



Operating Instructions and Parts Manual

12-inch Planer/Jointer

Models JPJ-12B, JPJ-12BHH



For models with serial no. 22060485 and higher

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1.0 Warranty and Service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90-day limited warranty against manufacturer's defects.

Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations, or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations

Woodworking products with a Five-Year Warranty that are used for commercial or industrial purposes default to a Two-Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty

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

JET 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.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

Note: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.

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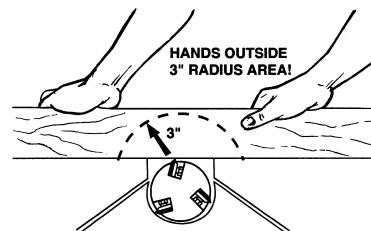
3.0 Safety Warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This woodworking Planer-Jointer is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a woodworking jointer or planer, do not use until proper training and knowledge have been obtained.
5. Do not use this machine for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shield while using this woodworking planer-jointer.
Note: Everyday eyeglasses only have impact resistant lenses; they are *not* safety glasses.
7. Before operating this woodworking planer-jointer, remove tie, rings, watches, and other jewelry, and roll sleeves up past the elbows. Do not wear loose clothing. Confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Do not operate this machine while tired or under the influence of drugs, alcohol, or any medication.
10. Make certain the switch is in the **OFF** position before connecting the machine to the power source.
11. Make certain the machine is properly grounded.
12. Make all machine adjustments or maintenance with the machine unplugged from the power source.
13. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
14. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
15. Make sure the planer-jointer is firmly secured to the floor or bench before use.
16. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
17. Provide for adequate space surrounding work area and non-glare, overhead lighting.
18. Keep the floor around the machine clean and free of scrap material, oil, and grease.
19. Keep visitors a safe distance from the work area. **Keep children away.**
20. Make your workshop child proof with padlocks, master switches or by removing starter keys.
21. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
22. Maintain a balanced stance at all times so that you do not fall or lean against the cutterhead or other moving parts. Do not overreach or use excessive force to perform any machine operation.
23. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and more safely.
24. Use recommended accessories; improper accessories may be hazardous.
25. Maintain tools with care. Keep cutters sharp and clean for the best and safest performance. Follow instructions for lubricating, and changing accessories.

26. Make sure the workpiece is securely attached or clamped to the table. Never use your hand to hold the workpiece.
27. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
28. Do not stand on the machine. Serious injury could occur if the machine tips over.
29. Never leave the machine running unattended. Turn the power off and do not leave the machine until the cutterhead comes to a complete stop.
30. Before turning on machine, remove all extra equipment such as keys, wrenches, scrap, stock, and cleaning rags away from the machine.

Jointer Operation

31. Always use a hold-down or push block when surfacing stock less than 12" long, 3" wide, or 3" thick.
32. Do not perform jointing operations on material shorter than 8", narrower than 3/4", or less than 1/4" thick.
33. Hands must never be closer than 3" to the cutterhead (see the Figure at right).
34. Never apply pressure to stock directly over the cutterhead. This may result in the stock tipping into the cutterhead along with the operator's fingers. Position hands away from extreme ends of stock, and push through with a smooth, even motion. Never back workpiece toward the infeed table.
35. To avoid kickback, the grain must run in the same direction you are cutting. Before attempting to joint or plane, each workpiece must be carefully examined for stock condition and grain orientation.
36. When working with a swirl grain wood or burls, making it necessary to plane against the grain, use a lesser depth of cut and a slow rate of feed.
37. Move the hands in an alternate motion from back to front as the work continues through the cut. Never pass the hands directly over the cutter knife. As one hand approaches the knives, remove it from the stock in an arc motion and place it back on the stock in a position beyond the cutter knife.
38. At all times hold the stock firmly against the table and fence.



Planer Operation

39. 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.
40. Check stock 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.
41. To avoid kickbacks, use this machine for single board surfacing only. Never make cuts deeper than 5/32" (4mm).

⚠ WARNING: This product can expose you to chemicals including lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov>.

⚠ WARNING: Drilling, sawing, sanding, or machining wood products generates wood dust and other substances known to the State of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask or other safeguards for personal protection.

Wood products emit chemicals known to the State of California to cause birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov/wood>.

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



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



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

4.0 Specifications

Model number	JPJ-12B	JPJ-12BHH
Stock number	715100	715155
Cutterhead speed (rpm)	5300	5300
Cutterhead diameter (in.)	2-3/4	2-3/4
Number of knives	3	44 four-sided inserts
Knife size (LxWxT) (in.)	12-3/16 x 11/16 x 1/8	0.59 x 0.59 x 0.10
Dust port outside diameter (in.)	4	4
Dust collection minimum (CFM)	550	550
Jointer table size (LxW) (in.)	55 x 12-1/32	55 x 12-1/32
Table height from floor (in.)	33-1/2	33-1/2
Maximum stock removal (in.)	1/8	1/8
Fence size (LxH) (in.)	43-1/4 x 5-7/8	43-1/4 x 5-7/8
Fence tilt	90° to 45° R	90° to 45° R
Fence positive stop	90° and 45° R	90° and 45° R
Fence travel (in.)	6	6
Planer table size (LxW) (in.)	25 x 12-1/32	25 x 12-1/32
Maximum workpiece thickness (in.)	8-3/4	8-3/4
Maximum depth of cut (in.)	5/32	5/32
Minimum length of workpiece (in.)	10	10
Feed rate (low speed / high speed) (fpm)	16 / 26	16 / 26
Table movement per one handwheel revolution (in.)	5/32	5/32
Motor, TEFC	3HP, 1PH, 230V only, 60Hz, 15A	3HP, 1PH, 230V only, 60Hz, 15A
Switch	magnetic switch and limit switch	magnetic switch and limit switch
Power cord	14AWG 300V, 6 ft	14AWG 300V, 6 ft
Power cord plug	CSA 6-15P, 15A/250V	CSA 6-15P, 15A/250V
Overall dimensions (LxWxH) (in.)	55-7/16 x 28-15/16 x 40	55-7/16 x 28-15/16 x 40
Stand footprint (LxW) (in.)	24 x 21-1/4	24 x 21-1/4
Net weight (lb)	453	453

The specifications in this manual are given as general information and are not binding. JET reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.



Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

5.0 Features and Terminology

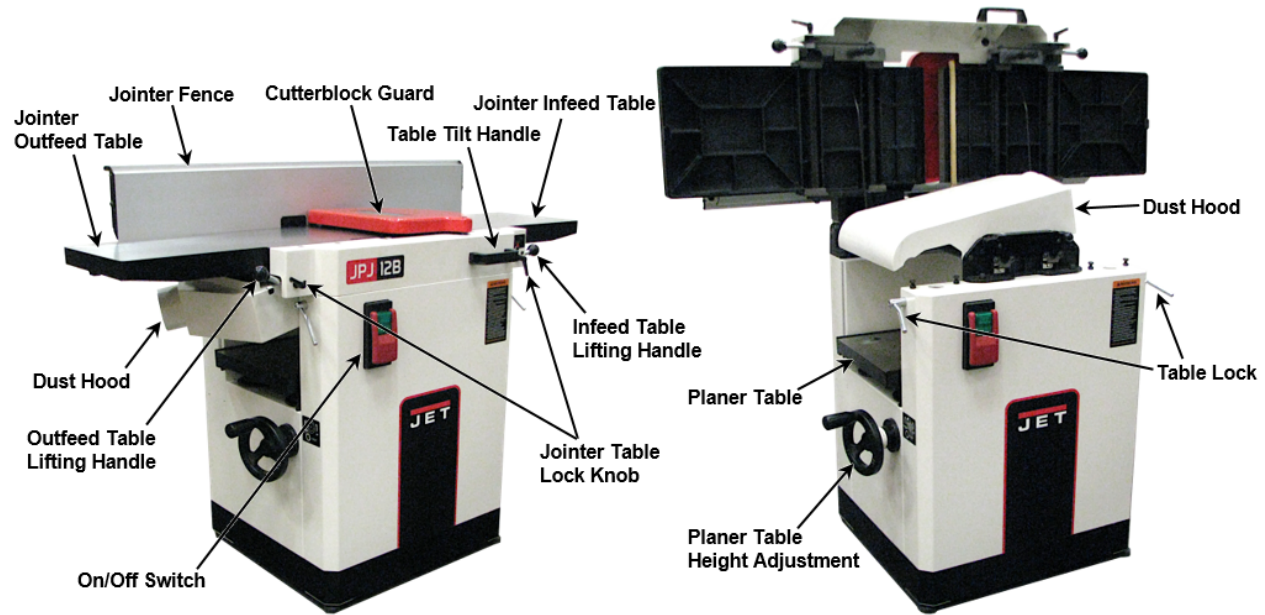


Figure 1

6.0 Receiving

Carefully unpack the machine and any loose items from the wood case and inspect for damage. Any damage should be reported immediately to your distributor and shipping agent. Before proceeding further, read your manual thoroughly to familiarize yourself with proper assembly, maintenance, and safety procedures.

Remove the clear plastic protective sheets and remove the protective coating from the tables and cutterhead. This coating may be removed with a soft cloth moistened with kerosene. Do not use acetone, gasoline, or lacquer thinner for this purpose. Do not use solvents on plastic parts.

CAUTION Use care when cleaning the cutterhead; the knives are very sharp.

7.0 Unpacking

1. Remove all contents from the shipping carton. Do not discard the carton or packing material until the machine is set up and running satisfactorily.
2. Inspect the contents for shipping damage. Report damage, if any, to your distributor.

This machine arrives fully assembled. However, some tools may be needed for adjustments.

9.1 Contents of Shipping Container

- 1 Planer/Jointer
- 2 Push blocks
- 1 6mm hex wrench
- 1 Aluminum knife gauge (JPJ-12B only)
- 2 Star point screwdrivers (JPJ-12BHH only)
- 10 Knife inserts (JPJ-12BHH only)
- 10 Knife insert screws (JPJ-12BHH only)
- 1 Owner's manual
- 1 Warranty card

8.0 Electrical Connection

WARNING All electrical connections must be done by a qualified electrician. All adjustments or repairs must be done with the machine disconnected from the power source, unplugged. Failure to comply may result in serious injury!

The model JPJ-12B and JPJ-12BHH Planer-Jointer is rated at 230V. This machine is not supplied with a plug. Use a plug and outlet rated at least 30 amps. The circuit for the machine should also be protected by at least a 30-amp circuit breaker or fuse.

Make sure the cutterhead rotates in the proper direction. If it does not, disconnect machine from power supply and reverse two of the phase wires on the supply input.

9.0 Operating Controls

⚠WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

⚠WARNING Cutterhead knives are dangerously sharp. Use extreme caution when working around them. Failure to comply may cause serious injury.

9.1 Jointer to Planer Setup

Refer to Figures 2 and 3:

To change the machine configuration from jointer to planer:

1. Release both *cabinet table locks* (A) by rotating the handles toward the operator, then pulling away from the machine.
2. Raise the *table* (C) using the *handle* (B). When raised, the table should be in the vertical position as shown in C, Fig. 3. The *latch* (E) should be engaged, preventing the table from an accidental forward fall.

⚠CAUTION Table is heavy. Use care when raising. Failure to comply may cause serious injury.

3. Position the *dust chute* (D) to the right (H). Use extreme care to avoid contact with cutterhead knives.

Note: The planer table may need to be lowered to allow clearance needed to position the dust chute.

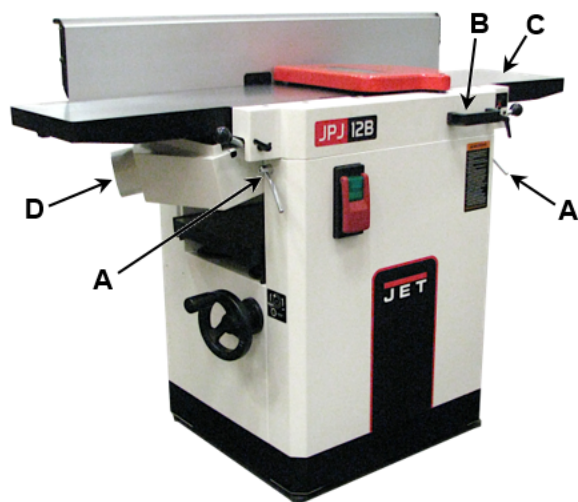


Figure 2

9.2 Planer to Jointer Setup

Refer to Figures 2 and 3:

To change the machine configuration from planer to jointer:

1. Pull the *dust chute release knob* (F) and reposition the *dust chute* (D) to the left (G). It should be positioned as shown in D, Fig. 2.

Note: The planer table may need to be lowered to allow clearance needed to position the dust chute.

2. Release the *latch* (E) and bring the table forward using the *handle* (B). It should be positioned as shown in C, Fig. 2.

⚠CAUTION Table is heavy. Use care when lowering. Failure to comply may cause serious injury.

3. Lock the *table* (C) by pushing the *lock handles* (A) in toward the machine and rotating down (away from the operator).

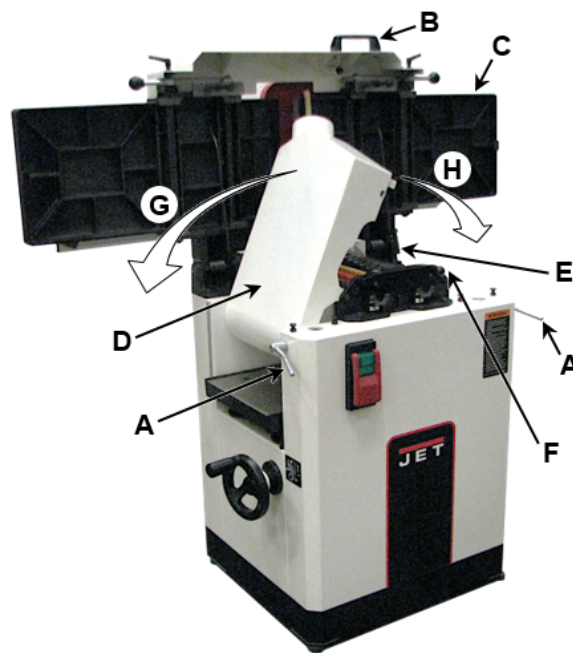


Figure 3

9.3 Control Switch

Refer to Figure 4:

Press the green switch to start. Press the red switch to stop.

To prevent unauthorized or accidental starting of the machine, remove the safety key from the green switch and store in a safe place. The key must be inserted to start the machine.

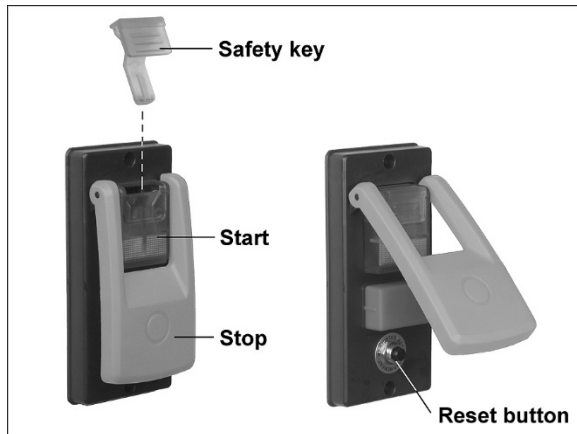


Figure 4

9.4 Planer Controls and Adjustments

Refer to Figure 5:

Table Height Adjustment

To set the planer table height, rotate the *height adjustment handwheel* (E) counterclockwise to raise the *planer table* (C), clockwise to lower.

Each revolution of the *handwheel* (E) results in a 5/32" up or down movement of the *table* (C). A scale on the handwheel column indicates the amount of handwheel rotation. A *pointer* (B) indicates the table position relative to the cutterhead on the *scale* (A) located on the side of the cabinet.

Power Feed

The gearbox has two feed speeds. These are set by pulling out or pushing in the *shift lever* (D). **Always change feed speed while the machine is running.** A diagram showing lever positions and associated feed speeds can be found above the gearbox cover. It is also shown in Figure 6.

CAUTION Planer must be running when changing the feed rate. Do not attempt to change the feed speed while stock is passing through the machine. Failure to comply may damage the gearbox.

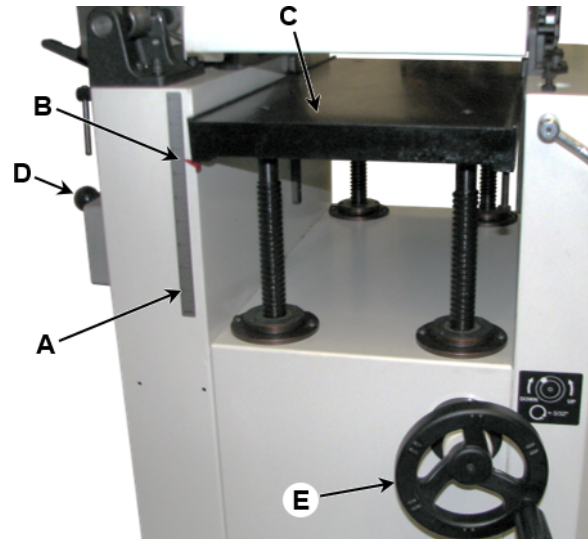


Figure 5

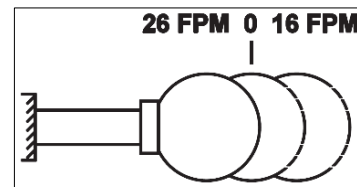


Figure 6

9.5 Jointer Controls and Adjustments

Outfeed Table Height Adjustment

Refer to Figure 7:

The *outfeed table lock handle* (C) and *outfeed table adjustment handle* (B) control the height adjustment of the *outfeed table* (A). The outfeed table is initially adjusted at the factory and should not be repositioned except during certain adjustments. These are described in sect. 10.2, *Table and Knife Adjustments*.

Infeed Table Height Adjustment

Refer to Figure 7:

The *infeed table lock handle* (D) and *infeed table adjustment handle* (E) control the height adjustment of the *infeed table* (F).

To adjust:

1. Loosen the *infeed table lock handle* (D).
2. Raise *infeed table adjustment handle* (E) to raise the *infeed table* (F) for a shallow depth of cut. Lower the handle for a deeper cut.
3. Tighten the *infeed table lock handle* (D).

The infeed table adjustment handle in the fully lowered position results in a depth of cut of 1/8".

Note: A depth of cut 1/16" or less is recommended.

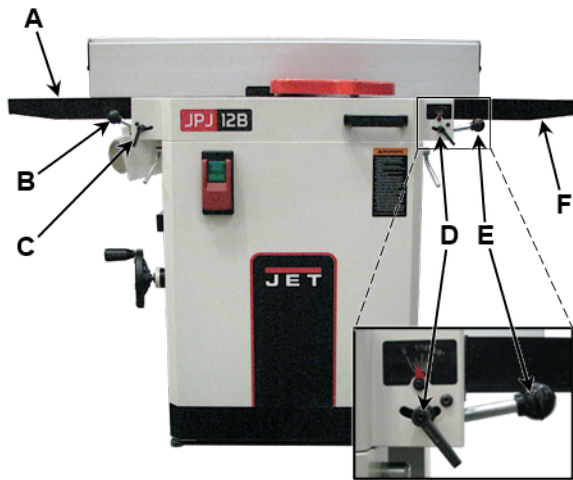


Figure 7

Cutterhead Guard

Refer to Figure 8:

Properly positioned, the *cutterhead guard* (B) should rest against the *fence* (A).

Fence Movement

Refer to Figure 8:

The *fence* (A) can be moved forward (C) or backward (D) across half the width (W) of the table, with 6" travel. It also tilts up to 45° backwards (E) and has positive stops at 90° and 45° R.

When edge jointing, the fence assembly should periodically be moved to different positions to distribute wear on the cutterhead knives.

To Slide Fence Forward or Backward

Refer to Figure 8:

1. Loosen the *assembly locking handle* (H).
2. Move the entire *fence assembly* (G) to the desired position.
3. Tighten the *assembly locking handle* (H).

To Tilt Fence Backward

Refer to Figure 8:

The *fence* (A) can be tilted backward (E) up to 45°; that is, for a total included angle of 135° from table surface.

1. Loosen the *tilt locking handle* (F).
2. Flip the *stop plate* (I) out of the way.
3. Tilt the *fence* (A) back (E) to the desired angle, up to 135°. Or place a beveled reference piece on the table and against the fence, adjusting the fence until the fence angle matches the bevel of gauge piece.
4. Tighten the *tilt locking handle* (F).

Important: When the tilted operation is finished and the fence is returned to 90°, make sure to flip the *stop plate* (I) back to its original position.

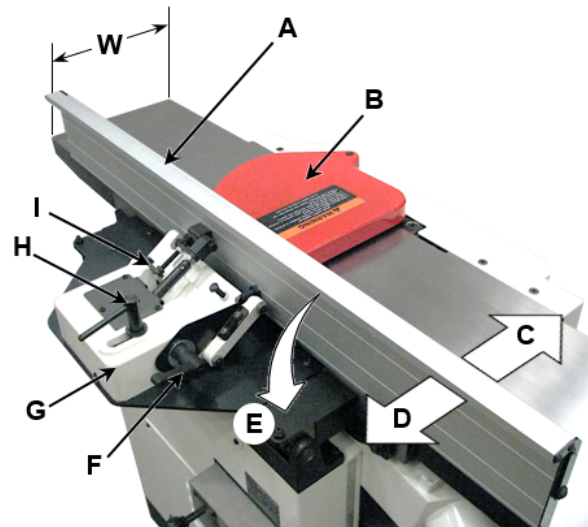


Figure 8

10.0 Adjustments

10.1 Fence Stop Adjustments

Refer to Figure 9:

Periodically check the 90° and 45° backward (135°) tilt accuracy of the fence with an angle measuring device, such as an adjustable square or machinist's protractor.

90° Stop Fence Adjustment

The 90° stop is controlled by the *stop bolt* (C) and the *stop plate* (D).

1. Set the *infeed table* (F, Fig. 7) to approximately the same height as the *outfeed table* (A, Fig. 7).
2. Move the *fence* (A) by releasing the *assembly locking handle* (F) and pushing the *fence assembly* (E) until it overlaps the tables. Then, tighten the *assembly locking handle* (F).
3. Adjust the *fence* (A) to a 90° angle by releasing *tilt locking handle* (G), pulling the fence upright, and tightening the tilt locking handle.

Note: The *stop bolt* (C) should be resting against the *stop plate* (D).

4. Place an angle measuring device on the table and against the *fence* (A) to confirm a 90° setting.

5. If the *fence* (A) is not square to the table, release the *tilt locking handle* (G), loosen the *lock nut* (B), and turn the *stop bolt* (C) until the fence is square to the table.
6. Tighten the *lock nut* (B) to retain the setting. Tighten the *tilt locking handle* (G).

45° Backward Stop Fence Adjustment

The 45° fence backward stop (fence positioned away from the operator) is controlled by the *backward stop bolt* (H).

1. Set the *infeed table* (F, Fig. 7) to approximately the same height as the *outfeed table* (A, Fig. 7).
2. Move the *fence* (A) by releasing the *assembly locking handle* (F) and pushing the *fence assembly* (E) until it overlaps the tables, then tighten the *assembly locking handle* (F).
3. Adjust the *fence* (A) to a 135° angle by releasing the *tilt locking handle* (G), moving the *stop plate* (D) out of the way, and positioning the fence against the *backward stop bolt* (H). Tighten the *tilt locking handle* (G).
4. Place an angle measuring device on the table and against the *fence* (A) to confirm a 135° setting.
5. To adjust, loosen the *tilt locking handle* (G) and *lock nut* (I), then turn the *backward stop bolt* (H) until a 135° angle is obtained.
6. Tighten the *lock nut* (I) to retain the setting. Tighten the *tilt locking handle* (G).

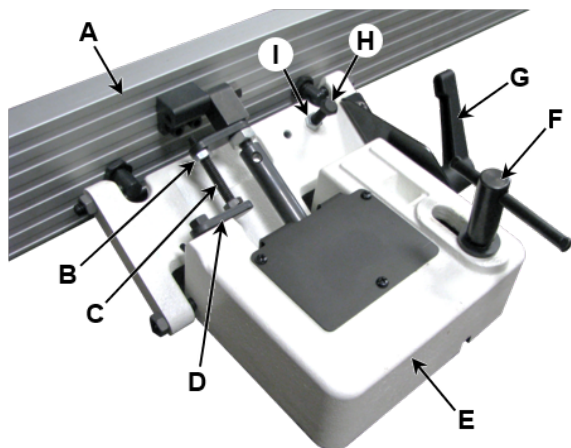


Figure 9

10.2 Table and Knife Adjustments

For accurate jointing, at least three things must be true:

1. Infeed and outfeed tables must be coplanar.
2. Knives or knife inserts must be set in the cutterhead so that the highest point of their arc is level with the outfeed table.
3. On the standard cutterhead, knives must be parallel with the outfeed table across the entire length of the knives.

These alignments are explained below.

10.3 Coplanar Alignment

Definition of Coplanar

When the infeed table is set to the same level as the outfeed table and all points on the tables lie in the same plane, thus forming a “perfect” flat surface, the tables are said to be coplanar.

For optimum performance of the jointer, the infeed and outfeed tables must be coplanar. If they are not, the finished workpiece may have a slight taper or twist across its jointed width or length.

Determining If Tables Are Coplanar

Refer to Figures 10 and 11:

The tables have been set coplanar at the factory, but they should be double-checked by the operator. Also, as the machine undergoes use, the tables should be checked occasionally and adjusted if necessary.

The procedure described below uses a steel straight edge to set the tables, which should be accurate enough for most purposes.

Important: The tables must be locked in position when performing the following test.

⚠ WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

1. Disconnect machine from power source.
2. Fully swing the *cutterhead guard* (G) away from the *fence* (B). It is recommended to then use a *6mm hex wrench* (F) (one is included with the machine) as a makeshift stop to hold the guard in place. To do this, insert the wrench into the front right roller tension adjustment screw. The cutterhead guard can then be released and the wrench will prevent it from swinging back towards the fence.

3. Slide the *fence assembly* (B) back (C) as far as it will go, or remove it from the machine entirely (use a 5mm hex wrench to remove the four button head socket screws and then remove the fence assembly).
4. Loosen the *outfeed table lock handle* (C, Fig. 7) on the *outfeed table* (A). Use the *outfeed table adjustment handle* (B, Fig. 7) to raise the outfeed table higher than the cutterhead.
5. Place a *straight edge* (D) across the back of the *outfeed table* (A) and extending over the *infeed table* (E). Note the position of the infeed table. Note the position of the straight edge in Figure 10 with respect to the *fence* (B).
6. Raise the *infeed table* (A) until it contacts the *straight edge* (D).

The straight edge should lie level across both tables. Move the straight edge to the front of the outfeed table as shown in Figure 11 and perform the same test.

If the straight edge does not lie level, the front or back of one of the tables must be adjusted to make the tables coplanar. Proceed as described in *Performing the Coplanar Alignment* below.

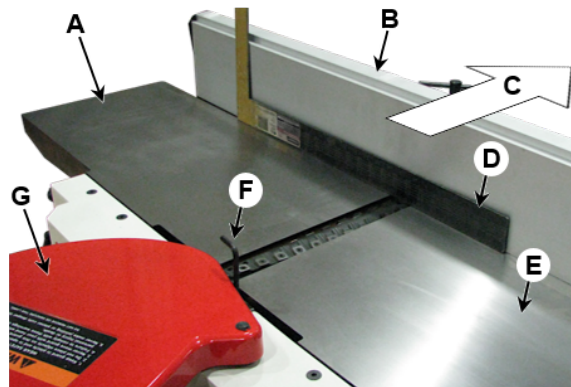


Figure 10

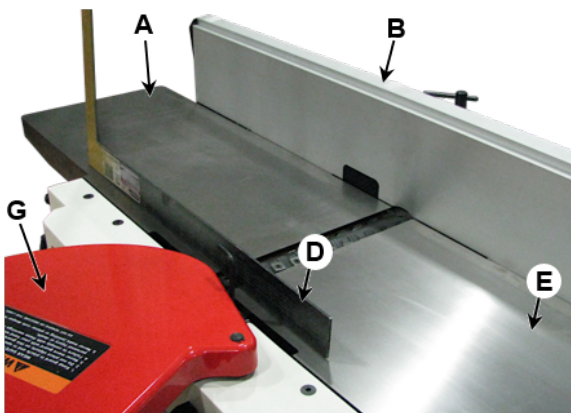


Figure 11

Performing the Coplanar Alignment

Refer to Figure 12:

If alignment is needed as determined in the previous section, proceed with step 7. A 2.5mm hex wrench and a 22mm open wrench is required.

7. Each table has four *adjustment cams*; two in front (A) and two in back (D). A small hole with a *set screw* (C) inside is near each cam.

Note: The two cams at the front of each table are concealed by the *front cover* (B). The front cams furthest from the cutterhead can be accessed from below the cover, when the jointer table is raised and the machine is in the planer orientation (see sect. 9.1, *Jointer to Planer Setup*). If adjusting one of the front cams closest to the cutterhead, the front cover must first be removed to access the set screw. Use a cross-head screwdriver to remove the infeed table scale pointer, turn the *infeed table lock handle* (D, Fig. 7) and *outfeed table lock handle* (C, Fig. 7) counterclockwise to remove them, and use a 5mm hex wrench to remove the four flat head socket screws along the top of the front cover; then remove the front cover.

Note: One cam at the back of each table is obscured by the jointer fence assembly. The cams can be accessed by removing the fence assembly, which can be done after removing four *button head socket screws* (B, Fig. 17) with a 5mm hex wrench.

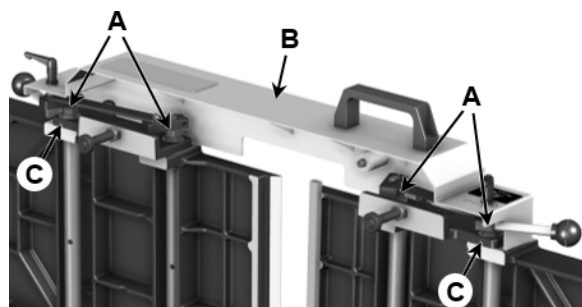
8. Near the point of the table where the adjustment must be made, use a 2.5mm hex wrench to loosen the *set screw* (C) by turning it counterclockwise.
9. Turn the associated *cam* (A or D) with a 22mm open wrench. **This adjustment is sensitive and should be made in small increments.**

Note: There is a notch on the cam that marks the alignment of the cam's eccentricity. There is a positive correlation between the mark and the infeed/outfeed table adjustment. When the cam is adjusted with the mark rotated upward, the corresponding area of the table is raised; conversely, when the mark is rotated downward, that part of the table is lowered.

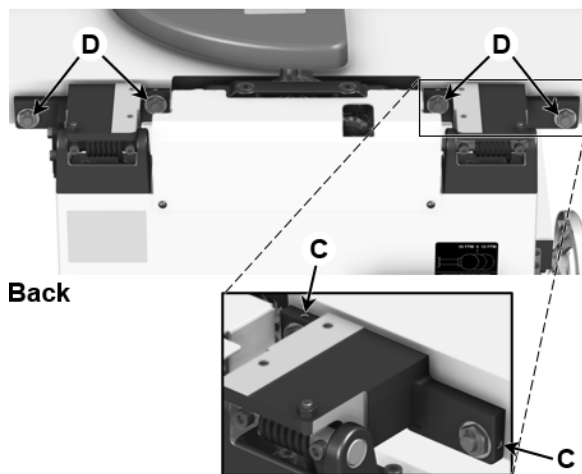
10. Use the *straight edge* (D, Fig. 10 and 11) upon the tables to check the adjustment until the tables are coplanar.
11. When the adjustment is satisfactory and the tables now coplanar, tighten the *set screw* (C) with the 2.5mm hex wrench.

It may be necessary to repeat the exercise in this section more than once to achieve coplanar alignment.

Note: If the tables do not lock properly after the adjustment, see *sect. 10.7, Jointer Table Lock Handle Adjustment*.



Front



Back

Figure 12

10.4 Setting Knives at Correct Height and Parallel to Outfeed Table

Refer to Figures 13 - 17:

For accurate jointing, the outfeed table surface must be level with the knives (or knife inserts for the helical cutterhead) at the high point of their arc. In addition, on the straight cutterhead, the knives must be parallel with the outfeed table along the entire length of the knives.

When you receive the jointer, the knives have been pre-set at the factory. However, the height and parallelism of the knives with the outfeed table should be checked, and any needed adjustments made, before operating the jointer.

Height setting of knives is not applicable to the helical head model, in which the knife inserts are immediately at the proper height after installing. However, the height of the outfeed table must still be verified in relation to the arc of the knife inserts, as follows.

Important: Before performing any adjustments in this section, the infeed and outfeed tables must be coplanar (see *sect. 10.3, Coplanar Alignment*).

Preparation

⚠ WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

⚠ WARNING Cutterhead knives are dangerously sharp! Use extreme caution when inspecting, removing, sharpening, or replacing knives into the cutterhead. Failure to comply may cause serious injury!

1. Disconnect machine from power source.
2. Fully swing the *cutterhead guard* (G, Fig. 11) away from the *fence* (B, Fig. 11). It is recommended to then use a 6mm hex wrench (one is included with the machine) as a makeshift stop to hold the guard in place. To do this, insert the wrench into the front right roller tension adjustment screw. The cutterhead guard can then be released and the wrench will prevent it from swinging back towards the fence.
3. Remove the *fence assembly* (A, Fig. 17) and *upper back panel* (C, Fig. 17) to access the *cutterhead pulley* (O, Fig. 19).

Setting the Outfeed Table Height

⚠ CAUTION Use care when handling the straightedge near blades to prevent damage.

4. Place a *straightedge* (B) on the *outfeed table* (A) near the back of the table. One end of the straightedge should be positioned over the *cutting knife* (E) near the end of the blade as shown in Figure 16.

⚠ CAUTION Always rotate the *cutterhead* (D) via the *cutterhead pulley* (O, Fig. 19). Do not contact the cutterhead itself to rotate it.

5. Rotate the *cutterhead* (D) until one of the blades is at its highest point in its cutting arc.
6. Loosen *outfeed table lock handle* (C, Fig. 7).
7. Use the *outfeed table adjustment handle* (B, Fig. 7) to lower the *outfeed table* (A) until the *straightedge* (B) contacts the *knife* (E), as shown in Figure 13. Rock the *cutterhead* (D) slightly to make sure the apex of the knife is contacting the *straightedge* (B).

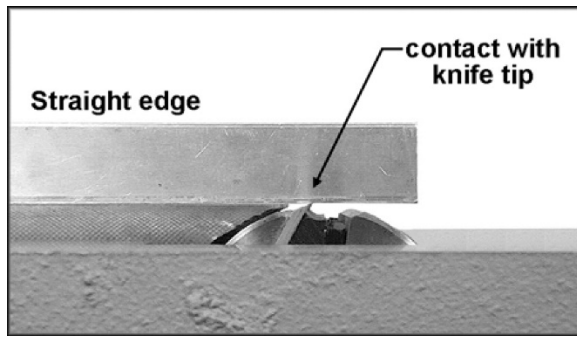


Figure 13

8. Lock the *outfeed table* (A) at that height by tightening the *outfeed table lock handle* (C, Fig. 7).

The outfeed table has now been locked at a standard height, level with the arc of the knife.

Note: After the outfeed table has been set at the correct height, it should not be changed except for special operations or after replacing knives.

On the helical cutterhead, after the outfeed table has been set, no further adjustments will be needed for the knife inserts. When inserts are installed properly in the helical cutterhead, they will automatically be set at the proper position.

On the straight knife cutterhead, further fine adjustments will now be achieved by adjusting the knives in the cutterhead. Proceed as follows.

Fine Knife Adjustment

9. Lower the *infeed table* (H) out of the way by loosening the *infeed table locking handle* (D, Fig. 7) and pushing down on the *infeed table adjustment handle* (E, Fig. 7).
10. An aluminum knife setting gauge, shown in Figure 14, is provided with the machine. Place the knife setting gauge at the back of the outfeed table (toward the fence support side) and extending over the *cutterhead* (D) as shown in Figure 14. Place the gauge so that the right mark lines up with the edge of the outfeed table, as shown.

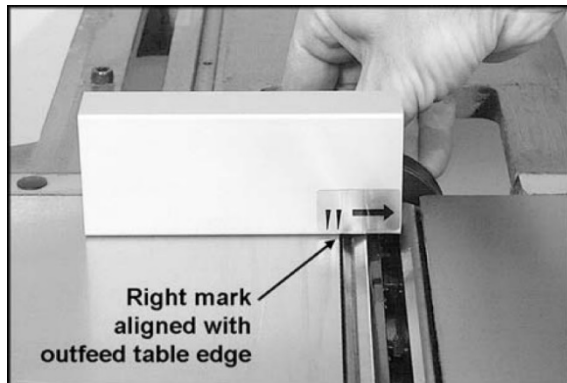


Figure 14

11. Rotate the cutterhead clockwise. If the outfeed table and knives are set correctly, the knife will contact the gauge and move it until the left mark lines up with the edge of the outfeed table, as shown in Figure 15.

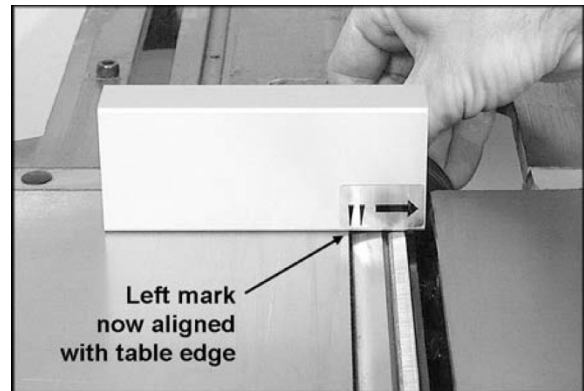


Figure 15

12. Place the knife gauge at the front of the outfeed table and repeat the process.

This test should be performed on the remaining knives using the provided gauge.

If any knife is either too high or too low at one of its ends to correctly move the gauge as described above, then the height and/or parallelism of that knife in the cutterhead needs to be adjusted. Proceed as follows.

13. Use a 13mm open wrench to slightly loosen the seven *gib lock screws* (F) by turning into the *lock bar* (G), clockwise as viewed from the *infeed table* (H).
14. Adjust the *blade* (E) height by turning the *jack screws* (C) upon which the blades rest with a 3mm hex wrench. To lower the blade, turn the screw clockwise. To raise the blade, turn the screw counterclockwise.
15. Use the edge of a board to push the *knife* (E) back down so that it is flush against the *jack screws* (C). Tighten the *gib screws* (F) only enough to keep the knife in position in the cutterhead. Do not fully tighten.
16. Check the height of the *knife* (E) again by using the gauge at the front and back of the *outfeed table* (A). Make further adjustments to the *jack screw(s)* (C) as needed.

Repeat this process for each of the other knives in turn. Do not fully tighten *gib screws* (F), only tighten them enough to keep the knife in position.

For best results, knives should be set at approximately .04" above the cutterhead. Knife height should not vary more than .002 - .003" across the length of the cutterhead. All three knives must be set at equal height in the cutterhead and parallel to the outfeed table across their length.

17. After all three knives are positioned properly in the cutterhead and made snug, continue tightening the *gib screws* (F). The gib screws should be tightened in increments, to prevent any distortion to the cutterhead or buckling of the knives. Begin tightening the gib screws a little more on one knife. Start with the center screw and work your way to the ends. Do not fully tighten yet.
18. Rotate the cutterhead to the other two knives in turn. Repeat step 17 for each knife.
19. The tightening process should continue at least two more times, each time tightening the *gib screws* (F) further on all three knives in turn. On the third time, the gib screws should all be firmly tightened.

⚠WARNING Before operating the machine, make sure all gib screws are firmly tightened. A loose knife thrown from the cutterhead can cause severe or fatal injury.

20. After all knife adjustments are completed, the *upper back panel* (C, Fig. 17) and the *fence assembly* (A, Fig. 17) should be placed back on the machine before operating.

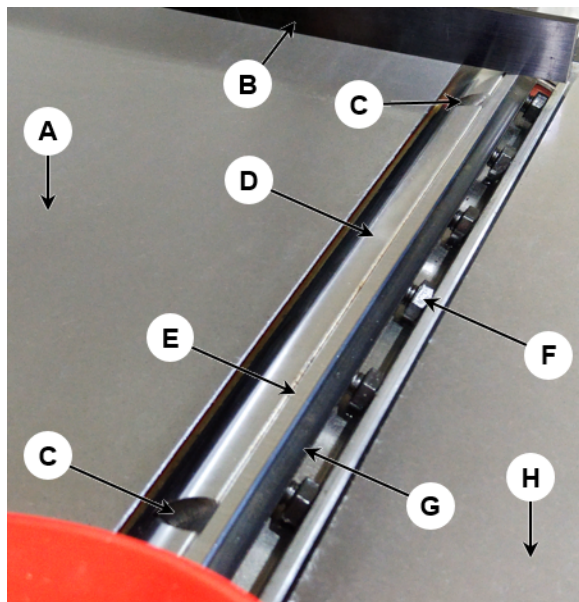


Figure 16 – Straight Knife Cutterhead (Model JPJ-12B Only)

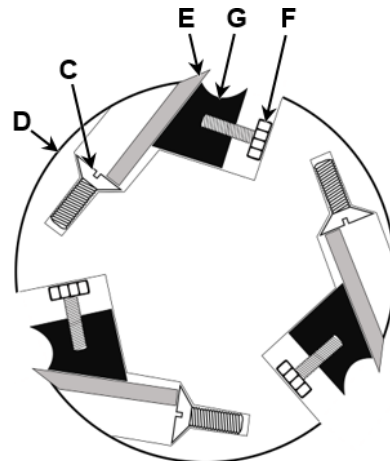


Figure 17 – Straight Knife Cutterhead (Model JPJ-12B Only)

10.5 Replacing Cutterhead Knives (Straight Knives Only)

Refer to Figures 16 and 17:

⚠WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

⚠WARNING Cutterhead knives are dangerously sharp. Use extreme caution when inspecting, removing, sharpening, or replacing knives into the cutterhead. Failure to comply may cause serious injury.

1. Disconnect machine from power source.
2. Fully swing the *cutterhead guard* (G, Fig. 11) away from the *fence* (B, Fig. 11). It is recommended to then use a 6mm hex wrench (one is included with the machine) as a makeshift stop to hold the guard in place. To do this, insert the wrench into the front right roller tension adjustment screw. The cutterhead guard can then be released and the wrench will prevent it from swinging back towards the fence.
3. Turn all seven *gib lock screws* (F) into the *lock bar* (G) by turning in a clockwise direction as viewed from the *infeed table* (H).
4. Carefully remove the *cutter knife* (E) and *lock bar* (G).
5. Thoroughly clean all surfaces of the cutterhead, knife slots, and lock bars of any dust or debris.
6. Insert the replacement *knife* (E) into the knife slot, making sure it faces the proper direction.

7. Insert the *lock bar* (G) and tighten just enough to hold it in place.

Repeat steps 3 - 7 for the other two knives.

The knives must now be adjusted as described in *sect. 10.4, Setting Knives at Correct Height and Parallel to Outfeed Table*.

10.6 Replacing or Rotating Knife Inserts (Helical Cutterhead Only)

Refer to Figure 18:

⚠ WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

⚠ WARNING Cutterhead knives are dangerously sharp. Use extreme caution when inspecting, removing, sharpening, or replacing knives into the cutterhead. Failure to comply may cause serious injury.

The knife inserts on the model JPJ-12BHH are four-sided. When dull, simply remove each insert, rotate it 90° for a fresh edge, and re-install it.

Use the provided star point screwdriver to remove the knife insert screw. See Figure 18. 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 affected.

Each knife insert has an etched reference mark to keep track of the rotations.

An extra set of ten knife inserts and knife insert screws are included with your JPJ-12BHH.

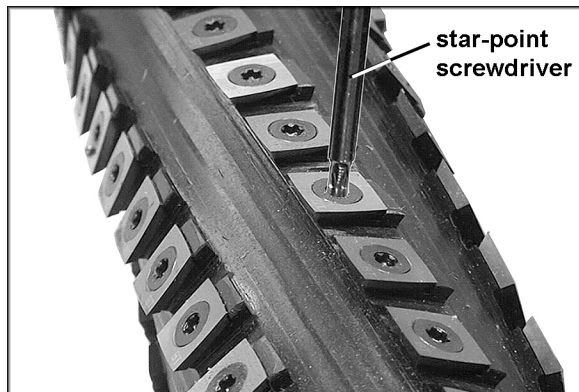


Figure 18 – Helical Cutterhead
(Model JPJ-12BHH Only)

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. Knife inserts should be torqued to approximately 50 to 55 pound-inches.

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

10.7 Jointer Table Lock Handle Adjustment

Refer to Figure 19:

For best performance, the *jointer table lock handles* (C) should be approximately in the fully down position when in the locked position. If adjustment is required:

⚠ WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

1. Disconnect machine from power source.
2. Unlock the *lock handles* (C) and raise the table to the upright position.
3. Loosen *locking nut* (B) with a 19mm open wrench.
4. Adjust the *table locking shaft* (A) in increments of 1/4 turns or less. Turn clockwise to tighten the lock handle performance and counterclockwise to loosen.
5. Tighten the *locking nut* (B).
6. Test locking function and repeat if necessary.

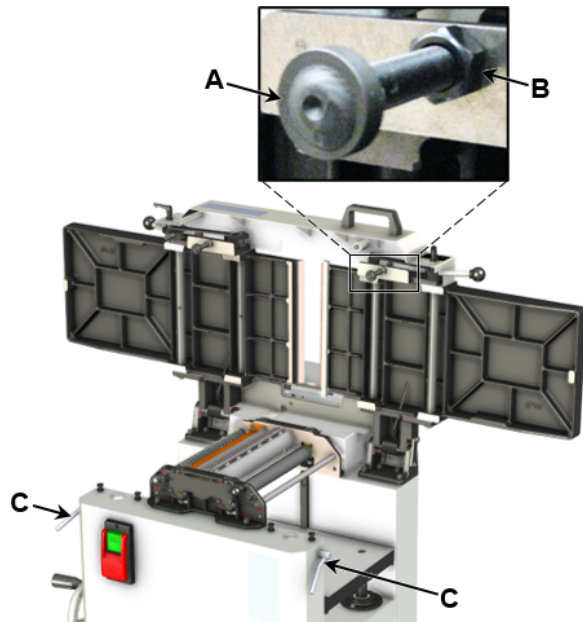


Figure 19

10.8 Belt Replacement

Refer to Figures 20 - 22:

Preparation

To replace the *cutterhead drive belt* and/or the *planer feed-roller belt*, the jointer fence assembly and two back panels must first be removed as described below. A 4mm hex wrench, 5mm hex wrench, and 17mm open wrench are required.

⚠WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

1. Disconnect machine from power source.
2. Remove four *button head socket screws* (B) and the *jointer fence assembly* (A).
3. Remove two *button head socket screws* (D) and the *upper back panel* (C).
4. Remove four *button head socket screws* (F) and the *lower back panel* (E).
5. Loosen *top nut* (L) on the *tension adjustment screw* (N), then turn the *bottom nut* (M) to raise the *motor* (I) and create slack in *feed-roller belt* (H) and *cutterhead drive belt* (G).

If there is still tension in feed-roller belt, loosen two socket head cap screws attaching gearbox to cabinet using a 5mm hex wrench.

6. Remove the *feed-roller belt* (H) from around the *feed-roller pulley* (P) and *motor pulley* (K).

If the *cutterhead drive belt* (G) is to be replaced, continue. Otherwise, proceed to step 10.

Cutterhead Drive Belt Replacement

Note: If the *cutterhead drive belt* (G) is to be replaced, steps 1 - 6 must be performed to remove the *feed-roller belt* (H) before the *cutterhead drive belt* can be replaced.

7. Remove *cutterhead drive belt* (G) from around *cutterhead pulley* (O) and *pulley* (J).
8. Loop the new *cutterhead drive belt* around the larger (inner) *motor pulley* (J) and *cutterhead pulley* (O).

If the *feed-roller belt* (H) is to be replaced as well, proceed to step 10. Otherwise, continue.

9. Loop the original *feed-roller belt* (H) around the smaller (outer) *motor pulley* (K) and *feed-roller pulley* (P).

Proceed to step 11.

Feed-Roller Belt Replacement

10. Loop the new *feed-roller belt* around the smaller (outer) *motor pulley* (K) and *feed-roller pulley* (P).

Concluding Steps

11. Turn *bottom nut* (M) on *tension adjustment screw* (N) to lower the *motor* (I) and create tension in *feed-roller belt* (H) and *cutterhead drive belt* (G), then tighten the *top nut* (L).

If the gearbox was adjusted in step 5, reposition the gearbox to maintain tension on the feed-roller belt and tighten the two socket head cap screws.

12. Replace the *lower back panel* (E), *upper back panel* (C), and *jointer fence assembly* (A) with their respective screws.

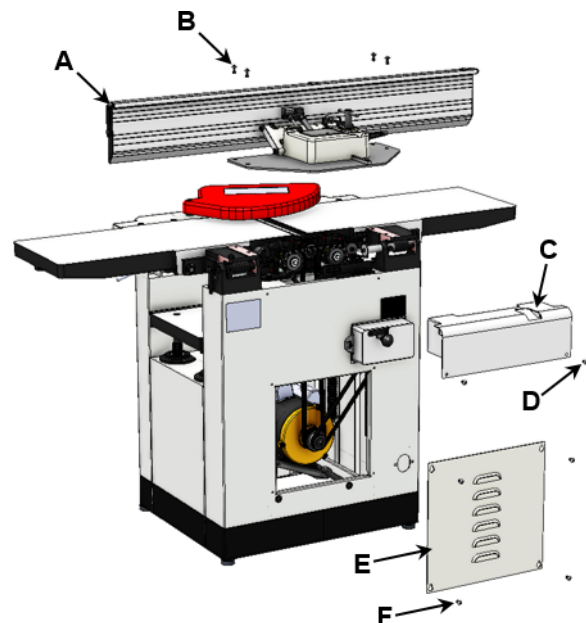


Figure 20

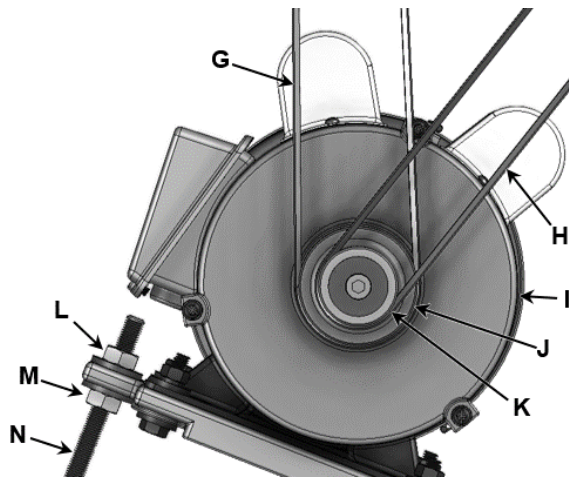


Figure 21

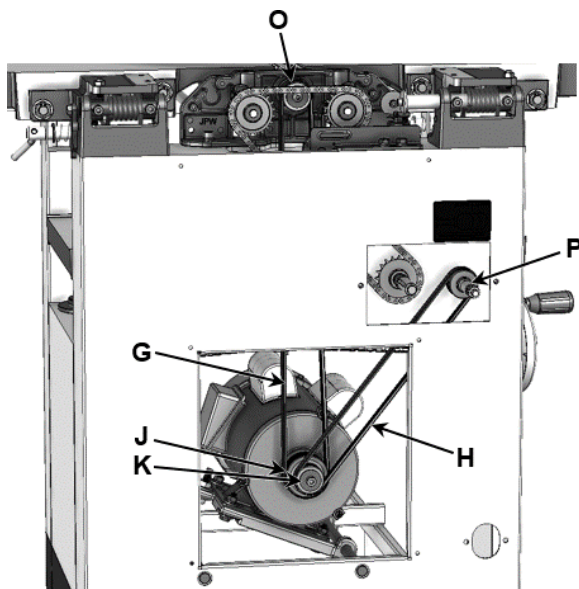


Figure 22

10.9 Feed Roller Height Adjustment

Refer to Figure 23:

The height of the infeed and outfeed rollers has been set by the manufacturer for planing operations. If this setting should ever need adjustment, it is done using the *screw (C)* and *nut (B)* at each end of the rollers. Two 10mm open wrenches are required.

Note: The front ends of the rollers can be accessed when the jointer table is raised and the machine is in the planer orientation (see sect. 9.1, *Jointer to Planer Setup*). The back ends of the rollers can be accessed by taking off the *jointer fence assembly (A, Fig. 17)* with a 5mm hex wrench and the *upper back panel (C, Fig. 17)* with a 4mm hex wrench.

⚠ WARNING Disconnect machine from power source before making any

adjustments. Failure to comply may cause serious injury.

1. Disconnect machine from power source.
2. Loosen the *hex nut (B)* and rotate the *screw (C)* as needed to raise or lower that end of the roller.

Note: Feed rollers must remain parallel to the table, and about 1/32" below the cutting arc of the knives or knife inserts.

3. Adjust any of the four screw/nut assemblies as needed.
4. Use a gauge on the planer table to verify the height of the rollers in relation to the cutterhead.
5. When settings are correct, tighten the *hex nuts (B)* up against the casting.

Note: Replace *upper back panel (C, Fig. 17)* and *jointer fence assembly (A, Fig. 17)* if they were removed to access the back ends of the rollers.

6. Make test cuts to verify the setting.

10.10 Feed Roller Pressure Adjustment

Refer to Figure 23:

The pressure of the feed rollers against the workpiece during planing operations is maintained by spring tension. To adjust this tension, turn the *socket head screw (A)*, clockwise to increase pressure or counterclockwise to decrease pressure.

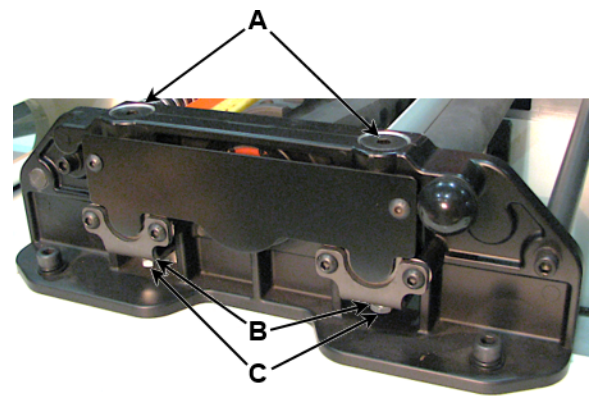


Figure 23

10.11 Planer Table Adjustment

Checking Planer Table Parallel to Cutterhead

Refer to Figures 24 and 25:

The planer table is set parallel to the cutterhead by the manufacturer and no further adjustment should be needed. If your machine is planing a taper, first check to see if the knives are properly adjusted in the cutterhead (see sect. 10.4, sect. 10.4, *Setting Knives at Correct Height and Parallel to Outfeed Table*) and make adjustments if necessary.

After the knives are confirmed to be properly set, check to see if the work table is set parallel to the cutterhead as follows.

⚠ WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

1. Disconnect machine from power source.
2. Rotate the cutterhead such that one of the knives (A) is at the 6 o'clock position.

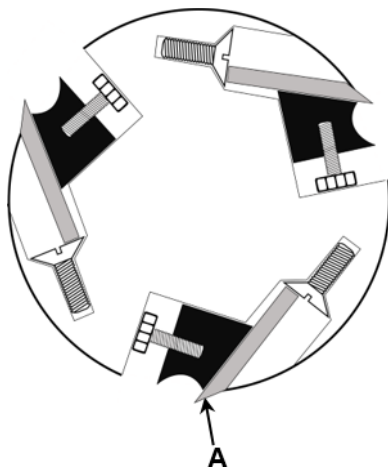


Figure 24

3. Place a *gauge block* (B) or another measuring device on the *work table* (C) at one edge (D) directly under the cutterhead.
4. With the *handwheel* (F), gently raise the *table* (C) until the *gauge block* (B) makes slight contact with the tip of the knife blade.
5. Move the *gauge block* (B) to opposite end of *table* (E).

If the distance from the table to tip of the knife blade is the same at both ends, the table is parallel to the cutterhead.

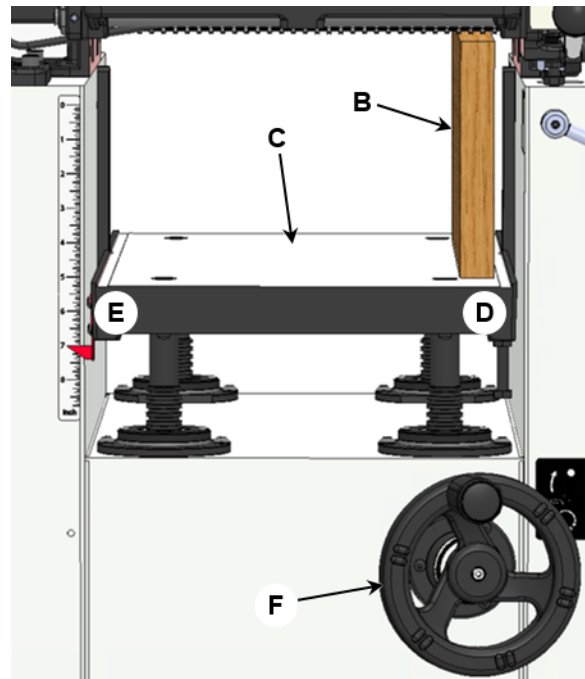


Figure 25

Adjusting Work Table Parallel to Cutterhead

Refer to Figure 26:

If the work table is not parallel to the cutterhead, perform the adjustment procedure as follows:

6. Identify which side of the *planer table* (A) you intend to adjust: the front or back side.
7. With an 8mm hex wrench, loosen the two socket head cap screws along the edge the adjustment is being made: B₁ and B₂ if adjusting the front of the table, or C₁ and C₂ if adjusting the back.
8. Bring the *table* (A) parallel to the cutterhead by turning both the corresponding *lead screws* (D) by hand an equal amount.
9. Repeat steps 3 - 5 to determine if the *planer table* (A) is level with the cutterhead. If further adjustment is necessary, repeat steps 6 - 8.

Note: Turning the lead screw clockwise will increase the distance between the table and cutterhead. Turning the lead screw counter-clockwise will decrease the distance.

When the table is determined to be parallel to the cutterhead, tighten the *socket head cap screws* (B₁, B₂, C₁, C₂).

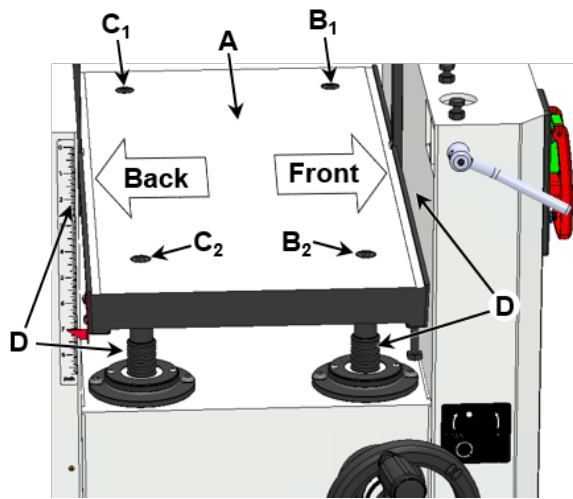


Figure 26

11.0 Basic Operations

11.1 Dust Collection

Before initial operation, the machine must be connected to a dust collector.

11.2 Initial Startup

After the assembly and adjustments are complete, the planer is ready to be tested. Turn on the power supply at the main panel. Press the *start* button. Keep your finger on the *stop* button in case of a problem. The planer should run smoothly with little or no vibration or rubbing noises. Investigate and correct the source of any problems before further operation.

⚠ WARNING DO NOT attempt to investigate or adjust the planer while it is running. Wait until the planer is turned off, unplugged, and all working parts have come to a complete standstill.

⚠ WARNING Always wear ANSI-approved safety glasses or goggles when operating the planer-jointer.

11.3 Changing Mode of Operation

When changing the operating mode (planer to jointer and back), the machine must be turned off and at a complete standstill. To change the mode of operation, see sect. 9.1, *Jointer to Planer Setup* and sect. 9.2, *Planer to Jointer Setup*.

11.4 Jointer Operations

Correct Operating Position

The operator must be positioned offset to the infeed table (Figure 27).

Hand Placement

⚠ WARNING Never pass hands directly over the cutterhead.

At the start of the cut, the left hand holds the workpiece firmly against the infeed table and fence while the right hand pushes the workpiece in a smooth, even motion toward the cutterhead. After the cut is under way, the new surface rests firmly on the outfeed table. The left hand is transferred to the outfeed side (Figure 27) and presses down on this part of the workpiece, at the same time maintaining flat contact with the fence. The right hand presses the workpiece forward and before the right hand reaches the cutterhead it should be moved to the work on the outfeed table.

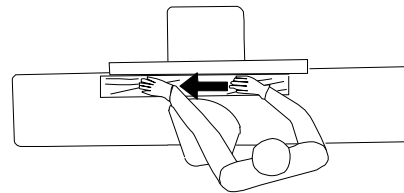


Figure 27

Surfacing

The purpose of planing on a jointer is to produce one flat surface (Figure 28). The other side can then be milled to precise, final dimensions on a thickness planer, resulting in a board that is smooth and flat on both sides and each side parallel to the other.

- ❑ If the wood to be jointed is cupped or bowed, place the concave side down and take light cuts until the surface is flat.
- ❑ Never surface pieces shorter than 12" or thinner than 3/8" without the use of a special work holding fixture.
- ❑ Never surface pieces thinner than 3" without the use of a push block.
- ❑ Cuts of approximately 1/16" at a time are recommended, which provides for better control over the material being surfaced. More passes can then be made to reach the desired depth.

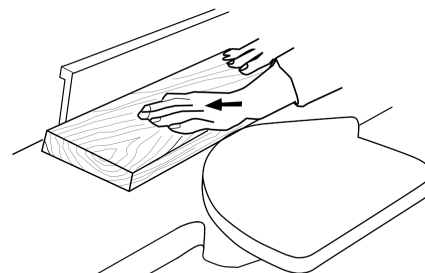


Figure 28

Direction of Grain

Avoid feeding work into the jointer against the grain (Figure 29). This may result in chipped and splintered edges.

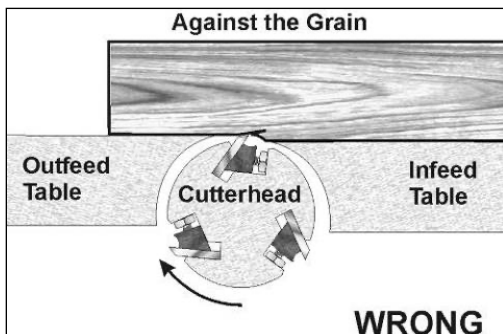


Figure 29

Feed *with* the grain to obtain a smooth surface, as shown in Figure 30.

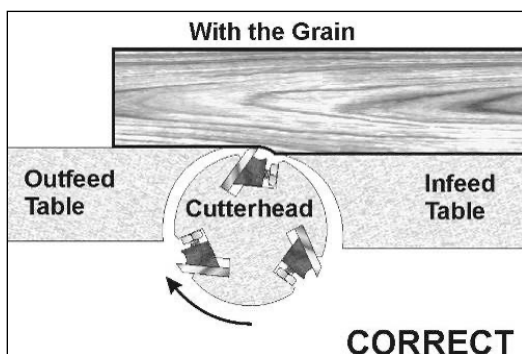


Figure 30

Jointing

Jointing (or edging) is the process of creating a finished, flat *edge surface* that is suitable for joinery or finishing (Figure 31). It is also a necessary step prior to ripping stock to width on a table saw.

- ❑ Never edge a board that is less than 3" wide, 1/4" thick, or 12" long without using a push block.
- ❑ When edging wood wider than 3", lap the fingers over the top of the wood, extending them back over the fence such that they will act as a stop for the hands in the event of a kickback.
- ❑ Position the fence (move it forward) to expose only the amount of cutterhead required.

CAUTION When workpiece is twice the length of the jointer infeed or outfeed table, use an infeed or outfeed support.

To edge:

1. Make sure the fence is set to 90°. Double-check it with a square.
2. Inspect stock for soundness and grain direction (refer to *Direction of Grain*).
3. If the board is bowed (curved), place the *concave edge down* on the infeed table.
4. Set the infeed table for a cut of approximately 1/16".
5. Hold the stock firmly against the fence and table, feed the stock slowly and evenly over the cutterhead.

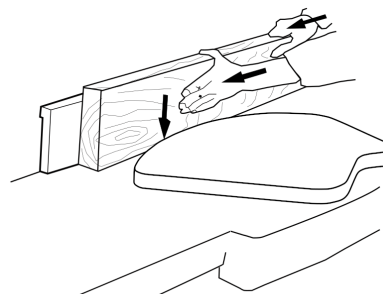


Figure 31

Beveling

Beveling an edge is the same operation as edge jointing, except that the fence is tilted to a specified angle.

- ❑ Make sure the material being beveled is more than 12" long, 1/4" thick, and 1" wide.

To bevel:

1. Use a bevel gauge to determine the desired angle. Then set the fence to the same angle.
2. Inspect stock for soundness and grain direction (refer to *Direction of Grain*).
3. Set the infeed table for a cut of approximately 1/16".
4. If the board is bowed (curved), place the *concave edge down* on the infeed table.
5. Feed the stock through the cutterhead, making sure the face of the stock is completely flat against the fence and the edge is making solid contact on the infeed and outfeed tables (Figure 32).

For wood more than 3" wide – hold with fingers close together near the top of the stock, lapping over the board and extending over the fence.

For wood less than 3" wide – use beveled push blocks and apply pressure toward the fence. Keep fingers near top of push block.

Several passes may be required to achieve the full bevel.

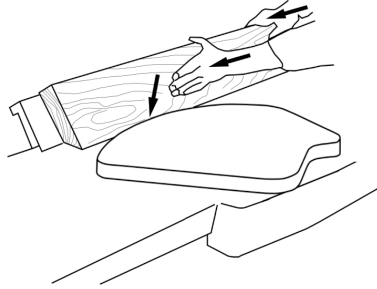


Figure 32

11.5 Planer Operations

Depth of Cut

Thickness planing refers to the sizing of lumber to a desired thickness while creating a level surface parallel to the opposite side of the board. The board thickness that the planer will produce is indicated by the *scale* and the *depth-of-cut gauge* (see sect. 9.4, *Table Height Adjustment*). Preset the planer to the desired thickness of the finished workpiece using the gauge. The depth-of-cut is adjusted by raising or lowering the *planer table* (C, Fig. 5) using the *handwheel* (E, Fig. 5).

- ❑ The quality of thickness planing depends upon the operator's judgment about the depth of cut.
- ❑ The depth of cut depends upon the width, hardness, dampness, grain direction, and grain structure of the wood.
- ❑ For optimum planing performance, the depth of cut should be less than 1/16".
- ❑ The board should be planed with shallow cuts until the work has a level side. Once a level surface has been created, flip the lumber and create parallel sides.
- ❑ Plane alternate sides until the desired thickness is obtained. When half of the total cut has been taken from each side, the board will have a uniform moisture content and additional drying will not cause it to warp.
- ❑ The depth of cut should be shallower when the workpiece is wider.
- ❑ When planing hardwood, take light cuts or plane the wood in thin widths.
- ❑ Make a test cut with a test piece and verify the thickness produced.
- ❑ Check the accuracy of the test cut before working on the finished product.

Precautions

- ❑ A thickness planer is a precision woodworking machine and should be used on good-quality lumber only.
- ❑ Do not plane dirty boards; dirt and small stones are abrasive and will wear out the blade.
- ❑ Remove nails and staples. Use the planer to cut wood only.
- ❑ Avoid knots. Heavily cross-grained wood makes knots hard. Knots can come loose and jam the blade. Any article that encounters planer blades may be forcibly ejected from the planer, creating a risk of injury.

Preparing the Work

- ❑ A thickness planer works best when the lumber has at least one flat surface. Use a jointer to create a flat surface.
- ❑ Twisted or severely warped boards can jam the planer. Split the lumber in half to reduce the magnitude of the warp.
- ❑ The work should be fed into the planer in the same direction as the grain of the wood. Sometimes the wood will change directions in the middle of the board. In such cases, if possible, cut the board in the middle so the grain direction is correct.

CAUTION Do not plane a board that is less than 10" long. It is recommended that when planing short boards, you butt them end to end to avoid kickback and reduce snipe.

Feeding the Work

The planer is supplied with planer blades mounted in the cutterhead, and infeed and outfeed rollers adjusted to the correct height. The planer feed is automatic; it will vary slightly depending on the type of wood.

Preparation:

- ❑ Feed rate refers to the rate at which the lumber travels through the planer.
- ❑ The operator is responsible for aligning the work so it will feed properly.
- ❑ Raise or lower the planer table to get the depth of cut desired.
- ❑ The surface that the planer produces will be smoother if a shallower depth of cut is used.
- ❑ Stand on the side of the machine that the handle is attached.
- ❑ Boards longer than 24" should have additional support via free standing material stands. These can be purchased from JET – Stock # 709209. See *sect. 17.0, Optional Accessories*.

Planing

1. Position the workpiece with the face to be planed on top.
2. Turn the planer on.
3. Turn the power feed on.
4. Rest the board end on the infeed roller plate and direct the board into the planer.
5. Slide the workpiece into the infeed side of the planer until the infeed roller begins to advance the workpiece.
6. Let go of the workpiece and allow the automatic feed to advance the workpiece.
7. Do not push or pull on the workpiece. Move to the rear and receive the planed lumber by grasping it in the same manner that it was fed.

⚠CAUTION To avoid the risk of injury due to kickbacks, do not stand directly in line with the front or rear of the planer.

8. Do not grasp any portion of the board that has not gone past the outfeed roller.
9. Repeat this operation on all boards that need to be the same thickness.

Avoiding Snipe

Snipe refers to a depression at either end of the board caused by an uneven force on the cutterhead when the work is entering or leaving the planer.

Snipe will occur when the boards are not supported properly or when only one feed roller is in contact with the work at the beginning or end of the cut.

Precautions for avoiding snipe:

- ❑ Push the board up while feeding the work until the outfeed roller starts advancing it.
- ❑ Move to the rear and receive the planed board by pushing it up when the infeed roller loses contact with the board.
- ❑ When planing more than one board of the same thickness, butt the boards together to avoid snipe.
- ❑ Make shallow cuts. Snipe is more apparent when deeper cuts are taken.
- ❑ Feed the work in the direction of the grain. Work fed against the grain will have chipped, splintered edges.

12.0 Maintenance

12.1 Blade Care

⚠WARNING Blades are extremely sharp! Use caution when cleaning or changing. Failure to comply may cause serious injury!

- ❑ The condition of the blades will affect the precision of the cut. Observe the quality of the cut that the planer produces to check the condition of the blades.
- ❑ Dull blades will tear, rather than cut, the wood fibers and produce a fuzzy appearance.
- ❑ Raised grain will occur when dull blades pound on wood that has varying density. A raised edge will also be produced where the blades have been nicked.

When gum and pitch collect on the blades, carefully remove with a strong solvent. Failure to remove gum and pitch buildup may result in excessive friction, blade wear, and overheating.

When blades become dull, touch up blades. See *sect. 12.2, Sharpening the Knives*.

12.2 Sharpening the Knives (Straight Knives Only)

⚠ WARNING Disconnect machine from power source before making any adjustments. Failure to comply may cause serious injury.

⚠ WARNING Blades are extremely sharp! Use caution when handling. Failure to comply may cause serious injury!

1. Disconnect machine from power source.
2. Fully swing the *cutterhead guard* (G, Fig. 11) away from the *fence* (B, Fig. 11). It is recommended to then use a 6mm hex wrench (one is included with the machine) as a makeshift stop to hold the guard in place. To do this, insert the wrench into the front right roller tension adjustment screw. The cutterhead guard can then be released and the wrench will prevent it from swinging back towards the fence.
3. To protect the infeed table from scratches, partially cover the sharpening stone with paper (Figure 30).
4. Lay the stone on the infeed table.
5. Lower the infeed table and turn the cutterhead by turning the cutterhead pulley. The infeed table height is set properly when the stone's surface is flush with the knife bevel.
6. Keep the cutterhead from rotating by grasping the cutterhead pulley while sliding the stone back and forth across the table.

7. Take the same number of passes for all three blades.

If the blades have been sharpened and still are not cutting efficiently, trying to touch up the blades further will only cause the formation of a second beveled edge. When this starts to happen, it is time to replace blades with another set. It is recommended to keep a second set of blades on hand so that they may be installed while the first set is being professionally sharpened.

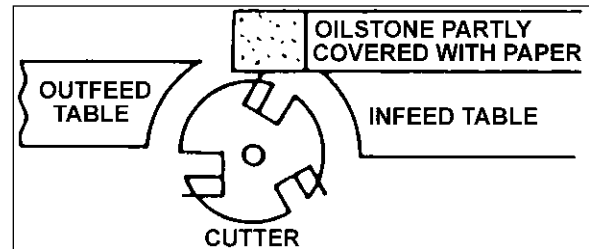


Figure 30

⚠ CAUTION Do NOT attempt to sharpen helical knife inserts! Only rotate the knife once it is dull. If all sides have been rotated properly, dispose of the knife and replace it with a replacement insert. Refer to sect. 10.6, *Replacing or Rotating Knife Inserts*.

13.0 Lubrication

- ❑ Use a good grade of light grease on the steel adjusting screws located in the raising and lowering mechanisms of the work tables.

The cutterhead ball bearings are lifetime lubricated and need no further care.

14.0 Troubleshooting the JPJ-12B,JPJ-12BHH

14.1 Performance Troubleshooting – Jointer

Trouble	Probable Cause	Remedy
Finished stock is concave on back end.	Knife is higher than outfeed table.	Align cutterhead knives with outfeed table. See <i>sect. 10.4, sect. 10.4, Setting Knives at Correct Height and Parallel to Outfeed Table</i> .
Finished stock is concave on front end.	Outfeed table is higher than knife.	Align cutterhead knives with outfeed table. See <i>sect. 10.4, sect. 10.4, Setting Knives at Correct Height and Parallel to Outfeed Table</i> .
Chip out.	Cutting against the grain.	Cut with the grain whenever possible.
	Dull knives.	Sharpen or replace knives/Rotate knife inserts or replace inserts.
	Feeding workpiece too fast.	Use slower rate of feed.
	Cutting too deeply.	Make shallower cuts.
	Knots, imperfections in wood.	Inspect wood closely for imperfections; use different stock if necessary.
Fuzzy grain.	Wood has high moisture content.	Allow wood to dry or use different stock.
	Dull knives.	Sharpen or replace knives/inserts.
Cutterhead slows while operating.	Feeding workpiece too quickly, or applying too much pressure to workpiece.	Feed more slowly, or apply less pressure to workpiece.
“Chatter” marks on workpiece.	Knives incorrectly set.	Set knives properly as described in <i>sect. 10.4, sect. 10.4, Setting Knives at Correct Height and Parallel to Outfeed Table</i> . Check that knife slots are clean and free of dust or debris.
	Feeding workpiece too fast.	Feed workpiece slowly and consistently.
Uneven knife marks on workpiece.	Knives are nicked, or out of alignment.	Align knives per <i>sect. 10.4, sect. 10.4, Setting Knives at Correct Height and Parallel to Outfeed Table</i> . Replace nicked knives/Rotate knife inserts.

Table 1

14.2 Performance Troubleshooting – Planer

Trouble	Probable Cause	Remedy
Snipe. <i>Note: Snipe cannot be eliminated, but can be so minimized as to become 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 tension.
	Dull knives.	Sharpen knives/Rotate knife 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 high moisture content from wood by drying.
	Dull knives.	Sharpen or replace/Rotate knife inserts.
Torn Grain.	Too heavy a cut.	Adjust proper depth of cut.
	Knives cutting against grain.	Cut along the grain.
	Dull knives.	Sharpen knives/Rotate knife inserts.
Rough/Raised Grain.	Dull knives.	Sharpen knives/Rotate knife inserts.
	Too heavy a cut.	Adjust proper depth.
	Moisture content too high.	Remove high moisture content from wood by drying.
Rounded, glossy surface.	Dull knives.	Sharpen or replace knives/Rotate knife inserts or replace.
	Feed speed too slow.	Increase speed.
	Cutting depth too shallow.	Increase depth.
Poor feeding of lumber.	Inadequate feed roller pressure.	Adjust feed roller tension. If proper tension cannot be achieved, replace feed rollers.
	Planer bed rough or dirty.	Clean pitch and residue, and wax planer table.
	Transmission v-belt slipping.	Tighten transmission v-belt.
	Surface of feed rollers clogged.	Clear pitch and residue out of teeth.
Uneven depth of cut side to side.	Knife projection.	Adjust knife projection.
	Cutterhead not level with bed.	Level bed.
Board thickness does not match depth of cut scale.	Depth of cut scale incorrect.	Adjust depth of cut scale.

Table 2

14.3 Mechanical Troubleshooting – Planer/Joiner

Trouble	Probable Cause	Remedy
Chain jumping.	Inadequate tension.	Adjust chain tension.
	Sprockets misaligned.	Align sprockets.
	Sprockets worn.	Replace sprockets.
Machine will not start/ restart or repeatedly trips circuit breaker or blows fuses.	No incoming power.	Verify unit is connected to power, on-button is pushed in completely, and stop-button is disengaged.
	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.
	Planer frequently trips.	One cause of overloading trips, which are 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 the amp setting is correct, 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 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.
	Motor starter failure.	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.
	Switch or Motor failure – how to distinguish.	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.
	Motor failure.	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.
	Miswiring of the unit.	Double check to confirm all electrical connections are correct and properly tight. The electrical connections other than the motor are pre-assembled and tested at the factory. Therefore, the motor connections should be double checked as the highest probability for error. If problems persist, double-check the factory wiring.

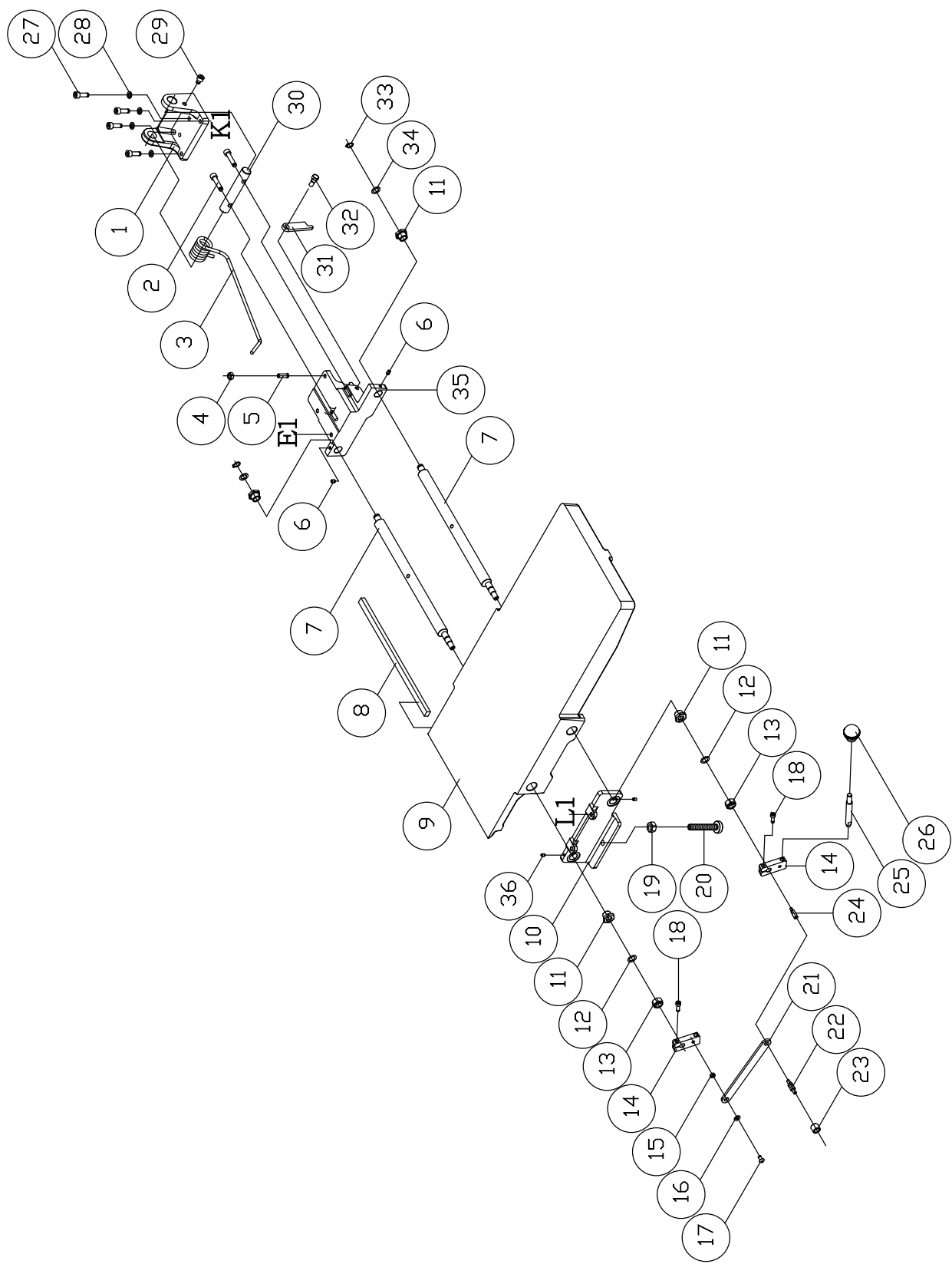
Table 3

15.0 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, 8:00 a.m. to 5:00 p.m. CST. Having the Stock Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET. Some parts are shown for reference only, and may not be available individually.

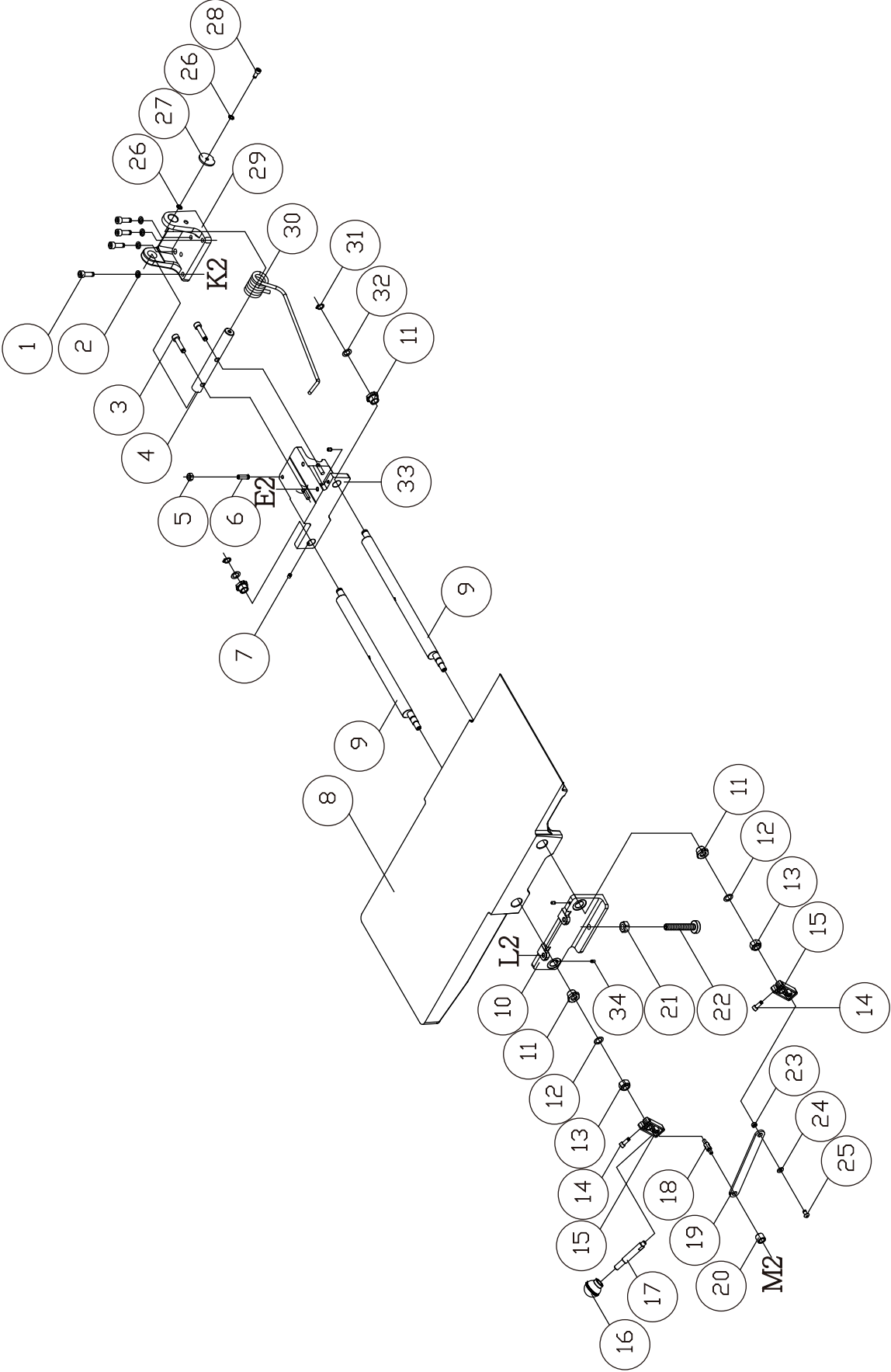
15.1 Infeed Table Assembly – Exploded View



15.2 Infeed Table Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JPJ12B-101	Fixed Jointer Table Hinge		1
2	JPJ12B-102	Socket Head Cap Screw w/threadlocker	M8 x 1.25P x 35L	2
3	JPJ12B-103	Torsion Spring		1
4	TS-2311081	Hex Nut	M8 x 1.25P	1
5	TS-1524061	Socket Head Set Screw	M8 x 1.25P x 25L	1
6	JPJ12B-106	Socket Head Set Screw w/threadlocker	M6 x 1.0P x 8L	2
7	JPJ12B-107	Eccentric Shaft		2
8	JPJ12B-108	Foam Pad		1
9	JPJ12B-109	Infeed Table		1
10	JPJ12B-110	Jointer Table Linking Bracket (Right)		1
11	JPJ12B-111	Eccentric Cam		4
12	JPJ12B-112	Oilite Washer		2
13	TS-2342121	Nylon Lock Hex Nut	M12 x 1.75PL	2
14	JPJ12B-114	Handle Bracket		2
15	JPJ12B-115	Bushing		1
16	TS-1550041	Flat Washer	6.3 x 13 x 1.0T	1
17	TS-2246122	Socket Head Button Screw	M6 x 1.0P x 12L	1
18	TS-1503051	Socket Head Cap Screw	M6 x 1.0P x 20L	2
19	TS-2311121	Hex Nut	M12 x 1.75P	1
20	JPJ12B-120	Stop Bracket		1
21	JPJ12B-121	Linking Plate		1
22	JPJ12B-122	Shaft		1
23	JPJ12B-123	Bushing		1
24	JPJ12B-124	Standoff		1
25	JPJ12B-125	Handle Shaft		1
26	6284865	Knob		1
27	TS-1504051	Socket Head Cap Screw	M8 x 1.25P x 25L	4
28	TS-2361081	Lock Washer	M8	4
29	JPJ12B-129	Socket Head Cap Screw w/threadlocker	M8 x 1.25P x 10L	1
30	JPJ12B-130	Infeed Table Pivot Shaft		1
31	JPJ12B-131	Jointer Table Stop Bracket		1
32	JPJ12B-132	Shoulder Screw		1
33	JPJ12B-133	External Retaining Ring, C-Type	STW-12	2
34	TS-2360121	Flat Washer	12.1 x 18.7 x 1.0T	2
35	JPJ12B-135	Rotary Jointer Table Hinge (Right)		1
36	JPJ12B-136	Socket Head Set Screw w/threadlocker	M5 x 0.8P x 8L	2

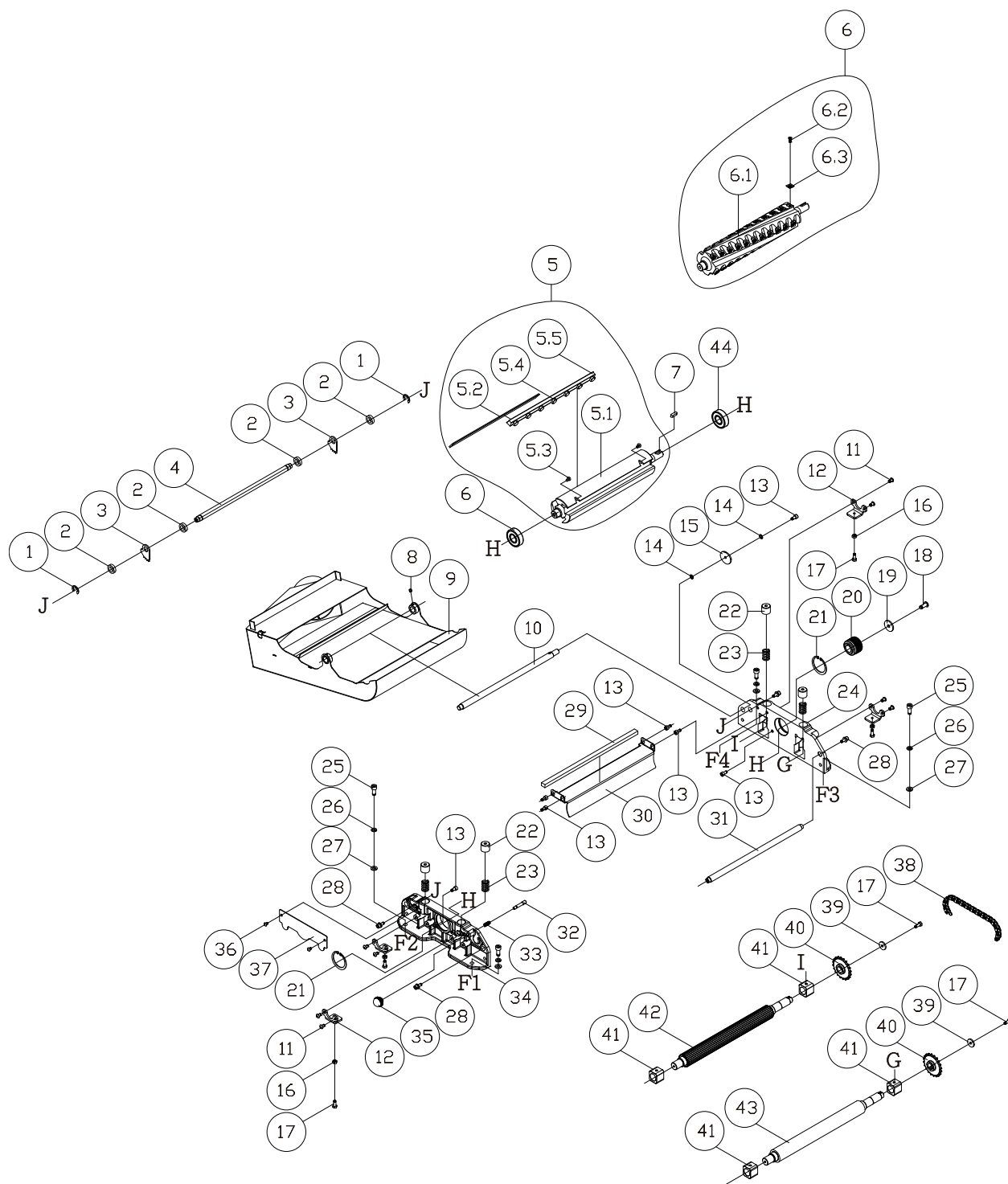
15.3 Outfeed Table Assembly – Exploded View



15.4 Outfeed Table Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1504051	Socket Head Cap Screw	M8 x 1.25P x 25L	4
2	TS-2361081	Lock Washer	M8	4
3	JPJ12B-102	Socket Head Cap Screw w/threadlocker	M8 x 1.25P x 35L	2
4	JPJ12B-204	Outfeed Table Pivot Shaft		1
5	TS-2311081	Hex Nut	M8 x 1.25P	1
6	TS-1524061	Socket Head Set Screw	M8 x 1.25P x 25L	1
7	JPJ12B-106	Socket Head Set Screw w/threadlocker	M6 x 1.0P x 8L	2
8	JPJ12B-109	Jointer Table		1
9	JPJ12B-107	Eccentric Shaft		2
10	JPJ12B-210	Jointer Table Linking Bracket (Left)		1
11	JPJ12B-111	Eccentric Cam		4
12	JPJ12B-112	Oilite Washer		2
13	TS-2342121	Nylon Lock Hex Nut	M12 x 1.75P	2
14	TS-1503051	Socket Head Cap Screw	M6 x 1.0P x 20L	2
15	JPJ12B-114	Handle Bracket		2
16	6284865	Knob		1
17	JPJ12B-217	Handle Shaft		1
18	JPJ12B-122	Shaft		1
19	JPJ12B-121	Linking Plate		1
20	JPJ12B-123	Bushing		1
21	TS-2311121	Hex Nut	M12 x 1.75P	1
22	JPJ12B-120	Stop Bracket		1
23	JPJ12B-115	Bushing		1
24	TS-1550041	Flat Washer	6.3 x 13 x 1.0T	1
25	TS-2246122	Socket Head Button Screw	M6 x 1.0P x 12L	1
26	JPJ12B-226	Star Washer	M6	2
27	JPJ12B-227	Eccentric Cam		1
28	JPJ12B-228	Socket Head Cap Screw	M6 x 1.0P x 15L	1
29	JPJ12B-101	Fixed Jointer Table Hinge		1
30	JPJ12B-103	Torsion Spring		1
31	JPJ12B-133	External Retaining Ring, C-Type	STW-12	2
32	TS-2360121	Flat Washer	12.1 x 18.7 x 1.0T	2
33	JPJ12B-233	Rotary Jointer Table Hinge (Left)		1
34	JPJ12B-136	Socket Head Set Screw w/threadlocker	M5 x 0.8P x 8L	2

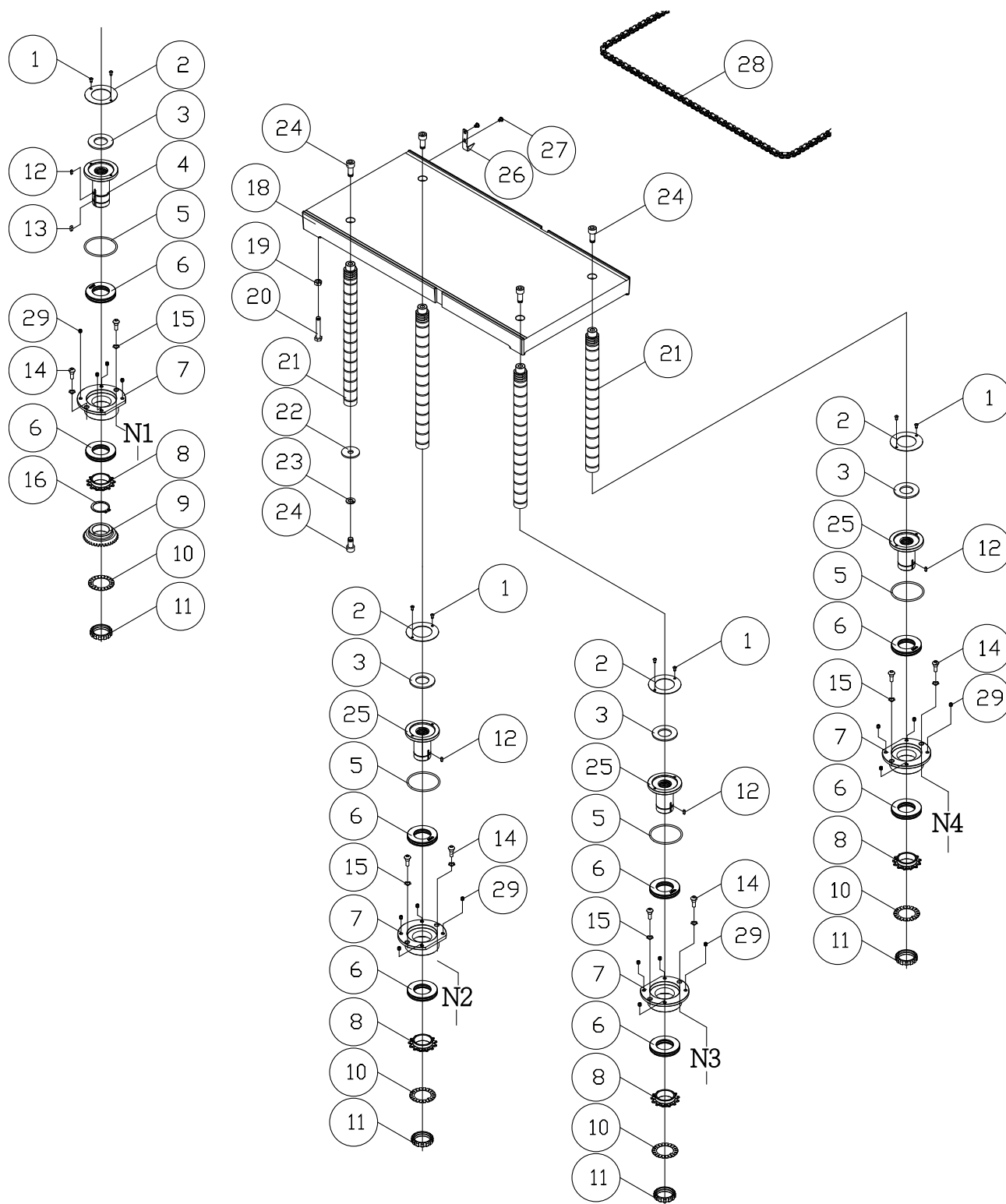
15.5 Cutterhead Assembly – Exploded View



15.6 Cutterhead Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JPJ12B-301	External Retaining Ring, E-Type	ETW-12	2
2	JPJ12B-302	Spacer		34
3	JPJ12B-303	Anti-Kickback Pawl		33
4	JPJ12B-304	Shaft		1
5	JPJ12B-SCHA	Straight Cutter Head Assembly		1
5.1	JPJ12B-SCHA-1	Straight Cutter Head		1
5.2	708821	Straight Knife (sold by set of 3)		3
5.3	TS-1513021	Socket Head Flat Screw	M5 x 0.8P x 12L	6
5.4	JPJ12B-SCHA-4	Gib Screw	M8 x 1.25P x 10L	21
5.5	JPJ12B-SCHA-5	Gib		3
6	JPJ12B-HCHA	Helical Cutter Head Assembly		1
6.1	JPJ12B-HCHA-1	Helical Cutter Head	4-Row	1
6.2	JWP208HH-111	Knife Screw	10-32 x 1/2"	44
6.3	1791212	Knife Insert (sold by set of 10, not shown)	15 x 15 x 2.5T	44
7	JPJ12B-307	Key	6 x 6 x 20	1
8	TS-1523011	Socket Head Set Screw	M6 x 1.0P x 6L	1
9	JPJ12B-309	Dust Hood		1
10	JPJ12B-310	Pivot Shaft		1
11	TS-2246102	Socket Head Button Screw	M6 x 1.0P x 10L	8
12	JPJ12B-312	Bracket		4
13	JPJ12B-313	Socket Head Cap Screw w/threadlocker	M6 x 1.0P x 12L	7
14	JPJ12B-314	Start Washer	M6	2
15	JPJ12B-315	Cam		1
16	TS-1540041	Hex Nut	M6 x 1.0P	4
17	TS-1482031	Hex Cap Screw	M6 x 1.0P x 16L	6
18	JPJ12B-318	Socket Head Button Screw w/threadlocker	M8 x 1.25P x 20L	1
19	TS-1550061	Flat Washer	8 x 30 x 3.0T	1
20	JPJ12B-320	Cutter Head Pulley		1
21	JPJ12B-321	Internal Retaining Ring, C-Type	RTW-47	2
22	JPJ12B-322	Tension Adjusting Screw		4
23	JPJ12B-323	Compression Spring		4
24	JPJ12B-324	Rear Cutter Head Bracket		1
25	TS-1504041	Socket Head Cap Screw	M8 x 1.25P x 20L	4
26	TS-2361081	Lock Washer	M8	4
27	TS-1550061	Flat Washer	8.5 x 16 x 2.0T	4
28	JPJ12B-328	Socket Head Cap Screw w/Lock & Flat Washers	M6 x 1.0P x 16L	4
29	JPJ12B-329	Foam Pad		1
30	JPJ12B-330	Chip Breaker		1
31	JPJ12B-331	Cutter Head Bracket Connection Shaft		1
32	JPJ12B-332	Plunger Shaft		1
33	JPJ12B-333	Compression Spring		1
34	JPJ12B-334	Front Cutter Head Bracket		1
35	JPJ12B-335	Plunger knob		1
36	JPJ12B-336	Socket Head Button Screw	M5 x 0.8P x 8L	2
37	JPJ12B-337	Safety Cover		1
38	JPJ12B-338	Chain	06B x 104P	1
39	TS-1550041	Flat Washer	6.2 x 22 x 3T	2
40	JPJ12B-340	Sprocket		2
41	JPJ12B-341	Retaining Bracket		4
42	JPJ12B-342	Infeed Roller		1
43	JPJ12B-343	Outfeed Roller		1
44	BB-6204VV	Ball Bearing	6204VV	2

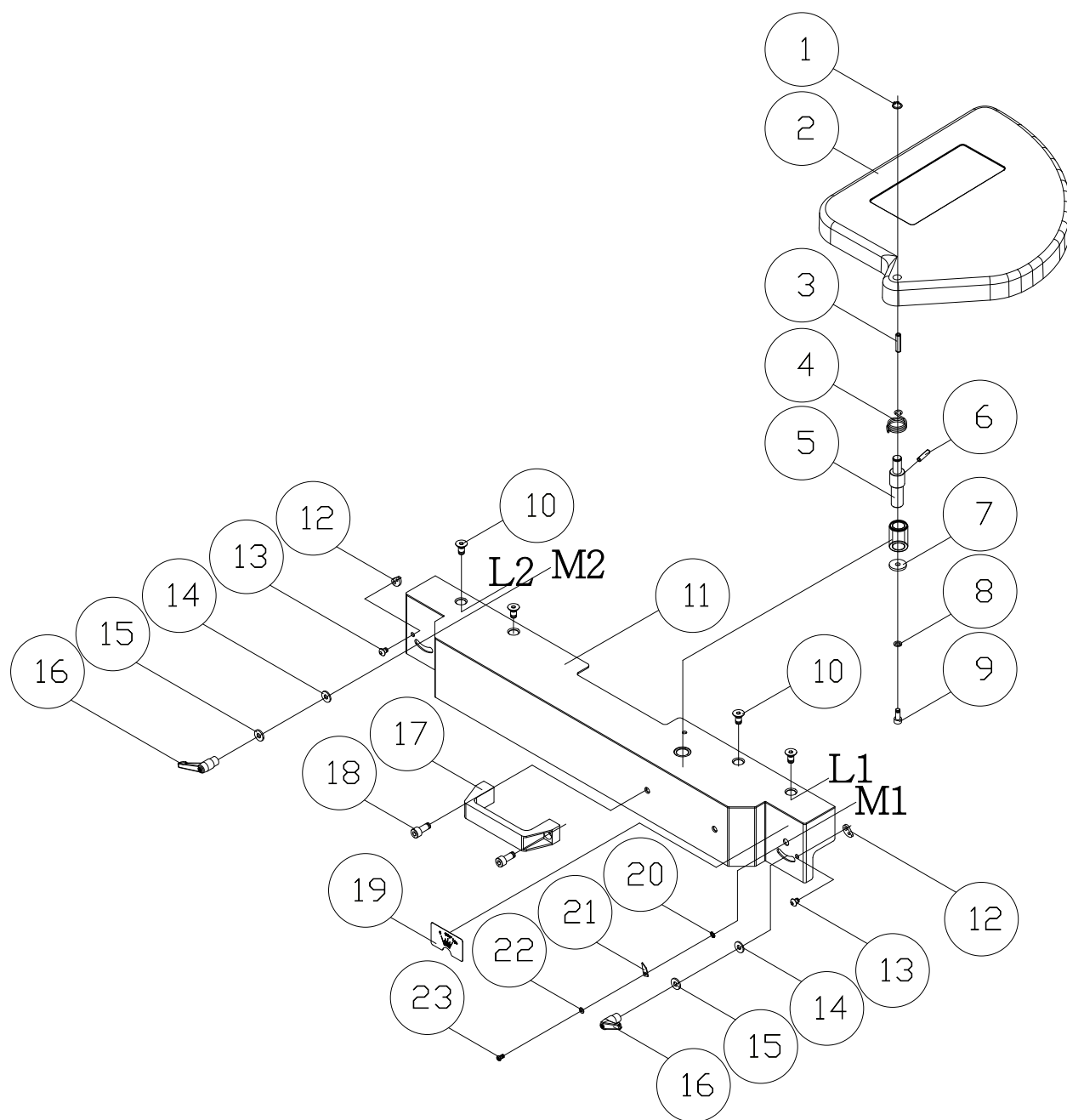
15.7 Planer Table Assembly – Exploded View



15.8 Planer Table Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JPJ12B-401	Socket Head Button Screw	M4 x 0.7P x 8L	8
2	JPJ12B-402	Cover		4
3	JPJ12B-403	Dust-Proof Felt Pad		4
4	JPJ12B-404	Nut for Drive Lead Screw		1
5	JPJ12B-405	O-Ring	G63	4
6	JPJ12B-406	Thrust Bearing		8
7	JPJ12B-407	Lead Screw Hub		4
8	JPJ12B-408	Sprocket		4
9	JPJ12B-409	Bevel Gear		1
10	JPJ12B-410	Star Washer		4
11	JPJ12B-411	Lock Nut		4
12	JPJ12B-412	Key	3 x 3 x 10	4
13	JPJ12B-413	Key	4 x 4 x 12	1
14	JPJ12B-414	Shoulder Screw		8
15	JPJ12B-415	Wave Washer	BWW-624	8
16	JPJ12B-416	External Retaining Ring, C-Type	STW-35	1
18	JPJ12B-418	Planer Table		1
19	TS-2311081	Hex Nut	M8 x 1.25P	1
20	TS-1490091	Hex Cap Screw	M8 x 1.25P x 50L	1
21	JPJ12B-421	Lead Screw		4
22	TS-1550071	Flat Washer	11 x 37 x 3.0T	1
23	TS-1551071	Lock Washer	M10	1
24	TS-1505021	Socket Head Cap Screw	M10 x 1.5P x 20L	5
25	JPJ12B-425	Nut for Driven Lead Screw		3
26	JPJ12B-426	Pointer		1
27	JPJ12B-427	Phillips Pan Head Machined Screw	M5 x 0.8P x 6L	2
28	JPJ12B-428	Chain	Z410 x 126P	1
29	TS-1523011	Socket Head Set Screw w/thrdlckr	M6 x 1.0P x 6L	16

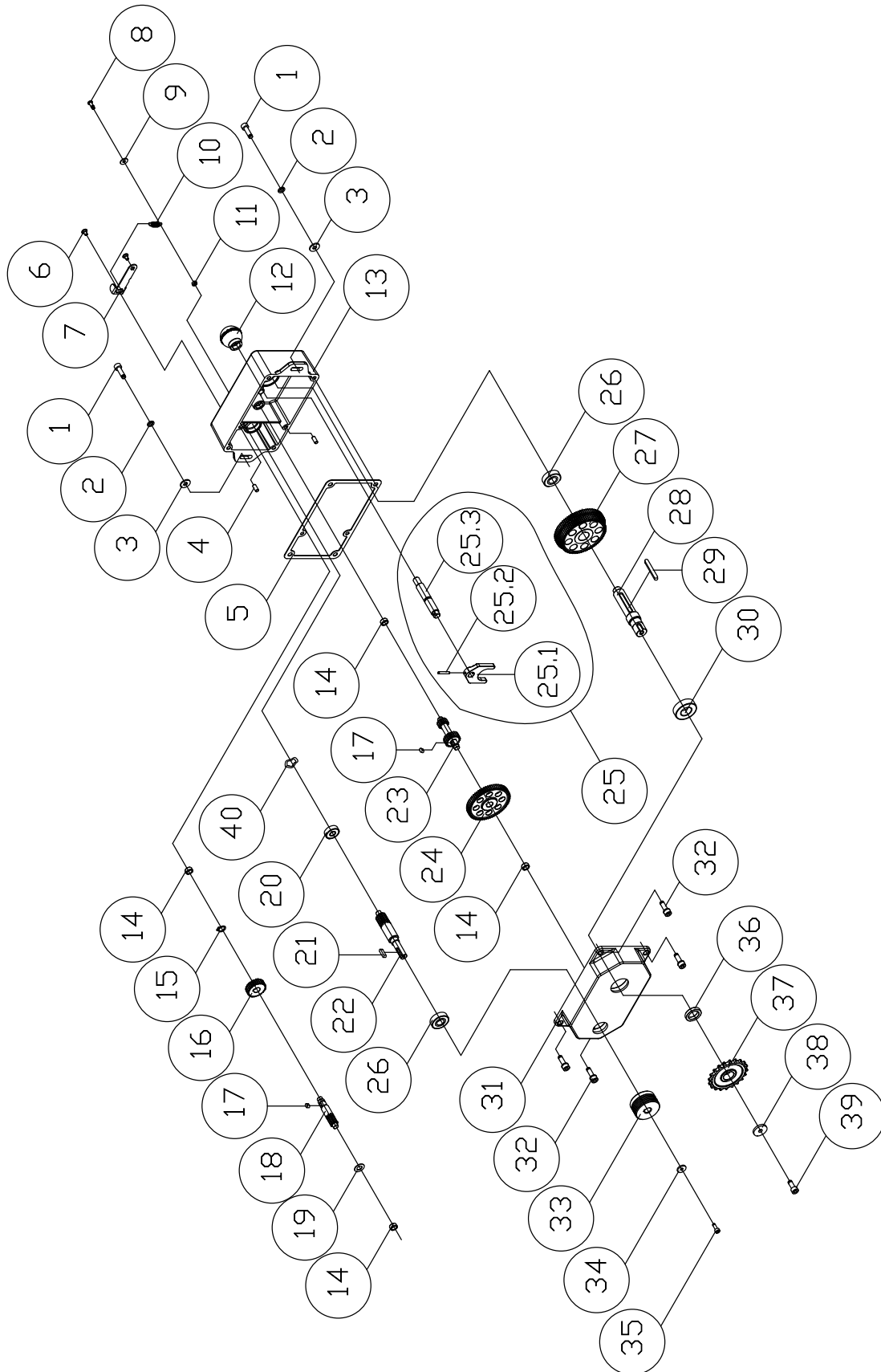
15.9 Blade Guard Assembly – Exploded View



15.10 Blade Guard Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JPJ12B-501	External Retaining Ring, C-Type	STW-11	1
2	JPJ12B-502	Blade Guard		1
3	JPJ12B-503	Roll Pin	Ø6 x 28	1
4	JPJ12B-504	Torsion Spring		1
5	JPJ12B-505	Pivot Shaft		1
6	JPJ12B-506	Roll Pin	Ø5 x 24	1
7	TS-1550041	Flat Washer	6.5 x 23 x 3.0T	1
8	TS-2361061	Lock Washer	M6	1
9	JPJ12B-509	Socket Head Cap Screw	M6 x 1.0P x 15L	1
10	TS-1515011	Socket Head Flat Screw	M8 x 1.25P x 16L	4
11	JPJ12B-511	Front Cover		1
12	JPJ12B-512	Stop Block		2
13	TS-2246102	Socket Head Button Screw	M6 x 1.0P x 10L	2
14	TS-1550041	Flat Washer	6.4 x 16 x 1.6T	2
15	TS-1550041	Flat Washer	6.7 x 16 x 2.0T	2
16	JPJ12B-516	Handle		2
17	JPJ12B-517	Handle		1
18	TS-1504041	Socket Head Cap Screw	M8 x 1.25P x 20L	2
19	JPJ12B-519	Scale		1
20	JPJ12B-520	Star Washer	M4	1
21	JPJ12B-521	Pointer		1
22	TS-1550021	Flat Washer	4.3 x 8 x 0.8T	1
23	TS-2284082	Phillips Pan Head Machined Screw	M4 x 0.7P x 8L	1

15.11 Gearbox Assembly – Exploded View

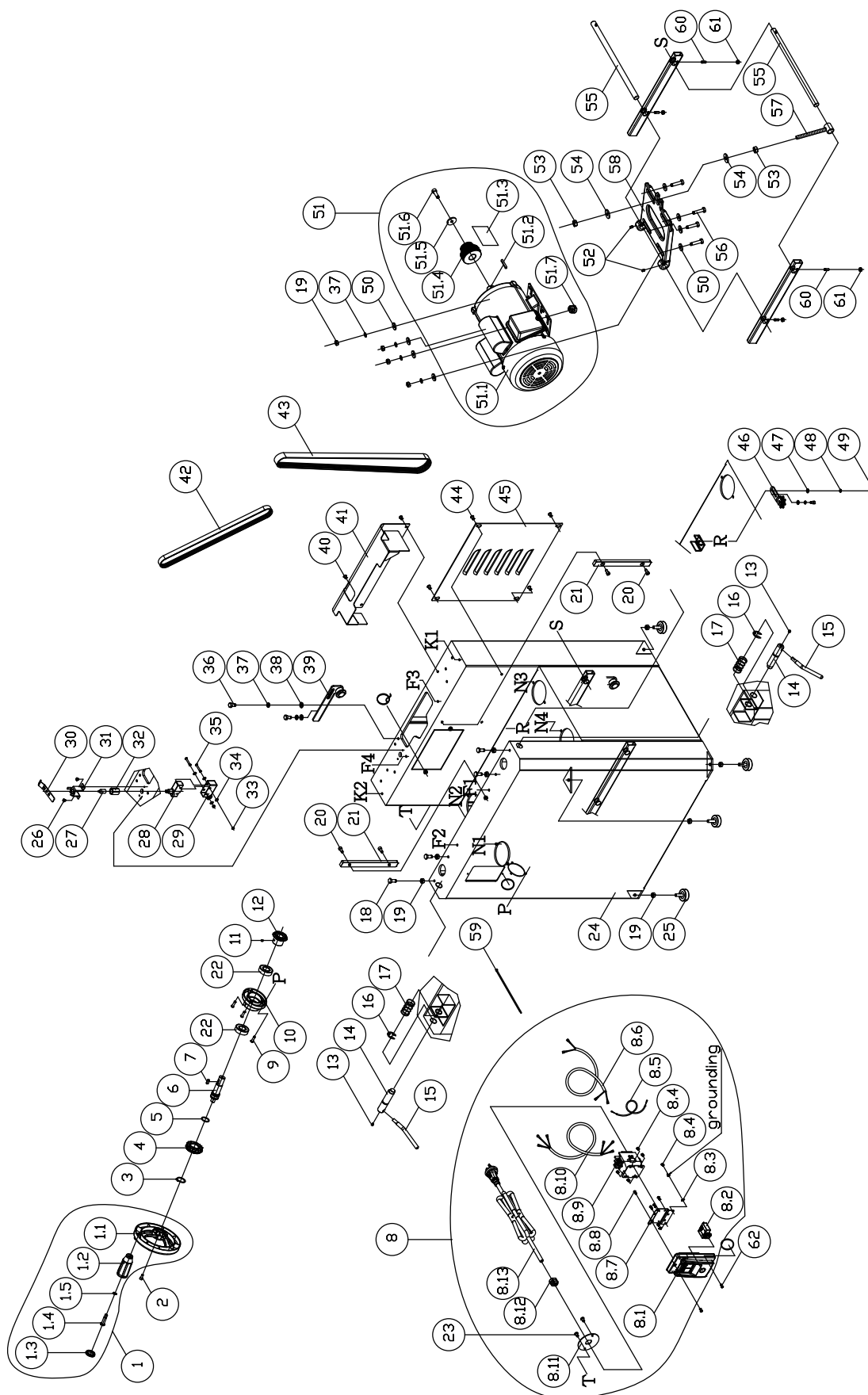


15.12 Gearbox Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
	JPJ12B-GBA	Gearbox Assembly		1
1	TS-1503051	Socket Head Cap Screw	M6 x 1.0P x 20L	2
2	TS-2361061	Lock Washer	M6	2
3	TS-1550041	Flat Washer	6.4 x 16 x 1.6T	2
4	JPJ12B-604	Positioning Pin		2
5	JPJ12B-605	Gasket		1
6	JPJ12B-606	Shoulder Screw		2
7	JPJ12B-607	Clutch Stop Bracket		1
8	TS-1532042	Phillips Pan Head Machined Screw	M4 x 0.7P x 12L	1
9	TS-1550021	Flat Washer	4.3 x 12 x 1.0T	1
10	JPJ12B-610	Tension Spring		1
11	TS-1540021	Hex Nut	M4 x 0.7P	1
12	6284865	Knob		1
13	JPJ12B-613	Gearbox		1
14	JPJ12B-614	Bushing		4
15	JPJ12B-615	External Retaining Ring, C-Type	STW-10	1
16	JPJ12B-616	Gear		1
17	JPJ12B-617	Key	4 x 4 x 7	2
	JPJ12B-6GSA	Gear Shaft Assembly (include #18, 22)		1
18	JPJ12B-618A	Gear Shaft	Spiral Type	1
19	TS-1550061	Flat Washer	8.5 x 16 x 0.8T	1
20	BB-608ZZ	Ball Bearing	608ZZ	2
21	JPJ12B-621	Key	4 x 4 x 16	1
22	JPJ12B-622A	Gear Shaft	Spiral Type	1
23	JPJ12B-623	Gear Assembly		1
24	JPJ12B-624	Gear		1
25	JPJ12B-625	Clutch Assembly		1
25.1	JPJ12B-626	Clutch		1
25.2	JPJ12B-627	Roll Pin	3 x 20	1
25.3	JPJ12B-628	Shaft		1
26	BB-6001ZZ	Ball Bearing	6001ZZ	2
27	JPJ12B-630	Gear Assembly		1
28	JPJ12B-631	Shaft		1
29	JPJ12B-632	Key	5 x 5 x 40	1
30	BB-6003ZZ	Ball Bearing	6003ZZ	1
31	JPJ12B-634	Gearbox Cover		1
32	JPJ12B-635	Socket Head Cap Screw w/Lock Washer	M6 x 1.0P x 20L	4
33	JPJ12B-636	Gearbox Pulley		1
34	TS-1550021	Flat Washer	4.3 x 14 x 2.0T	1
35	JPJ12B-638	Socket Head Cap Screw w/threadlocker	M4 x 0.7P x 12L	1
36	JPJ12B-639	Bushing		1
37	JPJ12B-640	Sprocket		1
38	TS-1550041	Flat Washer	6.2 x 22 x 3T	1
39	JPJ12B-642	Socket Head Cap Screw w/threadlocker	M4 x 0.7P x 8L	1
40	JPJ12B-643	Wave Washer	BWW-608	1

* for models with serial no. 22060485 and higher.

15.13 Cabinet Assembly – Exploded View

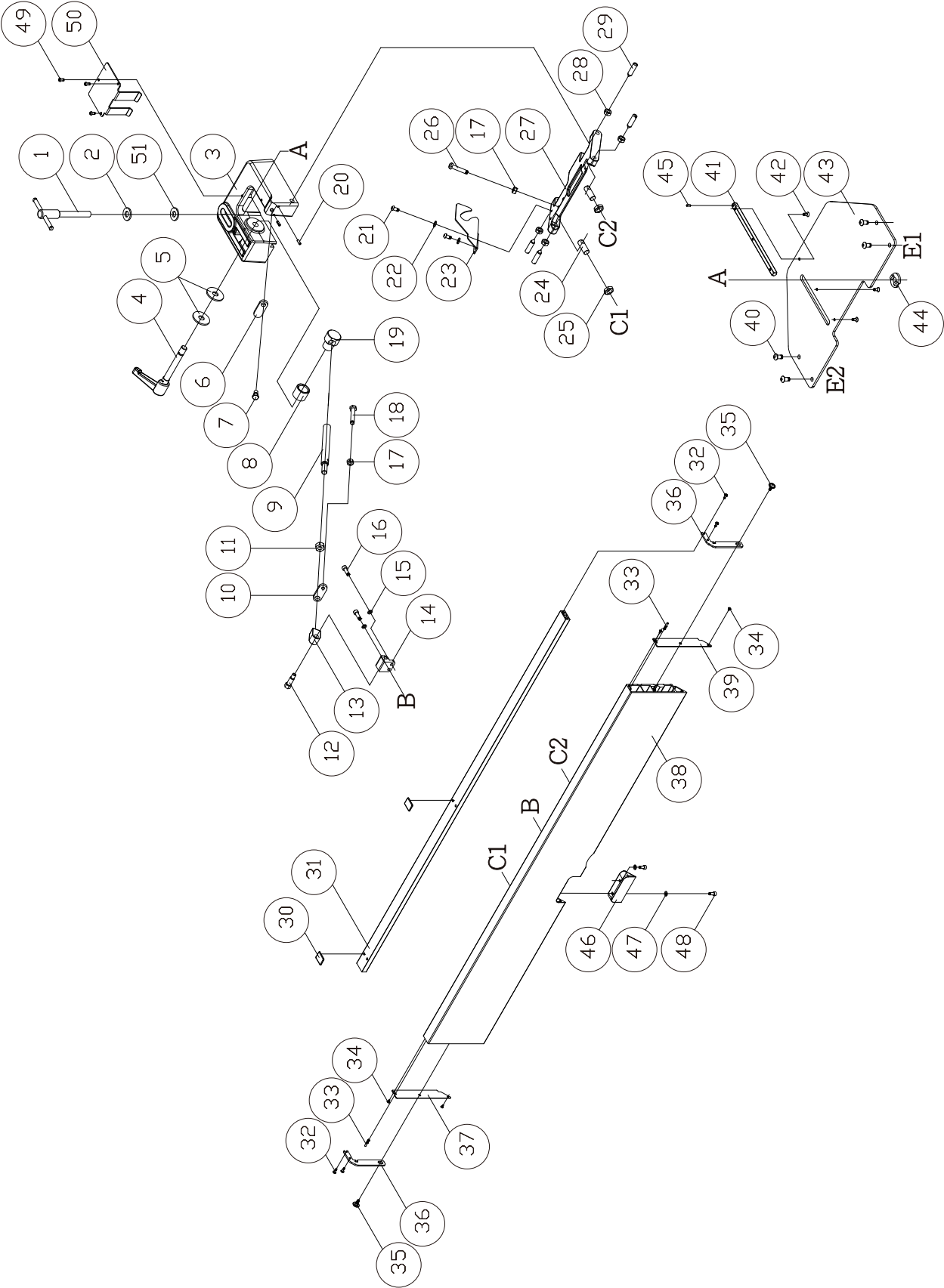


15.14 Cabinet Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JPJ12B-701	Hand Wheel Assembly		1
1.1	JPJ12B-701-1	Hand Wheel		1
1.2	JPJ12B-701-2	Handle		1
1.3	JPJ12B-701-3	Cover		1
1.4	JPJ12B-701-4	Shaft		1
1.5	JPJ12B-701-5	Wave Washer	WW-8	1
2	TS-1503041	Socket Head Cap Screw w/thrdlckr	M5 x 0.8P x 16L	1
3	JPJ12B-703	External Retaining Ring, C-Type	STW-25	1
4	JPJ12B-704	Scale Ring		1
5	JPJ12B-705	O-Ring	P21	1
6	JPJ12B-706	Shaft		1
7	JPJ12B-707	Key	5 x 5 x 16	1
8	JPJ12B-722	On/Off Switch Assembly	230V	1
8.1	JPJ12B-722-1	Control Panel Kit		1
8.2	JPJ12B-722-2	Overload Protector	230V, 18A	1
8.3	JPJ12B-722-3	Star Washer	M4	2
8.4	JPJ12B-722-4	Phillips Pan Head Machined Screw	M4 x 0.7P x 6L	6
8.5	JPJ12B-722-5	Connection Cable	AWM 14AWG x 1C x 200mm	1
8.6	JPJ12B-722-6	Connection Cable	SJT 18AWG x 2C x 1900mm	1
8.7	JPJ12B-722-7	Contact Mount Plate		1
8.8	JPJ12B-722-8	Self-Tapping Machined Screw	M4 x 1.41P x 10L	4
8.9	JPJ12B-722-9	Contact		1
8.10	JPJ12B-722-10	Motor Cable	SJT 14AWG x 3C x 1700mm	1
8.11	JPJ12B-722-11	Plate		1
8.12	JPJ12B-722-12	Strain Relief	SB8R-3	1
8.13	JPJ12B-722-13	Power Cable	SJT 14AWG x 3C x 3100mm	1
9	TS-2245202	Socket Head Button Screw	M5 x 0.8P x 20L	3
10	JPJ12B-710	Hub		1
11	JPJ12B-711	Socket Head Set Screw w/threadlocker	M5 x 0.8P x 5L	1
12	JPJ12B-712	Bevel Gear		1
13	TS-1523011	Socket Head Set Screw	M6 x 1.0P x 6L	2
14	JPJ12B-714	Shaft		2
15	JPJ12B-715	Lock Handle		2
16	JPJ12B-716	External Retaining Ring, E-Type	ETW-15	6
17	JPJ12B-717	Spring		2
18	JPJ12B-718	Special Screw		4
19	TS-2311081	Hex Nut	M8 x 1.25P	12
20	TS-1482021	Socket Head Cap Screw	M6 x 1.0P x 12L	4
21	JPJ12B-721	Guide Bar		2
22	BB-6004ZZ	Ball Bearing	6004ZZ	2
23	TS-1534032	Phillips Pan Head Machined Screw	M6 x 1.0P x 10L	2
24	JPJ12B-724	Cabinet		1
25	JPJ12B-725	Leveling Foot		4
26	JPJ12B-726	Socket Head Button Screw	M5 x 0.8P x 6L	2
27	JPJ12B-727	Actuator Shaft		1
28	JPJ12B-728	Limit Switch	MJ2-1307	1
29	JPJ12B-729	Limit Switch Cover		1
30	JPJ12B-730	Actuator Plate		1
31	JPJ12B-731	Supporting Bracket		1
32	JPJ12B-732	Actuator Shaft Housing		1
33	TS-1540021	Hex Nut	M4 x 0.7P	2
34	TS-1550021	Flat Washer	4.3 x 10 x 1.0T	2
35	TS-2284302	Phillips Pan Head Machined Screw	M4 x 0.7P x 30L	2
36	TS-1490021	Hex Cap Screw	M8 x 1.25P x 16L	2
37	TS-2361081	Lock Washer	M8	6

Index No.	Part No.	Description	Size	Qty
38	TS-1550061	Flat Washer	8.5 x 16 x 2.0T	2
39	JPJ12B-739	Chain Tensioner Assembly		1
40	TS-2246082	Socket Head Button Screw	M6 x 1.0P x 8L	2
41	JPJ12B-741	Safety Guard		1
42	JPJ12B-742	Poly-V Belt for Motor/Cutter Head	320J-6	1
43	JPJ12B-743	Poly-V Belt for Motor/Gearbox	480J-9	1
44	TS-2246102	Socket Head Button Screw	M6 x 1.0P x 10L	4
45	JPJ12B-745	Cabinet Door		1
46	JPJ12B-746	Chain Tensioner Assembly		1
47	TS-1550031	Flat Washer	5.3 x 12 x 1.0T	2
48	TS-2361051	Lock Washer	M5	2
49	TS-1502021	Socket Head Cap Screw	M5 x 0.8P x 10L	2
50	TS-1550061	Flat Washer	8.2 x 22 x 3.0T	8
51	JPJ12B-751	Motor Assembly		1
51.1	JPJ12B-751-1	Motor w/ Motor Label	3HP / 230V / 60Hz / 1PH	1
51.2	JPJ12B-751-2	Key	5 x 5 x 35	1
51.3	JPJ12B-751-3	Motor Label		1
51.4	JPJ12B-751-4	Motor Pulley		1
51.5	TS-1550061	Flat Washer	8 x 30 x 3.0T	1
51.6	JPJ12B-751-6	Socket Head Cap Screw w/threadlocker	M8 x 1.25P x 25L	1
51.7	JPJ12B-751-7	Strain Relief	SB8R-1	1
52	JPJ12B-752	Socket Head Set Screw w/threadlocker	M6 x 1.0P x 8L	2
53	TS-2311101	Hex Nut	M10 x 1.25P	2
54	TS-1550071	Flat Washer	10.5 x 28 x 3.0T	2
55	JPJ12B-755	Motor Pivot Shaft		2
56	TS-1490061	Hex Cap Screw	M8 x 1.25P x 35L	4
57	JPJ12B-757	Tension Adjustment Screw		1
58	JPJ12B-758	Motor Plate		1
59	JPJ12B-759	Cable Tie		4
60	JPJ12B-760	Socket Head Set Screw w/threadlocker	M6 x 1.0P x 16L	4
61	TS-2311061	Hex Nut	M6 x 1.0P	4
62	TS-1532032	Phillips Pan Head Machined Screw	M4 x 0.7P x 10L	4

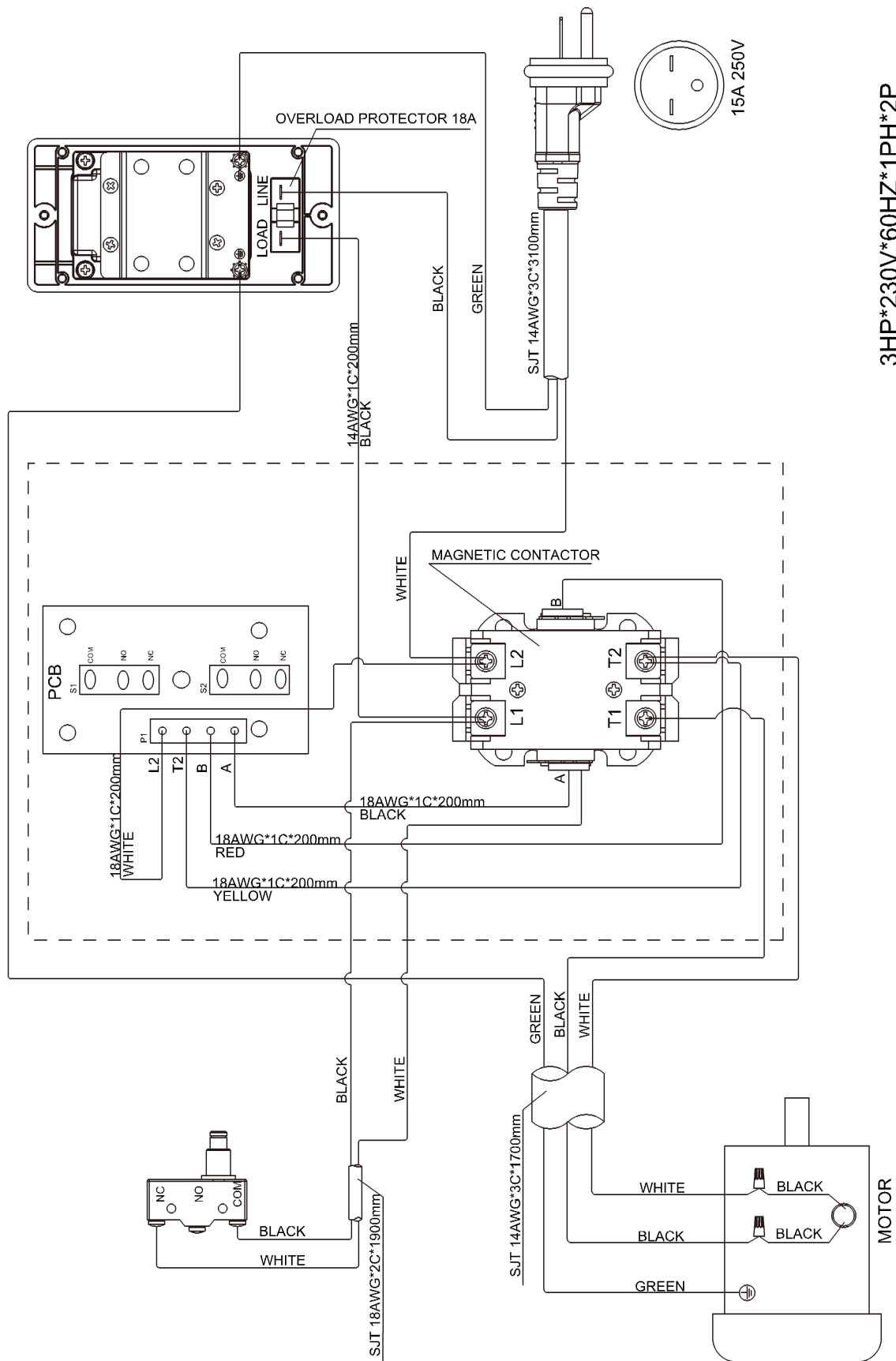
15.15 Fence Assembly – Exploded View



15.16 Fence Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JPJ12B-801	Fence Lock Handle		1
2	JPJ12B-802	Flat Washer	13 x 28 x 3.0T	1
3	JPJ12B-803	Fence Moving Bracket		1
4	JPJ12B-804	Fence Angle Lock Handle	1/2" - 12	1
5	JPJ12B-805	Flat Washer	13.5 x 40 x 3.0T	2
6	JPJ12B-806	Stop Plate		1
7	JPJ12B-807	Shoulder Screw		1
8	JPJ12B-808	Spacer		1
9	JPJ12B-809	Fence Angling Rod		1
10	JPJ12B-810	Plate		1
11	TS-0561041	Hex Nut	7/16" - 14	1
12	JPJ12B-812	Shoulder Screw		1
13	JPJ12B-813	Fixed Hinge		1
14	JPJ12B-814	Rotatable Hinge		1
15	TS-1551041	Lock Washer	M6	2
16	TS-0207041	Socket Head Cap Screw	1/4" - 20 x 3/4" L	2
17	TS-0561021	Hex Nut	5/16" - 18	2
18	TS-0051091	Hex Cap Screw	5/16" - 18 x 2" L	1
19	JPJ12B-819	Rod Hub		1
20	JPJ12B-820	Roll Pin	4 x 12	2
21	TS-081F032	Phillips Pan Head Machined Screw	1/4" - 20 x 1/2" L	2
22	TS-1550041	Flat Washer	6.3 x 13 x 2T	2
23	JPJ12B-823	Fixed Bracket		1
24	JPJ12B-824	Bracket		2
25	TS-0561052	Hex Nut	1/2" - 20 UNF	2
26	JPJ12B-826	Stop Screw	5/16" - 18 x 1-1/2" L	1
27	JPJ12B-827	Connection Bracket		1
28	TS-0561082	Hex Nut	3/8" - 16	4
29	JPJ12B-829	Pivot Screw		4
30	JPJ12B-830	Scratch Free Pad		2
31	JPJ12B-831	Auxiliary Fence		1
32	JPJ12B-832	Self-Tapping Machined Screw	M4 x 1.59P x 12L	4
33	JPJ12B-833	Stop Pin		2
34	JPJ12B-834	Self-Tapping Machined Screw	M3 x 1.06P x 8L	4
35	JPJ12B-835	Shoulder Screw		2
36	JPJ12B-836	Rotary Plate		2
37	JPJ12B-837	Left Fence Side Cover		1
38	JPJ12B-838	Fence		1
39	JPJ12B-839	Right Fence Side Cover		1
40	TS-2248162	Socket Head Button Screw	M8 x 1.25P x 16L	4
41	JPJ12B-841	Guide Key		1
42	TS-1534041	Phillips Flat Head Machined Screw	M5 x 0.8P x 10L	3
43	JPJ12B-843	Fence Fixed Bracket		1
44	JPJ12B-844	Lock Nut		1
45	JPJ12B-845	Roll Pin	Ø3 x 10	1
46	PJ882-144	Insert		1
47	TS-1550031	Flat Washer	5.2 x 10 x 1.0T	2
48	TS-1481031	Socket Head Cap Screw	M5 x 0.8P x 12L	2
49	JPJ12B-849	Phillips Pan Head Machined Screw	3/16" - 24 x 3/8" L	2
50	JPJ12B-850	Safety Guard		1
51	JPJ12B-851	Nylon Washer	14.5 x 25 x 1.5T	1

16.0 Electrical Connections for JPJ-12B, JPJ-12BHH



3HP*230V*60HZ*1PH*2P

17.0 Optional Accessories

These items are purchased separately.

Stock No.	Description
708821	Replacement Straight Knives for JPJ-12B Planer-Jointer (set of 3)
1791212	Replacement Knife Inserts for JPJ-12BHH Planer-Jointer (set of 10)
709209	Roller Stand, 12.5" wide
708118	JMB-UMB Universal Mobile Base



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