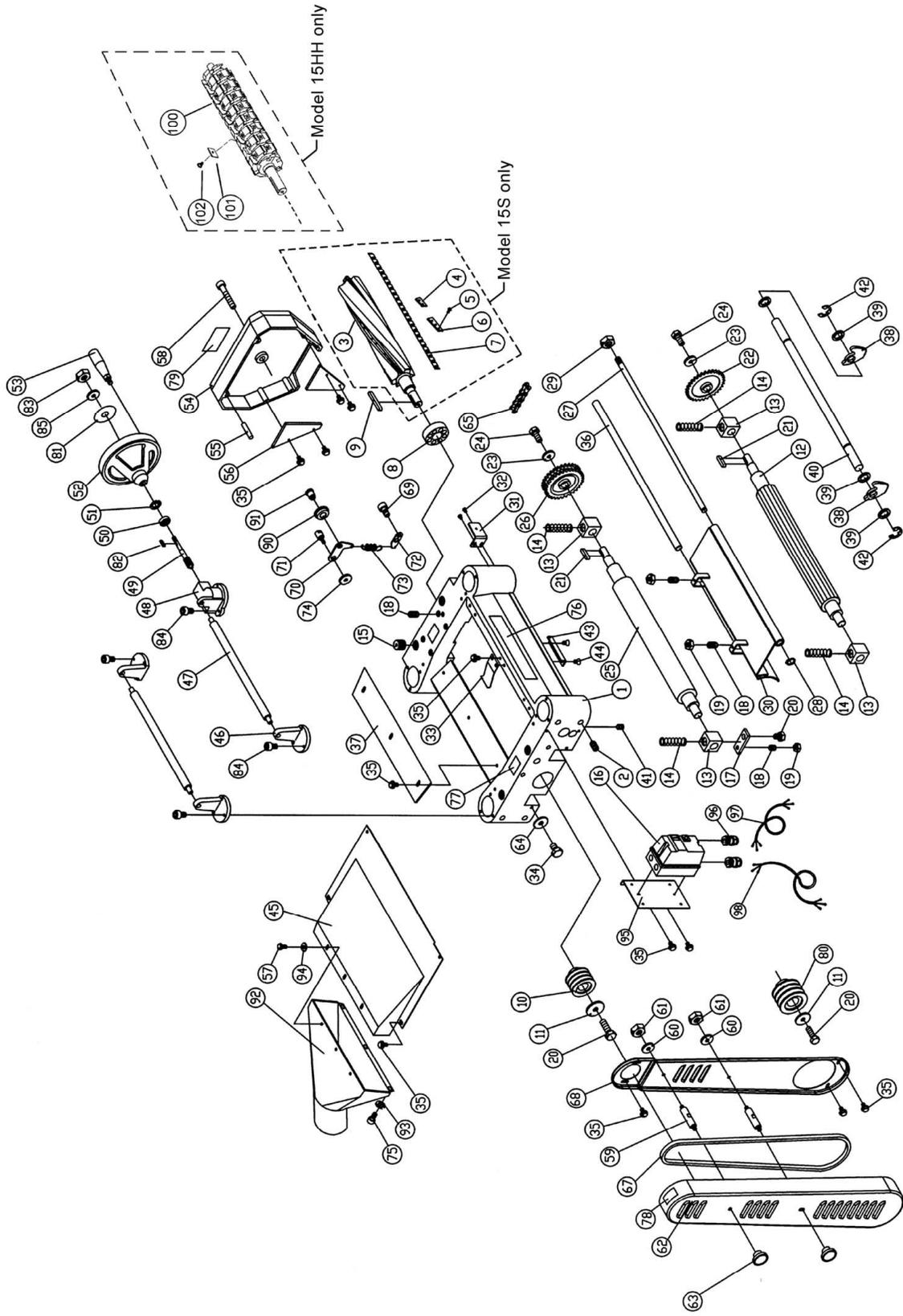
Optional Accessories

708816	Knives (set of 3) – <i>Model 15S only</i>
15S-600	Battery for digital scale – <i>Model 15S only</i>
15S-601	Battery cover – <i>Model 15S only</i>
2230002	Bed and Feed Roller Gauge
1791212	Knife Inserts (set of 10) – <i>Model 15HH only</i>
708520	DRO Retrofit Kit

Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848, Monday through Friday (see our website for business hours, www.powermatic.com). Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Head Assembly



Parts List: Head Assembly

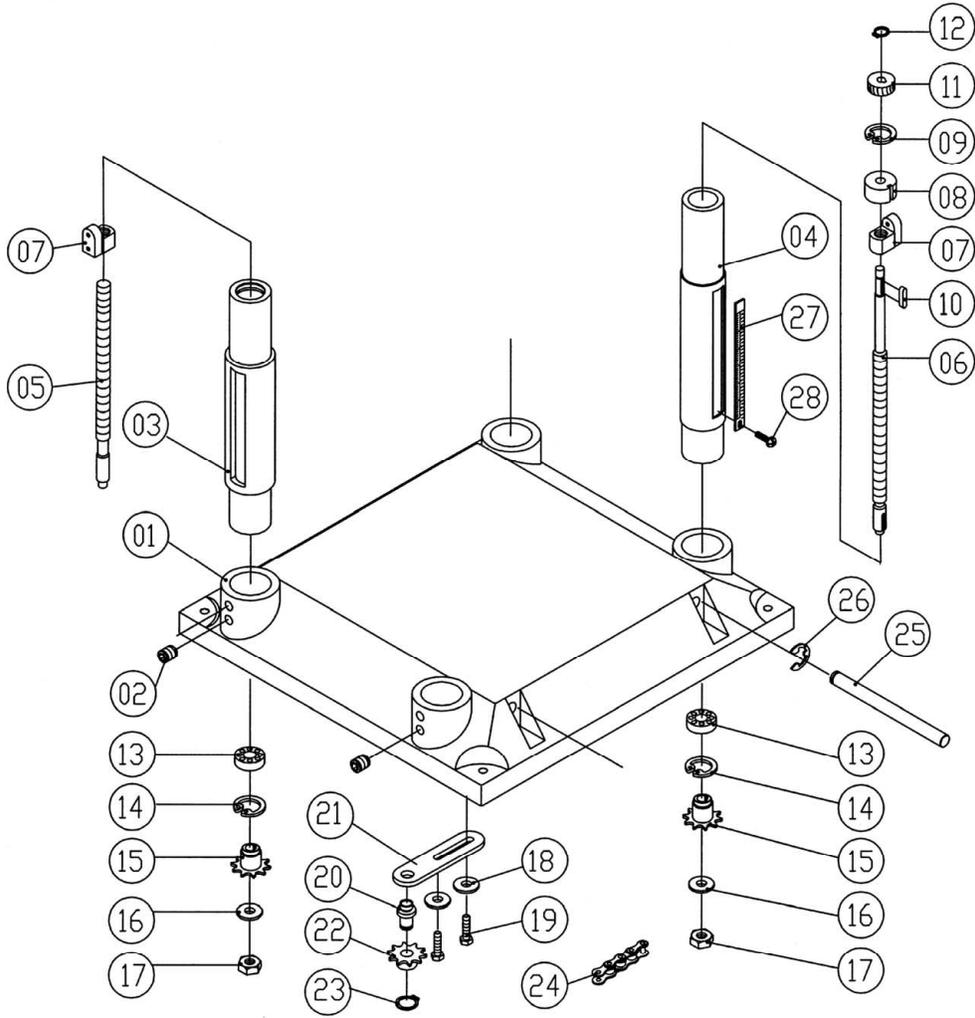
Index No.	Part No.	Description	Size	Qty
	15S-201	Cutterhead Assembly (Items 3 thru 9)		1
1	6284753	Roller Case		1
2	TS-1525011	Socket Set Screw	M10x10	8
3	15S-203	Spiral Cutterhead*		1
4	15S-204	Short Gib*		3
5	15S-205	Hex Socket Round Head Screw*	M6×1.0P×14L	42
6	15S-206	Long Gib*		12
7	15S-207	Spiral Knife*		3
8	6284759	Bearing	6205-2NSE	1
9	6284760	Key	8×8×36	1
10	6284761	Driven Pulley		1
11	TS-1550061	Flat Washer	M8	2
12	6284763	Infeed Roller		1
13	6284764	Retaining Bracket		4
14	6284765	Spring		4
15	6284766	Screw	M22-1.5P×20L	4
16	15S-216	Magnetic Switch		1
17	6284767	Bracket		4
18	TS-1523051	Socket Set Screw	M6×16	7
19	TS-1540041	Hex Nut	M6-1.0P	6
20	TS-1490041	Hex Cap Screw	M8×25	2
21	6284770	Key	5×5×22	2
22	6284771	Sprocket	31T	1
23	TS-1550041	Flat Washer	M6	2
24	TS-1482031	Hex Cap Screw	M6×16	2
25	6284774	Outfeed Roller		1
26	6284775	Sprocket	1T	1
27	6284776	Shaft		1
28	6284777	Retaining Ring	TW-12	1
29	TS-1540081	Hex Nut	M12	1
30	6284779	Chip Breaker		1
31	15S-231	Plate*		1
32	15S-232	Screw*	5-0.8P×8L	2
33	6284780	Bracket		3
34	TS-1482021	Hex Cap Screw	M6×12	4
35	6284781	Hex Cap Screw With Washer	M6-1.0P×12L	23
36	6284782	Chip Deflector Shaft		1
37	6284783	Chip Deflector Plate		1
38	6284784	Anti-Kickback Pawl		39
39	6284785	Spacer		40
40	6284786	Shaft		1
41	TS-1524031	Socket Set Screw	M8	1
42	6284788	E-Ring	ETW-15	2
43	6284789	Depth Limiter		1
44	6284790	Phillips Flat Head Machine Screw	M5-0.8P×8L	2
45	6284791	Dust Cover		1
	6284792	Roller Assembly		1
46	6284793	Roller Bracket		3
47	6284794	Roller		2
48	6284795	Worm Gearbox		1
49	6284796	Worm Gear		1
50	6284797	Bearing		1
51	6284798	Retaining Ring	RTW-30	1
52	6284799	Handwheel		1
53	6284828	Handle	3/8-16NC	1

* Index Nos. 3, 4, 5, 6, 7, 31 and 32 are used only on the Model 15S Planer.

54	6284700	Cover		1
55	6284701	Spring Pin	6-20	2
56	6284702	Plate		2
57	TS-1481021	Hex Cap Screw	M5×10	3
58	TS-1504091	Socket Head Cap Screw	M8×45	1
59	6284804	Stud		2
60	TS-0680031	Flat Washer	5/16	2
61	TS-0561021	Hex Nut	5/16-18	2
62	15S-262	Pulley Cover		1
63	6284808	Nut		2
64	TS-1550061	Flat Washer	M8	4
65	6284810	Chain	06B-63	1
67	6284811	Belt	M59	3
68	6284812	Guard, Pulley		1
69	TS-1503021	Socket Head Cap Screw	M6×10	2
70	6284814	Bracket		1
71	6284815	Shaft		1
72	6284818	Hanger		1
73	6284819	Spring	1.2	1
74	6284720	Flat Washer	8.2×22×4.5T	1
75	TS-1503031	Socket Head Cap Screw	M6×12	3
76	6284820	Warning Label		1
77	6284821	Lubrication Label		2
78	15S-278	Warning Label		1
79	6284823	Speed Label		1
80	6284824	Motor Pulley		1
81	6284830	Handwheel Direction Label		1
82	6284712	Key	4×4×10	1
83	TS-1540071	Hex Nut	M10	1
84	TS-1503051	Socket Head Cap Screw	M6×20	12
85	6284718	Flat Washer	10×20×1.5T	1
90	6284816	Idle Pulley		1
91	6284817	Shaft		1
92	6284825	Dust Hood		1
93	TS-2361061	Lock Washer	M6	3
94	TS-1550031	Flat Washer	M5	3
95	15S-295	Switch Plate		3
96	15S-296	Strain Relief		3
97	15S-297	Motor Cord		3
98	15S-298	Power Cord		3
99	15S-299	Knife Adjustment Pin (not shown) <i>Model 15S only</i>		2
100	1791211	Helical Cutterhead **		1
101	1791212	Knife Insert (set of 10) **		98 total
102	15HH-2102	Knife Insert Screw **		98
	15S-HK	Hardware Kit for 15S (see page 9 for items included)		

** Index Nos. 100, 101 and 102 are used only on the Model 15HH Planer.

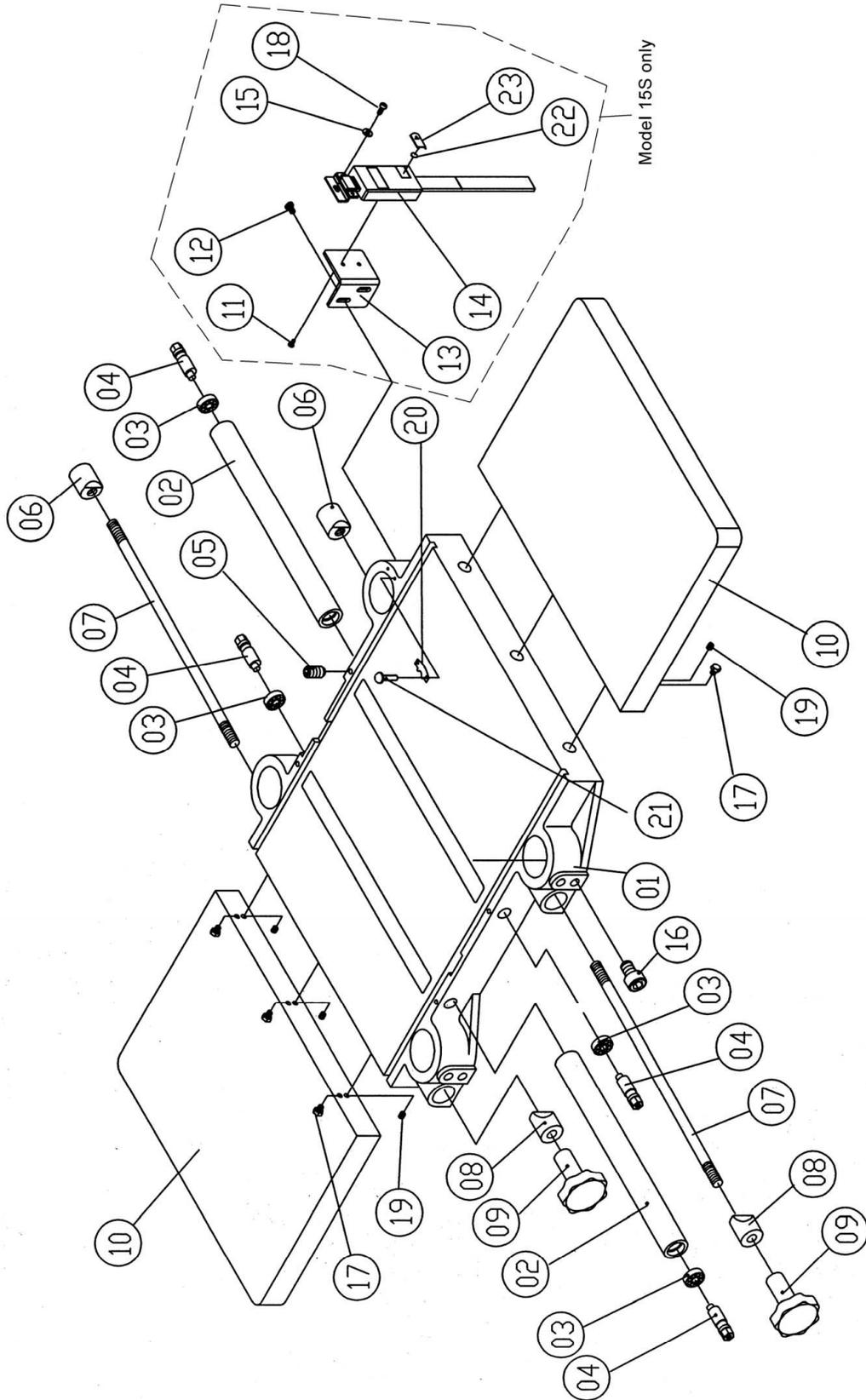
Base Assembly



Parts List: Base Assembly

Index No.	Part No.	Description	Size	Qty
1	6284703	Base		1
2	TS-1525021	Socket Set Screw	M10×12	8
3	6284705	Crank Case Column		3
4	6284706	Column		1
5	6284707	Lead Screw		3
6	6284708	Lead Screw Crank		1
7	6284709	Lead Nut		4
8	6284710	Bushing		1
9	6284711	Retaining Ring, Internal	RTW-38	1
10	6284712	Key	4×4×10	1
11	6284713	Gear		1
12	6284714	Retaining Ring	STW-10	1
13	6284715	Bearing	6202Z	4
14	6284716	Retaining Ring, Internal	RTW-35	4
15	6284717	Sprocket		4
16	TS-1550071	Flat Washer	M10	4
17	TS-1540071	Hex Nut	M10	4
18	TS-1550061	Flat Washer	M8	2
19	TS-1490041	Hex Cap Screw	M8×25	2
20	6284722	Shaft		1
21	6284723	Tension Bracket		1
22	6284724	Sprocket		1
23	6284725	Retaining Ring	STW-15	1
24	6284726	Chain	41×134P	1
25	6284727	Lifting Bar		4
26	6284728	E-Ring	ETW-12	4
27	6284729	Scale		1
28	6284730	Screw	M3-0.5P×6L	1

Table Assembly



Parts List: Table Assembly

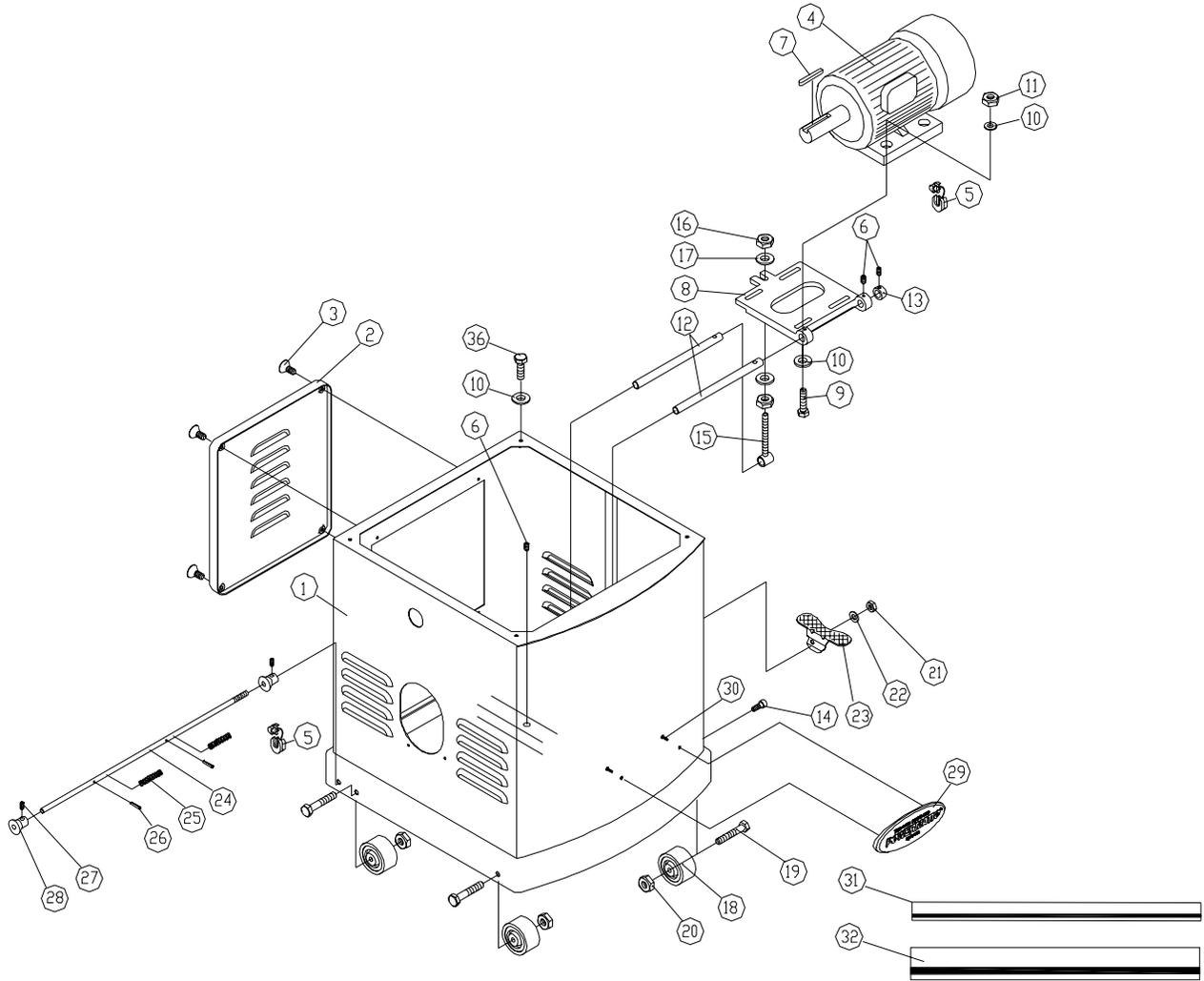
Index No.	Part No.	Description	Size	Qty
1	15S-301	Table		1
	15S-309	Table Roller Assembly (Items 2, 3, 4)		
2	6284732	Table Roller		2
3	6284733	Bearing		4
4	6284734	Eccentric Adjuster		4
5	TS-1523041	Socket Set Screw	M6x12	4
6	6284737	Lock Nut		2
7	6284738	Threaded Shaft		2
8	6284736	Lock Bushing		2
9	6284739	Knob	M12-1.75P	2
10	15S-310	Cast Iron Table Extension		2
11	TS-1531012	Phillips Pan Head Machine Screw*	M3x6	2
12	15S-312	Screw*	M5-0.8Px8L	2
13	15S-313	Plate*		1
14	15S-314	Digital Readout*		1
15	TS-1550021	Flat Washer*	M4	1
16	TS-1503051	Socket Head Cap Screw	M6x20	8
17	TS-1490041	Hex Cap Screw	M8x25	6
18	15S-318	Screw*	M4-0.7Px8L	1
19	TS-1524021	Socket Set Screw	M8x20	6
20	6284750	Scale Pointer		1
21	6284751	Rivet		2
22	15S-600	Battery*	1.5 volt	1
23	15S-601	Battery Cover*		1
	708520	DRO Retrofit Kit * (index no. 11-15, 18, 22 and 23)		

* Parts with an asterisk are used only on the Model 15S Planer.

Parts List: Gearbox Assembly

Index No.	Part No.	Description	Size	Qty
	6284842	Gearbox Assembly (Items 1 thru 35)		1
1	TS-1504101	Socket Head Cap Screw	M8x50	4
2	6284843	Oil Seal	TC28-40-8	1
3	6284844	Plug, NPT	PT1/4"-19	2
4	6284845	Gearbox		1
5	6284846	Gasket		1
6	BB-6204ZZ	Bearing	6204ZZ	1
7	6284848	Helical Gear		1
8	6284849	Gear	47T	1
9	BB-6201Z	Bearing	6201Z	3
10	6284851	Key	5x5x10	2
11	6284852	Single Geared Shaft	18T	1
12	6284853	Double Geared Shaft	18, 22T	1
13	6284854	Gear	71T	1
14	6284855	Key	6x6x40	1
15	6284856	Gear Assembly		1
16	6284857	Spring	0.6	1
17	6284858	Steel Ball	6	1
18	6284859	Gear Shaft		1
19	6284860	Oil Shaft	SC25-47-6	1
20	6284861	Bearing	6204Z	1
21	6284862	Clutch Handle		1
22	6284863	O'Ring		1
23	6284864	Gearbox Cover		1
24	6284865	Knob	32-3/8"-16NC	1
25	TS-1482051	Hex Cap Screw	M6x25	6
26	6284867	Pin		2
27	6284868	Sprocket	12T	1
28	TS-1550041	Flat Washer	M6	1
29	TS-1482031	Hex Cap Screw	M6x16	1
30	6284870	Chain	06B-47	1
31	6284871	Clutch		1
33	15S-433	Hex Head Bolt With Washer	M6-1.0Px12L	1
34	TS-1503031	Socket Head Cap Screw	M6x12	1
35	6284874	Bearing	6201	2

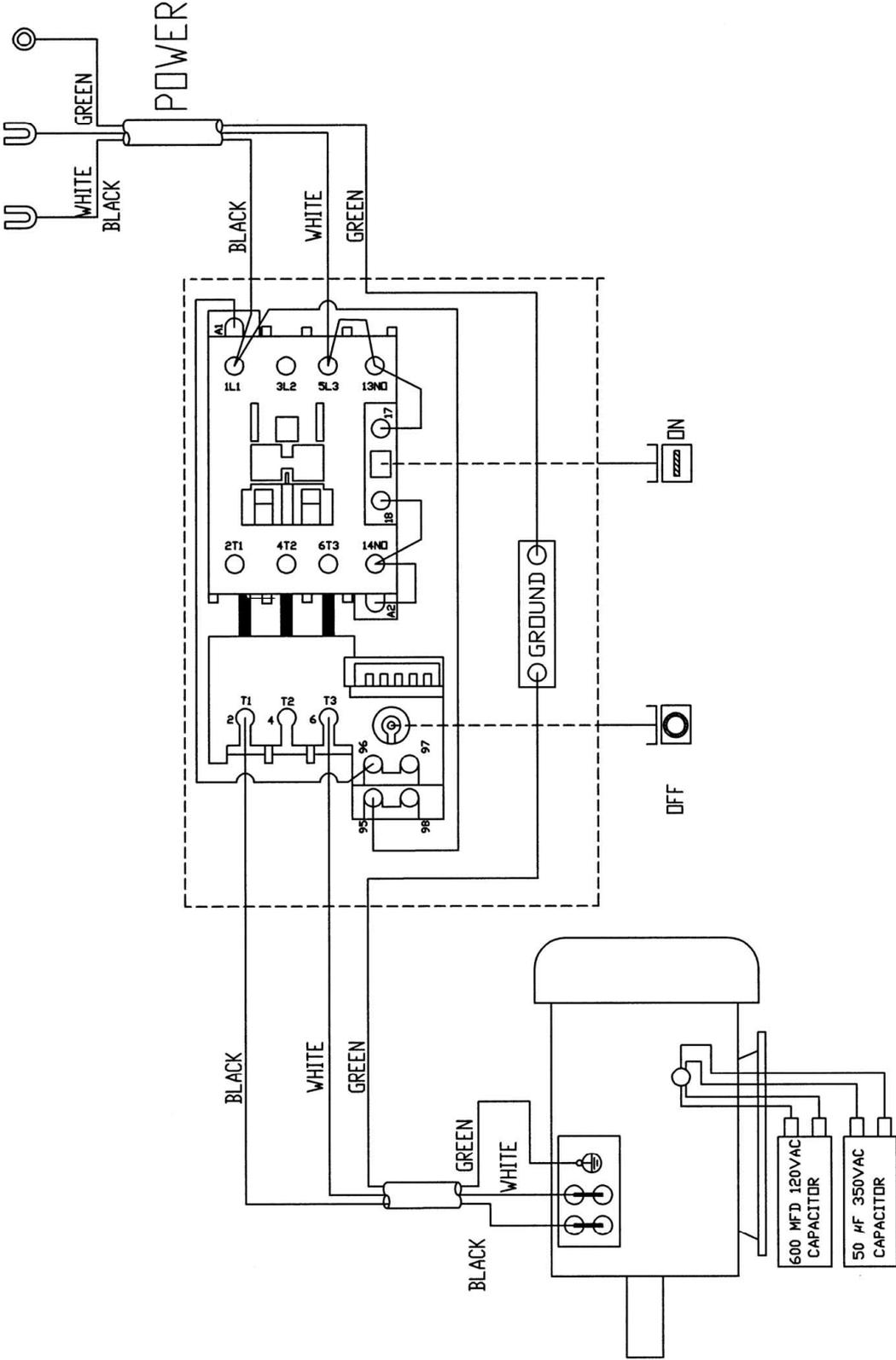
Cabinet Assembly



Parts List: Cabinet Assembly

Index No.	Part No.	Description	Size	Qty
	6284875	Cabinet Assembly (Items 1 thru 29)		1
1	15S-501	Cabinet		1
2	6284877	Door		1
3	TS-2236121	Phillips Flat Head Machine Screw	M6x12	4
4	6284878	Motor		1
5	6284895	Strain Relief	SB8R-3	2
6	TS-1523041	Socket Set Screw	M6x12	4
7	6284880	Key	5x5x30	1
8	6284881	Plate, Motor		1
9	TS-1490051	Hex Cap Screw	M8x30	4
10	TS-0680031	Flat Washer	5/16	12
11	TS-1540061	Hex Nut	M8-1.25P	4
12	6284885	Pivot Bar		2
13	6284886	Spacer		1
14	TS-1503031	Socket Head Cap Screw	M6x12	1
15	6284888	Tension Bolt Assembly		1
16	6284831	Hex Nut	M10-1.25P	2
17	TS-0680061	Flat Washer	1/2	2
18	6284890	Wheel		4
19	TS-0060111	Hex Cap Screw	3/8"-16x2.5	4
20	6284892	Locking Nut	3/8"-16NC	4
21	15S-521	Locking Nut	M10-1.5P	1
22	TS-1550071	Flat Washer	M10	1
23	15S-529	Foot Brake		1
24	15S-524	Shaft		1
25	15S-525	Spring		2
26	15S-526	Roll Pin		2
27	TS-1523011	Socket Set Screw	M6x6	2
28	15S-528	Eccentric Cam		2
29	PM2000-105	Powermatic Name Plate		1
30	209-5042	Pan Head Screw	1/4-20 x 3/8	2
31	PM2700-441	Narrow Stripe		<i>sold per ft.</i>
32	PM2700-440	Wide Stripe		<i>sold per ft.</i>

Electrical Connections – Single Phase, 230 Volt



Preventive Maintenance

Checklist for Model 15S and 15HH Planers

- [] Work area around machine marked off clearly.
- [] Non-skid floor strips in area where operator normally stands.
- [] Inspect entire machine for loose bolts, nuts, screws. Tighten and replace as necessary.
- [] Clean table and cutterhead area, removing sawdust and chips with a soft bristle brush. Remove gum and pitch with oven cleaner.
- [] Lubricate appropriate places with a good grade non-hardening grease.
- [] Clean table surface. If rusted, use paste mixture of household ammonia, a good commercial detergent and 000 steel wool. Wash surface down with hot, soapy water, rinse and dry thoroughly. Coat surface with talcum powder, rubbing briskly into surface with a clean blackboard eraser.
- [] Check blade condition; should be sharp and free of nicks or grooves.
- [] Check belt condition. Replace as needed. Dress with belt dressing. Check belt tension.
- [] Check motor for loose wiring and sawdust congestion, pulleys tight and in line.
- [] Check bearings. Replace any bad or suspect bearings immediately.
- [] Check leveling of extension tables with main table.



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