

# Operating Instructions and Parts Manual 13-inch Portable Thickness Planer Model JWP-13BT



JET 427 New Sanford Road LaVergne, Tennessee 37086 Ph.: 800-274-6848 www.jettools.com



# 1.0 IMPORTANT SAFETY INSTRUCTIONS

WARNING - To reduce risk of injury:

#### 1.1 General machine safety rules

- Read and understand the entire owner's manual before attempting assembly or operation.
- 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.
- Replace the warning labels if they become obscured or removed.
- 4. This planer 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 planer, do not use until proper training and knowledge have been obtained.
- 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 ANSI Z87.1 approved safety glasses or face shield while using this machine. (Everyday eyeglasses only have impact resistant lenses; they are *not* safety glasses.)
- Before operating this machine, 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.
- Make certain the switch is in the OFF position before connecting the machine to the power supply.
- 10. Make certain the machine is properly grounded.
- 11. Make all machine adjustments or maintenance with the machine unplugged from the power source.
- 12. 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.

- 13. 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 after completion of maintenance.
- 14. 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.
- 15. Provide for adequate space surrounding work area and non-glare, overhead lighting.
- 16. Keep the floor around the machine clean and free of scrap material, oil and grease.
- 17. Keep visitors a safe distance from the work area. Keep children away.
- 18. Make your workshop child proof with padlocks, master switches or by removing starter keys.
- Give your work undivided attention. Looking around, carrying on a conversation and "horseplay" are careless acts that can result in serious injury.
- 20. Maintain a balanced stance at all times so that you do not fall into the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
- 21. 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.
- 22. Use recommended accessories; improper accessories may be hazardous.
- Maintain tools with care. Keep blades sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
- 24. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris do not use bare hands.
- 25. Do not stand on the machine. Serious injury could occur if the machine tips over.
- 26. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
- 27. Remove loose items and unnecessary work pieces from the area before starting the machine.

28. Don't use in dangerous environment. Don't use power tools in damp or wet location, or expose them to rain. Keep work area well lighted.

#### 1.2 Planer specific safety rules

- 29. Do not force work through the machine; allow the planer to apply the proper feed rate.
- Never stand directly in line with either infeed or outfeed. Always stand to one side, in case kickback occurs.
- 31. Make sure workpiece is free of nails, screws, stones and other foreign objects which could damage the knives and/or present a safety hazard. Do not plane boards with loose knots, or that have severe warpage.
- 32. Make sure knives are securely installed in cutterhead. Loose knives can be propelled from the tool at high speed causing serious injury.
- 33. Do not start the machine while cutterhead is contacting the workpiece.
- 34. Allow cutterhead to reach full speed before feeding the workpiece.
- 35. Never reach into the machine when the cutterhead is rotating.
- 36. Use caution when feeding boards. When a board is engaged by the feed roller, it will be forced down onto the infeed table, causing a pinching hazard. Keep hands clear.
- 37. Do not attempt to plane excessively warped boards.
- 38. Support very long workpieces with an assistant or support stand.
- 39. Do not attempt to feed boards from the outfeed side
- 40. Do not plane boards shorter than 9-1/2 inches in length.

- 41. Do not exceed 1/8-inch depth of cut per pass.
- Keep knives sharp for best results and safer operation. Rotate for a fresh edge or replace as needed.
- 43. Plane in the direction of the board's grain. Planing against the grain can result in tear-out and splintering of the wood, and increase risk of kickback. Do not plane end grain.
- 44. Check feed rollers before use for chips and sawdust lodged between any of the components. If the rollers are not seated securely, they will not hold stock firmly against the bed, and the chance of kickback increases.

MARNING: This product can expose you to chemicals including lead and cadmium which are known to the State of California to cause cancer and birth defects or other reproductive harm, and phthalates which are known to the State of California to cause 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, or possibly even fatal, injury.

# 2.0 Table of contents

Section	Page
1.0 IMPORTANT SAFETY INSTRUCTIONS	
1.1 General machine safety rules	
1.2 Planer specific safety rules	3
2.0 Table of contents	4
3.0 About this manual	5
4.0 Features of JWP-13BT Planer	5
5.0 Specifications	6
5.1 Mounting layout for JWP-13BT	
6.0 Setup and assembly	
6.1 Shipping contents	
6.2 Unpacking	
6.3 Installing	
6.4 Dust collection	
6.5 Knife inspection	
6.6 Wrench storage	
7.0 Electrical connections	
7.1 GROUNDING INSTRUCTIONS	
7.2 Extension cords	
8.0 Adjustments	
8.1 Head adjustment	
8.2 Cutting depth gauge	
8.3 Thickness gauge	
8.4 Table alignment	
8.5 Knife inspection/replacement	
9.0 Operation	
9.1 General recommendations	
9.2 Basic operating procedure	
9.3 Start/stop	
9.4 Circuit breaker reset	
9.5 Feed rate	
9.6 Planing warped wood	
9.7 Grain direction	
9.8 Knots and trouble spots	
9.9 Snipe	
9.10 Ridges	
9.11 Planing rough lumber	
9.12 Planing glued-up boards	
10.0 User-maintenance	
10.1 General cleaning	
10.2 Feed roller inspection	
10.3 Commutator brush inspection	
10.4 Lubrication	
10.5 Thickness scale calibration	
10.6 Belt replacement	
10.7 Thickness gauge adjustment	
10.8 Additional servicing	
11.0 Troubleshooting JWP-13BT Planer	
12.0 Replacement Parts	
12.1.1 Base Assembly – Exploded View	
12.1.2 Base Assembly – Parts List	
12.2.1 Head Assembly – Exploded View	21 22
12.2.2 Head Assembly – Exploded View	
12.3.1 Motor Assembly – Exploded View	
12.3.2 Motor Assembly – Exploded View	
12.4.1 Cutterhead Assembly – Exploded View	
12.4.2 Cutterhead Assembly – Parts List	
13.0 Electrical Connections for JWP-13BT	
14.0 Warranty and service	
	<b>_</b> 0

#### 3.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET Model JWP-13BT Portable Planer with segmented knives. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your tool has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions set forth in this document.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

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

Register your product with the provided mail-in card, or register online:

http://www.jettools.com/us/en/service-and-support/warranty/registration/

## 4.0 Features of JWP-13BT Planer

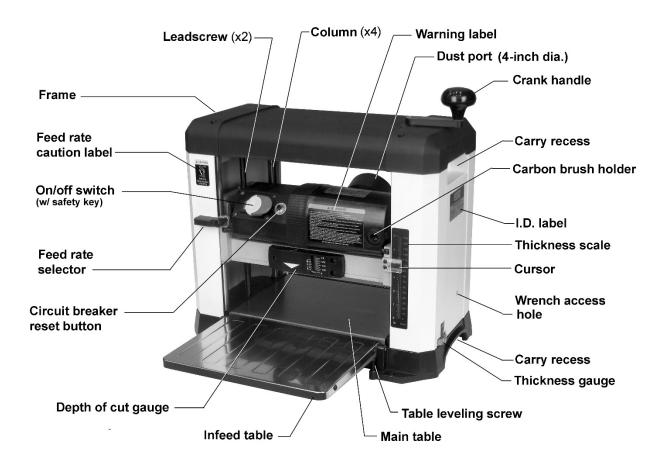


Figure 4-1

# 5.0 **Specifications**

Table 1

Model number	JWP-13BT	
Stock number	722130	
Motor and electricals	722100	
Motor type	DC, Series-wound	
Horsepower	2 HP	
Motor phase	Single	
Motor voltage	120 V	
Cycle	60 Hz	
Listed FLA (full load amps)	15 A	
Motor speed	23,000 RPM	
Starting current	13A	
Running current (no load)	7.1A	
On/off switch	Toggle switch with removable safety key	
Power cord	14AWG x 3C, 6-1/2 ft.	
Power plug installed	5-15P (CSA/UL)	
Recommended circuit and fuse/breaker size <sup>1</sup>	20 A	
Sound rating <sup>2</sup>	97dB at 20 in. (508mm) from motor	
Capacities	or ab at 20 m. (occinim) nom motor	
Maximum cutting width	13 in. (330 mm)	
Maximum workpiece thickness	6 in. (153 mm)	
Maximum cutting depth	1/8 in. (3.2 mm)	
Maximum full-width depth of cut	1/16 in. (1.6 mm)	
Minimum unbutted workpiece length	9-1/2 in. (240 mm)	
Head movement per one revolution of handle	9-1/2 iii. (240 iiiii) 1/16 in. (1.6 mm)	
Feed rate	18 and 26 FPM	
Thickness gauge stops	1/8, 1/4, 3/8, 1/2, 3/4, 1 in.	
Cutterhead and feed rollers	170, 171, 070, 172, 071, 1 111.	
Number of cutterhead rows	6	
Knife style	Two-edged, HSS inserts	
Knife inserts, number of	26	
Knife inserts, size (LxW)	1-3/32 x 19/32 in. (28 x 15 mm)	
Cutterhead speed, no load	10,000 RPM	
Cutterhead diameter	2 in. (46 mm)	
Dimensions	(10 mm)	
Dust chute diameter	4 in. (102 mm)	
Overall dimensions, assembled (LxWxH)	28 x 22 x 19 in. (711 x 558 x 482 mm)	
Main table size (LxW)	9-3/4 x 13 in. (248 x 330 mm)	
Feed table size (LxW)	9-1/4 x 12-1/2 in. (227 x 318 mm)	
Shipping box dimensions (LxWxH)	23 x 15-3/8 x 20-1/2 in. (585 x 390 x 520 mm)	
Dust collection	20 % 10 0/0 % 20 112 1111 (000 % 000 % 020 11111)	
Dust port outside diameter	4 in. (102 mm)	
Recommended minimum dust extraction	500 CFM	
Main materials	255 51 111	
Main table and infeed/outfeed tables	Steel	
Frame	Plastic	
Feed rollers	Rubber	
Weights	1 (4,000)	
Net weight	34 kg (74.8 lbs.)	
Shipping weight	37.5 kg (81.7 lbs.)	
יייררייים ייכישייי		

L = length, W = width, H = height

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

#### 5.1 Mounting layout for JWP-13BT

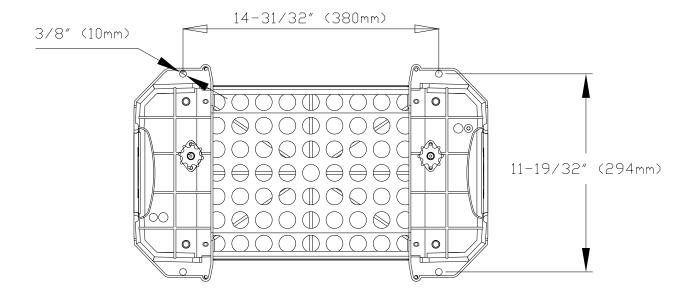


Figure 5-1

<sup>&</sup>lt;sup>1</sup> subject to local and national electrical codes.

<sup>&</sup>lt;sup>2</sup> The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

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

## 6.0 Setup and assembly

#### 6.1 Shipping contents

- 1 Planer
- 1 Crank handle
- 1 Socket head cap screw M5x25
- 1 Dust hood
- 1 T-handle hex wrench, 3mm
- 1 Operating Instructions & Parts Manual
- 1 Product registration card

#### Tools required for assembly:

4mm hex wrench 3mm T-handle hex wrench (provided)

Additional tools may be needed for adjustments or maintenance procedures.

#### 6.2 Unpacking

- Remove all contents from shipping carton. Do not discard carton or packing material until planer is assembled and running satisfactorily.
- Inspect contents for shipping damage or part shortages. If either is discovered, report it immediately to your distributor.

#### 6.3 Installing

Recesses are included at both top and bottom for carrying the planer. See Figure 4-1.

The planer should be secured to a stable and level workbench or table using fasteners (not provided) through the four holes in the base. See Figure 5-1 for hole layout. This is especially important when processing large boards or taking deeper cuts, to prevent the machine from migrating during the procedure. An alternative method is to fasten it to a thick plywood piece and then clamp the plywood to the bench or table; this ensures stability while still allowing portability.

Leave sufficient space around the planer for complete processing of boards through infeed and outfeed sides.

Install the crank handle (see Figure 4-1), matching the flats on handle base and leadscrew. Secure the handle with the provided socket head cap screw, using a 4mm hex wrench.

#### 6.4 Dust collection

It is strongly recommended that a dust collection system be used with this planer, with a minimum capacity of 500 CFM.

Install the dust hood using the four screws already installed at back of machine, and the provided T-wrench. The port should angle upward, away from outfeed table. See Figure 6-1. Connect a 4-inch diameter dust hose (not provided) to the port and secure with a hose clamp. If using a 2-1/2-inch dust hose, a 4-inch to 2-1/2-inch adaptor is required.

Note: Dryer vent hose is not acceptable for the collection of wood dust and chips.

**IMPORTANT:** If a dust collection system is not used, do not install the dust hood. Use of the dust hood without dust collection will hasten the gathering of chips and dust around the cutterhead area.



Figure 6-1: dust hood

#### 6.5 Knife inspection

The knife inserts in the cutterhead are secured in position by the manufacturer. However, the operator should confirm the tightness of each knife insert before operating the planer. Refer to *sect. 8.5* for accessing the cutterhead.

AWARNING Check tightness of all knife inserts in cutterhead before operating planer. Loose knife inserts can be ejected from the cutterhead at high speed, causing serious injury.

#### 6.6 Wrench storage

The provided T-handle wrench may be stored atop the deflector cover behind the motor, by snapping it into the prongs. The remaining two prongs can hold a 4mm hex wrench (not provided). See Figure 6-2.

**IMPORTANT:** After extended use, if the prongs no longer hold the wrench securely, refrain from using them, as a loose wrench could vibrate off, creating a safety hazard.

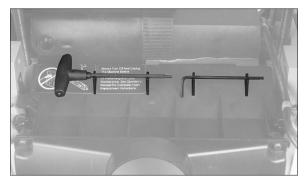


Figure 6-2: wrench storage

#### 7.0 Electrical connections

The JWP-13BT is wired for 115-volt power. The planer comes with a plug designed for use on a circuit with a *grounded outlet* that looks like the one pictured in **A**, Figure 7-1.

Keep in mind that a circuit being used by other machines, tools, lights, heaters, etc. at the same time will add to the electrical load. A dedicated circuit to the machine will offer best results.

Before connecting to power source, be sure switch is in *off* position.

It is recommended that the planer be connected to a dedicated 20 amp circuit with circuit breaker or fuse. If connected to a circuit protected by fuse, use time delay fuse marked "D". Local codes take precedence over recommendations.

#### 7.1 GROUNDING INSTRUCTIONS

#### 1. All Grounded. Cord-connected Tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

AWARNING

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly

# grounded. Failure to comply may cause serious or fatal injury.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating **less than 150** volts:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in **A**, Figure 7-1. An adapter, shown in **B**, may be used to connect this plug to a 2-pole receptacle as shown in **B** if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code, C22.1.

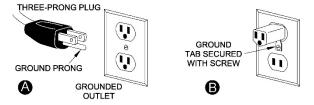


Figure 7-1

#### 7.2 Extension cords

The use of extension cords is discouraged; try to position equipment within reach of the power source. If an extension cord becomes necessary, be sure it is heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

Table 2 shows recommended size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Ampe Rating		Volts	Total length of cord in feet			
More	Not	120	25	50	100	150
Than	Than More Than		AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recom	mended

Table 2: Extension Cord Recommendations

## 8.0 Adjustments

#### 8.1 Head adjustment

The head contains the motor, cutterhead and chip deflector. Depth of cut is controlled by raising or lowering the head.

Rotate crank handle (see Figure 4-1) clockwise to raise head, counterclockwise to lower. One complete rotation of handle equals 1/16" of height change.

The adjoining cursor and thickness scale measures distance from cutterhead knives to main table surface, and thus identifies finished thickness of the workpiece.

while stock is being planed. This can put stress upon knives, cutterhead and motor, leading to machine damage.

#### 8.2 Cutting depth gauge

The cutting depth gauge (Figure 8-1) provides a rapid method for setting depth of cut. The bottom of the gauge ball has been set even with the cutterhead knives.

- Insert workpiece far enough (about 2-inches) that it lies beneath gauge ball. Make sure workpiece lies flat on table.
- Lower head until ball contacts workpiece and engages depth scale, as shown. Continue lowering until desired cut depth is shown on the scale. Withdraw workpiece.
- 3. Start planer and insert workpiece, allowing it to push past gauge ball and continue feeding through machine.
- Refer to thickness scale to lower head to desired depth of cut for the next pass.

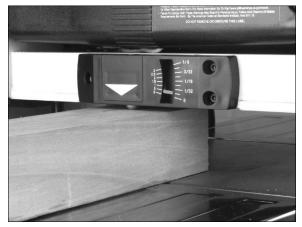


Figure 8-1: cutting depth gauge

#### 8.3 Thickness gauge

The thickness gauge (see Figure 4-1) allows final thickness of the workpiece to be preset. This is particularly useful when multiple boards must be

processed to the same final thickness. Choose one of 6 stop settings, from 1/8 to 1-inch.

Rotate thickness gauge dial to desired finish depth. Lower head for each pass until the stop is contacted, then make the final pass.

farther when thickness gauge stop has been reached, or damage to machine may result.

#### 8.4 Table alignment

Tools needed: 10mm wrench, straight edge

The extension tables should be flush or slightly below the main table:

- 1. Disconnect planer from power source; unplug.
- Place a straight edge (A, Figure 8-2) across main table and infeed table at left side of machine. A steel bar is ideal, but a carefully jointed board may also be used. A straight edge that reaches across both infeed and outfeed tables is preferable.
- 3. If the straight edge does not sit flush on the tables, loosen nut (B) and turn stop screw (C) at that side of table, as needed. Tighten nut (B) to secure setting.
- Move straight edge to right side of infeed table and repeat process.
- 5. Repeat process for outfeed table.

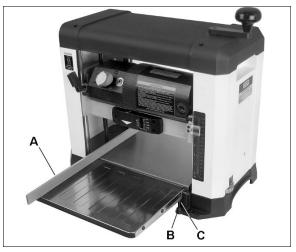


Figure 8-2: leveling tables

#### 8.5 Knife inspection/replacement

**ACAUTION** Knife inserts are very sharp; use care when working with or around them.

The knife inserts are double-edged, so they can be rotated one time for a fresh edge before needing replacement. Nicked or otherwise damaged knife inserts can be rotated or replaced without having to replace others.

1. Disconnect planer from power source; unplug.

Unscrew two knobs (D, Figure 8-3) and remove deflector cover (E).

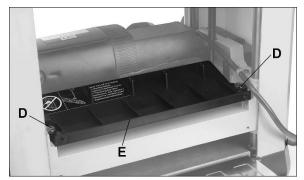


Figure 8-3: removing deflector cover

- Look through access hole (Figure 8-4), while lowering head, until you see the hexagonal recess in center of cutterhead shaft through the hole. This will be at about the 1-1/4 inch mark on the thickness scale.
- 4. Insert a 4mm hex wrench through hole and into recess, as shown. Use this wrench to rotate cutterhead during the knife inspection process.
- Use the provided T-wrench to remove two screws from a knife insert. See Figure 8-4. Lift knife insert from cutterhead slot.
- 6. Rotate knife insert 180-degrees for a fresh edge and reinstall. Securely tighten screws.

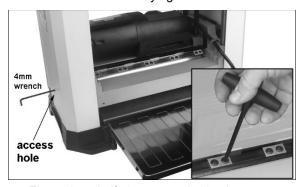


Figure 8-4: knife insert rotation/replacement

AWARNING Make certain all knife insert screws are securely tightened before turning on the planer. Loose inserts can be propelled from the cutterhead at high speed causing serious injury.

ACAUTION Remove hex wrench from access hole before starting planer.

# 9.0 Operation

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.

Note: The cutterhead may throw off a slight spray of lubricant when the machine is first turned on. Allow

it to run for a few moments, then shut it off and wipe any oil off the tables before proceeding.

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

#### 9.1 General recommendations

- Many variables determine suitable depth of cut, such as wood width, density, grain structure, dampness, etc. For best results, use shallow cuts and multiple passes. Excessive depth of cut can place additional strain upon the motor.
- 2. Use shallower cuts on wider workpieces.
- 3. A thickness planer works best when the lumber has at least one flat surface. Use a jointer to create a flat surface. If this is not possible, make several passes of the same surface through the planer until it is flat. Then flip the material over to plane the opposite surface.
- 4. Plane alternate sides until 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.
- Make a test cut on scrap wood to verify thickness; check its accuracy before working on the finished product.
- 6. Avoid knots. Heavily cross-grained wood makes knots hard. Knots can come loose and jam the knives.
- 7. Do not plane dirty boards; dirt and small stones are abrasive and will wear out the knife inserts.
- 8. Do not plane boards less than 9-1/2 inches long. It is recommended that when planing short boards you butt them end-to-end to avoid kickback and reduce snipe.
- 9. For optimum planing performance, the depth of cut should be less than 1/16-inch.
- 10. Recommended maximum depth of cut:
  - Hard/Softwood up to 5-1/2" wide.......1/8"
  - Hard/Softwood 5-1/2 to 13" wide......1/16"

#### 9.2 Basic operating procedure

- Turn crank handle to desired setting. Use depth gauge if desired.
- 2. Turn on planer and select feed rate.
- 3. Turn on dust collection system.
- Place material flat-side down on infeed table and slide it straight into machine until it is engaged by infeed roller. Do not push or pull on the workpiece as it is being planed.
- 5. Move to rear of planer, out of the line of feed, and grasp the workpiece as it exits the machine.

- Lower head to desired cut depth for next pass.
   Flip the material over and re-feed it through machine.
- Repeat procedure as necessary. If a jam occurs, turn planer OFF and raise head to withdraw the workpiece.

#### 9.3 Start/stop

**AWARNING**Make sure switch is in OFF position before plugging in the planer.

If a power outage occurs, the planer will restart when power is restored. If an outage occurs, immediately turn off machine at the switch.

Pull up paddle switch to start planer, push it down to stop.

To prevent unauthorized operation, turn off planer, pull yellow safety key out of switch and store it in a secure location. See Figure 9-1. To restart the planer, insert key and push until it "snaps" in.

Note: The safety key can be removed while the planer is operating, but once shut off, the planer will not restart without the safety key reinserted.

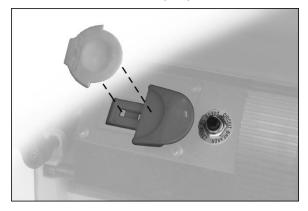


Figure 9-1: on/off switch and safety key

#### 9.4 Circuit breaker reset

The planer is equipped with a motor protective device (circuit breaker). The breaker will shut the planer off automatically when excessive current is consumed. If this occurs:

- 1. Press the OFF switch.
- 2. Raise head and withdraw the workpiece.
- 3. Allow planer to cool for a few minutes, then push reset button (see Figure 4-1) and restart the planer.

Be sure to turn planer OFF before resetting the circuit breaker to avoid unintentional starting.

If the circuit breaker trips frequently, consult sect. 11.0, Troubleshooting the JWP-13BT.

#### 9.5 Feed rate

Move feed rate selector (see Figure 4-1) to desired rate of 18 or 26 feet per minute, while planer is operating.

MCAUTION Only move feed rate selector while planer is running. Moving selector with planer stopped will cause stress to roller gear engagement at start-up, resulting in possible damage to gear system.

#### 9.6 Planing warped wood

which is warped along its length. A warped board can jam itself against the cutterhead knives resulting in kickback and/or damage to the planer.

Note that if a significantly cupped board is fed into the planer, the feed rollers will press it flat for the pass, but the wood will spring back into cupped form when it has cleared the rollers. For best results, one side of the material should be run through a jointer to achieve a flat surface prior to planing. However, if a board is only moderately cupped you may attempt to plane it.

If the board is narrow enough, consider using a table saw or band saw to rip the top of the warp before planing the board. If this is not practical, feed the board into the planer concave side down and plane the top of the board until it presents a flat surface.

Turn the board over and plane the bottom edges until they are flush with the middle. After planing the board, use a table saw or band saw to square the board's edges with the top and bottom surfaces.

Cupping can often be diminished by ripping the board into narrower pieces on a table saw or band saw. See Figure 9-2.

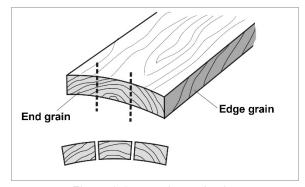


Figure 9-2: cupping reduction

#### 9.7 Grain direction

Always feed the board so the knives are cutting in the same direction as the wood grain, as shown in Figure 9-3. If you cut against the grain, the wood can "chip out" leaving an undesirable finish. See Figure 9-4. **TIP:** On rough lumber, you may need to rip one edge on a table saw or band saw to more easily observe a board's grain direction. Also, the grain on some wood species may change direction in the middle of the board – if possible, cut the board in the middle so the grain direction will be consistent on both pieces. Otherwise, use personal judgment as to which direction is more favorable, and safer, for feeding.

Edge grain (see Figure 9-2) may be planed if the stock is wide enough to rest firmly upon the table.

**Do not attempt to plane end-grain** (see Figure 9-2) as this can result in splintering of the stock and potential kickback.

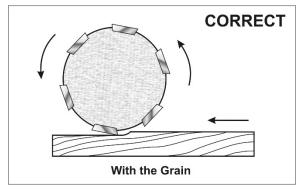


Figure 9-3

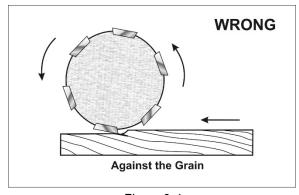


Figure 9-4

#### 9.8 Knots and trouble spots

Wood with knots, "wild" grain, or extensive figuring is always difficult to surface and requires extra care. Check that any knots are solid. Do not plane stock with loose knots. Take light cuts. Be especially cautious of kickbacks and stop cutting immediately if the board will not feed smoothly.

#### 9.9 **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 may occur when the board is not supported properly or when only one feed roller is in contact with the board at the beginning or end of the cut.

If the snipe is deep, be more careful how the board is supported. Keep it parallel to and flat on the table at all times. Use an extra support, such as a roller

stand, at both the infeed and outfeed ends of the planer.

Other methods to prevent snipe are reducing the depth of cut, and feeding additional boards butted closely to leading and trailing ends of the workpiece.

If snipe cannot be avoided, cut the material longer than needed and trim the ends after planing.

#### 9.10 Ridges

Damaged or nicked knives can leave ridges along the length of a board.

Always inspect each board carefully before attempting to plane it. Do not attempt to plane second-hand lumber with nails below the surface, painted wood, plywood, hardboard, wood with a glue bead, or any material other than solid wood.

AWARNING Do not attempt to plane second-hand lumber, painted or varnished wood, plywood or particle board. These materials can damage planer knives. Failure to comply may cause serious injury.

#### 9.11 Planing rough lumber

Make sure wood is properly dried before planing. Wet or "green" lumber may clog the machine and lead to damage.

Air dried wood should stand for at least a year per inch of thickness of the rough cut stock. The moisture content of air dried wood should be about 12% to 15%. Kiln dried woods should have a moisture content of approximately 10%. Wood to be used in fine furniture should have a moisture content of 7% to 8%.

Joint one edge of the rough cut lumber before planing. This will help you determine the direction of grain travel. Feed the board into the planer so the knives cut with the grain, see Figure 9-3.

Measure the rough lumber at several locations to find the thickest part. As wood dries, its dimensions vary, including its thickness. Set the planer to take a very shallow cut on the highest, thickest part of the board. Continue to take very shallow cuts until you can determine whether there are any knots or unusual grain patterns.

After completing one side, inspect the opposite side for irregularities, then process it using the same procedure as for the first side.

#### 9.12 Planing glued-up boards

AWARNING Glued-up stock must dry at least 24 hours before being planed. Failure to comply may cause the stock to separate in the planer, leading to kickback and serious injury.

The JWP-13BT planer is designed for planing solid wood. Other material, including glue, will dull or damage the knives. However, when you need to 'true-up" glued-together stock, follow these suggestions.

As you glue the stock, scrub off all the glue on the surface with a wet rag. This prevents glue beads from forming on the wood surface. Allow the glue to dry at least 24 hours. Check the surface for any glue that you missed and remove with a scraper, chisel, or sander.

Set the cutterhead for a shallow depth of cut. When you are finished planing the glued-up board, unplug the planer and check planer knives for built-up pitch or other signs of wear.

#### 10.0 User-maintenance

**AWARNING**Disconnect power to planer (unplug) before performing any maintenance. Failure to comply may result in serious personal injury.

A regular, periodic schedule of simple maintenance procedures can greatly extend the life of the machine.

#### 10.1 General cleaning

Periodically use a brush or vacuum to clear dust and chips from inside the machine. Do not use bare hands.

Wipe the tables clean with a soft rag. In addition, a light coat of non-silicone paste wax applied periodically to the tables will promote smooth feeding of stock. Do not use silicone-based protectants on the tables as it may impede proper sealing or varnishing of the finished piece.

#### 10.2 Feed roller inspection

The feed rollers are made of a rubber material and should be inspected after every hour of operation:

- 1. Disconnect planer from power source; unplug.
- 2. Lower head until you see the hexagonal recess in center of cutterhead shaft through the access hole. Refer to Figure 8-4.
- 3. Insert 4mm hex wrench through hole and into recess. Use this wrench to rotate cutterhead and rollers during the inspection process.
- 4. Inspect both rollers for sawdust and wood chips. To remove sawdust or wood chips, first use a soft brush. If chips or dust remain, use a soft cloth with a mild cleaner. Do not touch feed rollers with sharp or abrasive objects, or use harsh solvents. Keep hands away from knife inserts.

#### 10.3 Commutator brush inspection

To maintain motor efficiency, inspect the two carbon brushes periodically (frequently if planer is heavily used). Stalling or loss of power may be a symptom of worn carbon brushes. If one brush is worn, replace both at the same time.

Continued use of damaged or worn brushes may result in damage to motor armature.

- 1. Disconnect planer from power source; unplug.
- Unscrew and remove cap with flat blade screwdriver. See Figure 10-1.
- Grip the brass clip and pull brush assembly from hole. Note its orientation – always reinstall a brush in the same orientation as its original position.
- 4. Brush should be replaced if any of the following are discovered:
  - Brush has worn to about 1/2-inch long.
  - Signs of crumbling, burning or breaking.
  - End of brush is rough or pitted.
  - Abnormal coloration of spring
  - Broken lead in spring
  - Collapsed spring
- Install new brush (or reinstall current brush if still in good condition) and gently press it all the way into hole until the brass clip is secured.
- Install cap.
- 7. Repeat for brush on opposite side of motor.
- It is recommended that the planer be run without load for several minutes to seat new brushes.

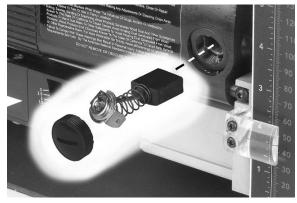


Figure 10-1: carbon brushes

#### 10.4 Lubrication

Motor and cutterhead bearings are sealed, and do not require lubrication.

The following areas should be inspected periodically and lubricated as necessary:

- Leadscrews (refer to Figure 4-1). Clean both leadscrews with a brush and/or soft rag. Apply a light coat of #2 lithium tube grease along the entire length of both leadscrews.
- Columns (refer to Figure 4-1). Clean all four columns with a soft rag. Apply a light coat of #2 lithium tube grease to the columns. Wipe away excess grease.
- Drive chain Remove left side cover (refer to sect. 10.8 on removing side cover). Remove chain guard. Clean any debris from the chain and sprockets, and apply standard wheel bearing grease to the chain. Keep the chain clean of dust, dirt, and wood shavings. Do not over-lubricate. Over-lubricating the chain will attract contaminates and increase wear on the chain.

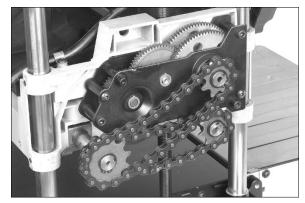


Figure 10-2: drive chain

Head elevating chain – Carefully tilt planer onto its left side, as shown in Figure 10-3. (Make sure side covers are installed before tilting planer.) Clean any debris from the underside of the machine and from the chain and sprockets. Apply standard wheel bearing grease to the chain. Turn the crank handle a few times to spread the grease, then wipe off any excess.



Figure 10-3: head elevating chain

#### 10.5 Thickness scale calibration

If the thickness scale becomes inaccurate after extended use, plane a board and carefully measure its thickness. If the scale does not match this measurement, loosen the two screws on the cursor (see Figure 4-1) and adjust the cursor as needed. Retighten screws.

#### 10.6 Belt replacement

Inadequate tension on the V-belt will cause the belt to slip from the motor pulley or the cutterhead pulley. A loose belt must be replaced, as follows.

- 1. Disconnect planer from power source; unplug.
- Remove crank handle.
- 3. Unscrew the two screws on the right side of the top plate (A, Figure 10-4) with a 5mm hex wrench; a T-handle wrench is preferred for this. The screws do not need to be removed, only released from the tops of the columns.
- Carefully maneuver the right side cover from beneath the top plate, and lift side cover out of the groove in the planer base.

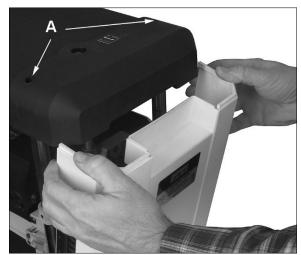


Figure 10-4: removing side cover

5. Remove two screws (B, Figure 10-5) with Phillips screwdriver, and remove belt guard (C).

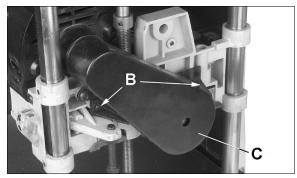


Figure 10-5: removing belt guard

- 6. Remove belt (Figure 10-6) by walking the belt from the motor and cutterhead pulleys alternately. Gently pull the belt while turning the pulleys at the same time.
- Walk the new belt on to the pulleys in the reverse procedure from that above. The belt should fit snugly in the grooves of both pulleys.
- 8. Reinstall belt guard, side cover, and tighten screws in top plate.
- 9. Reinstall crank handle.

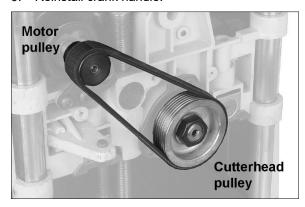


Figure 10-6: drive belt

#### 10.7 Thickness gauge adjustment

The stop screw for the thickness gauge has been set by the manufacturer and should not require attention. If you suspect the thickness gauge to be inaccurate, test and make adjustments as follows:

- 1. Disconnect planer from power source; unplug.
- 2. Rotate thickness dial to 1-inch setting.
- 3. Feed a board, making several passes top and bottom, until the final pass is taken with the head lowered to the thickness gauge stop.
- 4. Carefully measure the board thickness using a calipers.
  - If it measures 1-inch, the gauge is correct; check the accuracy of the cursor and adjust if needed.
  - If the board thickness is not 1-inch, proceed as follows.
- 5. Remove side panel (refer to Figure 10-4).

- Back off the hex nut (D, Figure 10-7) and turn the stop screw (E) as needed. Move head to contact the gauge stop.
- 7. Feed another board as was done in step #3, and confirm the accuracy of the adjustment.
- Continue adjusting the stop screw if needed, until accurate. Tighten hex nut (D) to secure setting.
- Check accuracy of cursor/thickness scale and make any adjustments there if needed.
- 10. Reinstall side cover and crank handle.

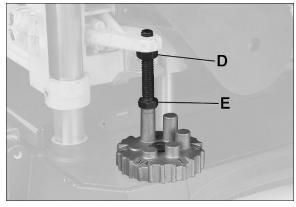


Figure 10-7: thickness gauge stop screw

#### 10.8 Additional servicing

Any additional servicing should be performed by authorized service personnel.

# 11.0 **Troubleshooting JWP-13BT Planer**

Symptom	Possible Cause	Correction*
Planer will not start.	No incoming power.	Check plug connection.
	Low voltage.	Have power line inspected for proper voltage.
	Circuit breaker on planer motor tripped.	Allow motor to cool and press reset switch.
	Fuse blown or breaker tripped at panel.	Check power source. Replace fuse or reset breaker.
	Motor brushes worn or damaged.	Inspect and replace brushes if needed.
	Short circuit in line cord or plug.	Inspect cord or plug for damaged insulation and shorted wires.
	Defective or loose switch or wiring.	Have a qualified electrician inspect switch and wiring.
	Motor failure.	Have motor inspected by qualified personnel.
	Incorrect fuses or circuit breakers in power line.	Install correct fuses or circuit breakers.
Motor stalls or overheats, resulting in tripped breaker.	Motor overloaded.	Reduce load on motor; try less depth of cut or slower feed rate. Make sure knife inserts are sharp.
	Low voltage.	Correct the low voltage conditions.
	Incorrect fuses or circuit breakers in power line.	Install correct fuses or circuit breakers.
	Motor failure.	Have motor inspected by qualified personnel.
Machine slows when operating.	Feed rate too fast or cutting too deeply.	Select lower feed rate, or shallower depth of cut.
	Drive belt is loose (stretched).	Replace belt.
	Motor brush failure.	Inspect and replace brushes if needed.
Snipe.	Dull knife inserts.	Rotate or replace knife inserts.
	Inadequate support of long boards	Use an assistant or roller stand to support long workpieces.
	Lumber is not butted properly.	Butt each piece of stock end-to-end as they pass through the planer.
	Cutterhead not parallel to table.	Contact JET technical service.
Fuzzy grain.	Wood has high moisture content.	Remove moisture by drying, or use different stock.
	Dull knife inserts.	Rotate or replace knife inserts.
Torn grain.	Too heavy a cut.	Remove less material.
	Knives cutting against grain.	Cut with the grain.
	Dull knife inserts.	Rotate or replace knife inserts.
Rough/raised grain.	Dull knife inserts.	Rotate or replace knife inserts.
	Too heavy a cut.	Reduce depth of cut and make more passes.
	Wood has high moisture content.	Remove moisture by drying, or use different stock.
Poor feeding of lumber.	Excessive warpage of stock.	Use different stock.
	Planer bed rough or dirty.	Clean pitch and residue; wax planer bed.
	Feed roller surfaces are dirty.	Clean feed rollers with cloth and mild cleaner.
	Dull knives, or debris building up on cutterhead.	Clean cutterhead; rotate or replace knife inserts; clean out dust hood if being used.
	Drive belt slipping or damaged.	Replace belt.

Symptom	Possible Cause	Correction*
Uneven depth of cut side to side.	Knife projection not uniform.	Inspect all knife inserts for positioning and tightness.
	Table not parallel to cutterhead.	Contact JET technical service.
Head difficult to adjust.	Lack of lubrication on corner posts and lead screws.	Lubricate posts and lead screws.
Head cannot be lowered.	Thickness gauge is preventing further movement.	Reset thickness gauge dial setting.
	Buildup of debris on leadscrews and/or columns.	Clean affected areas, and re-grease.
Board thickness doesn't match thickness scale.	Thickness scale out of adjustment.	Recalibrate thickness scale/cursor, and make test cuts.
Chain keeps coming off sprocket(s).	Chain or sprocket(s) are worn.	Inspect and replace as needed.

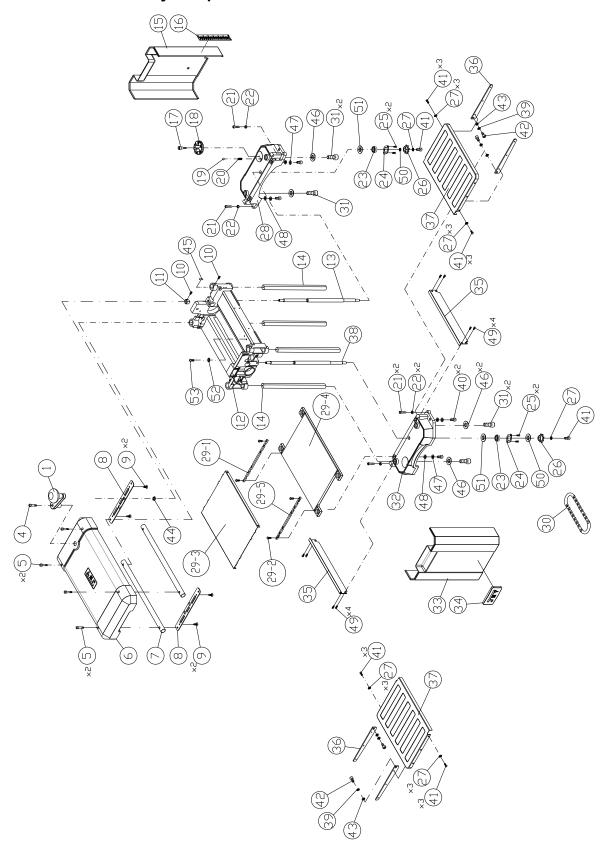
<sup>\*</sup>Warning: Some corrections may require a qualified electrician.

# 12.0 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 Model 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.

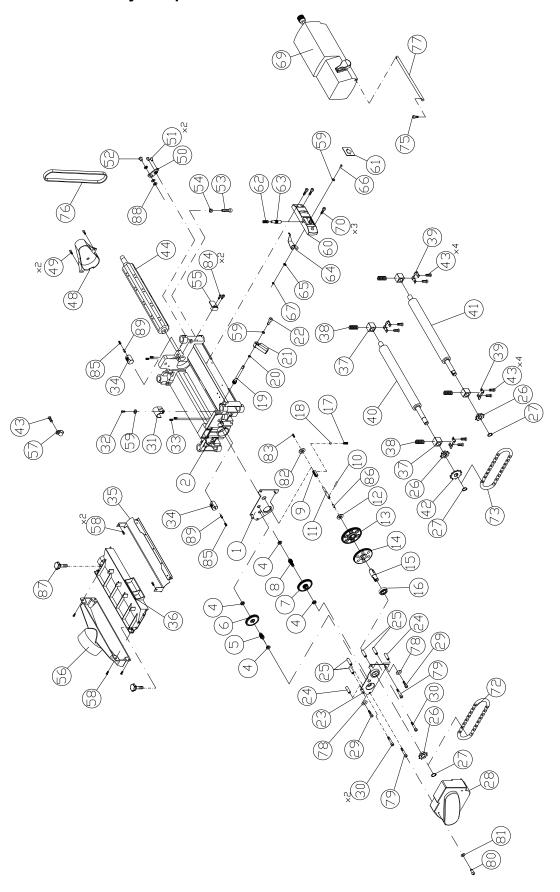
# 12.1.1 Base Assembly – Exploded View



# 12.1.2 Base Assembly – Parts List

Index No	Part No	Description	Size	Qty
		Crank Handle Assembly		
		Socket Head Cap Screw		
		Socket Head Cap Screw		
		Top Cover		
		Steel Pipe		
		Steel Plate		
9	F001228	Phillips Pan Hd Machine Screw BO	M4-0.7 x 18	4
		Nylon Set Screw		
11	JWP13BT-111	Stop Bushing		1
		Head		
13	JWP13BT-113	Leadscrew, Drive Side		1
		Column		
15	JWP13BT-115	Side Cover, Right		1
16	JWP13BT-116	Thickness Scale		1
17	JWP13BT-117	Screw		1
		Cutting Thickness Gauge		
		Steel Ball		
		Spring		
		Hex Cap Screw		
		Hex Nut		
		Ball Bearing		
		Ball Bearing Cover Plate		
		Socket Head Button Screw		
		Sprocket		
		Flat Washer		
		Base, Right		
		Table Assembly (Includes #29-1 thru 29-5)		
		Right Side Bar		
		Socket Head Button Screw		
		Surface Plate		
		Table		
		Left Side Bar		
		Chain		
		Socket Head Cap Screw		
		Base, Left		
		Side Cover, Left		
		JET Logo with 3M Adhesive		
		Plate		
35				2
		Extension Table Assembly (item #27, 36, 37, 41).		
		Extension Table Support		
		Extension Table		
		Leadscrew, Driven Side		
39	JWP13B1-139	Sleeve		4
		Socket Head Cap Screw		
		Socket Head Button Screw		
		Socket Head Cap Screw		
		Wave Washer		
		Bushing		
		Resistance Pad		
		Flat Washer		
		Lock Washer		
		Flat Washer		
		Socket Head Button Screw		
		Spacer		
		Spacer		
52	TS-0733031	External Tooth Lock Washer	#10	1
53	TS-1533032	Phillips Pan Head Machine Screw	M5-0.8x10	1
		ID Label, JWP-13BT (not shown)		
55	LM000365	Caution Label, Feed Rate (not shown)		1
56	LM000366	Repeat Thickness Limiter Label (not shown)		1

# 12.2.1 Head Assembly – Exploded View

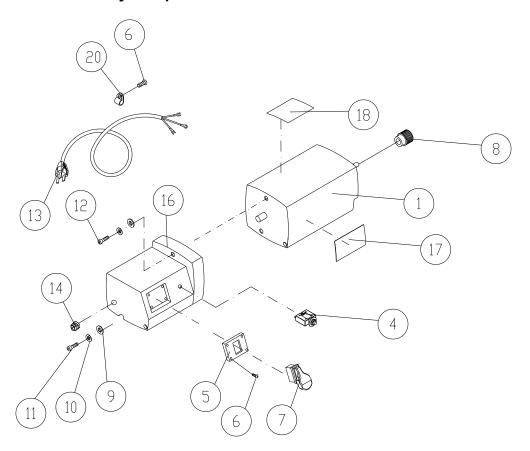


# 12.2.2 **Head Assembly – Parts List**

1       JWP13BT-201       Gear Plate (includes #4,12)         2       JWP13BT-202       Head         4       JWP13BT-204       Spacer         5       JWP13BT-205       Gear Shaft       12t         6       JWP13BT-206       Gear       52T         7       JWP13BT-207       Gear       52T         8       JWP13BT-208       Pinion Gear         9       JWP13BT-209       Rack         10       JWP13BT-210       Pin       Ø10mm         11       JWP13BT-211       Shaft-Actuator       9       W1913BT-211       Shaft-Actuator       9         12       JWP13BT-212       Spacer       75 T       14       JWP13BT-213       Gear       75 T       14       JWP13BT-214       Gear       80 T       15       JWP13BT-215       Shaft       80 T       15       JWP13BT-215       Shaft       88-6002       17       JWP13BT-217       Spring       BB-6002       17       JWP13BT-217       Spring       BB-6002       17       JWP13BT-219       Feed Rate Adjustment Shaft       9       20       JWP13BT-221       Feed Rate Selector       S-8       21       JWP13BT-221       Feed Rate Selector       9       21       JWP13BT-223       Bracket (inc	11111111
4       JWP13BT-204       Spacer         5       JWP13BT-205       Gear Shaft       12t.         6       JWP13BT-206       Gear       52T.         7       JWP13BT-207       Gear       8         8       JWP13BT-209       Rack       9         10       JWP13BT-210       Pin       Ø10mm         11       JWP13BT-211       Shaft-Actuator       9         12       JWP13BT-212       Spacer       75 T.         13       JWP13BT-213       Gear       75 T.         14       JWP13BT-214       Gear       80 T.         15       JWP13BT-215       Shaft       80 T.         16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring       BB-6002         17       JWP13BT-219       Feed Rate Adjustment Shaft       9         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       S-8         21       JWP13BT-221       Feed Rate Selector       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       M4-0.7Px15         24       JWP13BT-224       Spacer	4 1 1 1 1 1
5         JWP13BT-205         Gear Shaft         12t           6         JWP13BT-206         Gear         52T           7         JWP13BT-208         Pinion Gear           8         JWP13BT-209         Rack           9         JWP13BT-210         Pin         Ø10mm           11         JWP13BT-211         Shaft-Actuator         W10mm           12         JWP13BT-212         Spacer         3           13         JWP13BT-213         Gear         75 T           14         JWP13BT-214         Gear         80 T           15         JWP13BT-215         Shaft         Shaft           16         BB-6002ZZ         Ball Bearing         BB-6002           17         JWP13BT-217         Spring         BB-6002           17         JWP13BT-219         Feed Rate Adjustment Shaft         W10           20         JWP13BT-220         S-Ring         S-8           21         JWP13BT-221         Feed Rate Selector         W10           22         TS-1501051         Socket Head Cap Screw         M4-0.7Px15           23         JWP13BT-223         Bracket (includes #4,16)         W10           24         JWP13BT-224         Spacer	1111111
6       JWP13BT-206       Gear       52T         7       JWP13BT-207       Gear       8         8       JWP13BT-208       Pinion Gear       9         9       JWP13BT-210       Pin       Ø10mm         10       JWP13BT-211       Shaft-Actuator       11         12       JWP13BT-212       Spacer       75 T         13       JWP13BT-213       Gear       75 T         14       JWP13BT-215       Shaft       80 T         15       JWP13BT-215       Shaft       80 T         16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring       88mm         19       JWP13BT-221       Feed Rate Adjustment Shaft       98mm         20       JWP13BT-229       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       98mm         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       98mm         24       JWP13BT-224       Spacer       98mm         25       JWP13BT-225       Spacer       98mm         26       JWP13BT-226	1111111
7         JWP13BT-207         Gear           8         JWP13BT-208         Pinion Gear           9         JWP13BT-209         Rack           10         JWP13BT-210         Pin           11         JWP13BT-211         Shaft-Actuator           12         JWP13BT-212         Spacer           13         JWP13BT-213         Gear         75 T           14         JWP13BT-214         Gear         80 T           15         JWP13BT-215         Shaft           16         BB-6002ZZ         Ball Bearing         BB-6002           17         JWP13BT-217         Spring         BB-6002           17         JWP13BT-219         Feed Rate Adjustment Shaft         Ø8mm           20         JWP13BT-229         Feed Rate Selector         S-8           21         JWP13BT-221         Feed Rate Selector         S-8           21         JWP13BT-221         Feed Rate Cap Screw         M4-0.7Px15           23         JWP13BT-223         Bracket (includes #4,16)         M4-0.7Px6           24         JWP13BT-225         Spacer         S-15           25         JWP13BT-226         Chain Gear         8T           27         JWP13BT-227	111111
8       JWP13BT-208       Pinion Gear         9       JWP13BT-209       Rack         10       JWP13BT-210       Pin       Ø10mm         11       JWP13BT-211       Shaft-Actuator         12       JWP13BT-212       Spacer         13       JWP13BT-213       Gear       75 T         14       JWP13BT-214       Gear       80 T         15       JWP13BT-215       Shaft       BB-6002         17       JWP13BT-217       Spring       BB-6002         17       JWP13BT-217       Spring       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft       20         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       S-8         21       JWP13BT-221       Feed Rate Selector       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       M4-0.7Px15         24       JWP13BT-224       Spacer       S-5         25       JWP13BT-225       Spacer       S-2         26       JWP13BT-225       School (Includes Sponge)       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       S-15	111111
9	11111
10       JWP13BT-210       Pin       Ø10mm         11       JWP13BT-211       Shaft-Actuator          12       JWP13BT-212       Spacer          13       JWP13BT-213       Gear           14       JWP13BT-214       Gear </td <td>1 1 1 1</td>	1 1 1 1
10       JWP13BT-210       Pin       Ø10mm         11       JWP13BT-211       Shaft-Actuator          12       JWP13BT-212       Spacer          13       JWP13BT-213       Gear           14       JWP13BT-214       Gear </td <td>1 1 1 1</td>	1 1 1 1
11       JWP13BT-211       Shaft-Actuator         12       JWP13BT-212       Spacer         13       JWP13BT-213       Gear       75 T         14       JWP13BT-214       Gear       80 T         15       JWP13BT-215       Shaft       80 T         16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring       8         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft       8         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       8-8         21       JWP13BT-221       Feed Rate Selector       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       M4-0.7Px15         24       JWP13BT-224       Spacer       Spacer         25       JWP13BT-225       Spacer       8T         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       S-15         29       TS-1502081       Sock	1 1 1
12       JWP13BT-212       Spacer       75 T         13       JWP13BT-213       Gear       75 T         14       JWP13BT-215       Shaft       80 T         15       JWP13BT-215       Shaft       BB-6002         17       JWP13BT-217       Spring       BB-6002         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft       20         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-227       S-Ring         27       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px85         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6	1 1
13       JWP13BT-213       Gear       75 T         14       JWP13BT-214       Gear       80 T         15       JWP13BT-215       Shaft         16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-225       S-Ring         27       JWP13BT-226       Chain Gear         27       JWP13BT-227       S-Ring         28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px45         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover	1
14       JWP13BT-214       Gear       80 T         15       JWP13BT-215       Shaft         16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft       S-8         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       M4-0.7Px15         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       M4-0.7Px15         24       JWP13BT-224       Spacer       Spacer         26       JWP13BT-225       Spacer       S-Ring       S-15         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       S-15         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6	
15       JWP13BT-215       Shaft         16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
16       BB-6002ZZ       Ball Bearing       BB-6002         17       JWP13BT-217       Spring         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-225       Spacer         27       JWP13BT-227       S-Ring         28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
17       JWP13BT-217       Spring         18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       22         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       44         24       JWP13BT-224       Spacer       55         25       JWP13BT-225       Spacer       57         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
18       SB-8MM       Steel Ball       Ø8mm         19       JWP13BT-219       Feed Rate Adjustment Shaft         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       W4-0.7Px15         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       W4-0.7Px15         24       JWP13BT-224       Spacer       Spacer         25       JWP13BT-225       Spacer       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       S-15         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
19       JWP13BT-219       Feed Rate Adjustment Shaft         20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector       W4-0.7Px15         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)       W4-0.7Px15         24       JWP13BT-224       Spacer       Spacer         25       JWP13BT-225       Spacer       8T         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	1
20       JWP13BT-220       S-Ring       S-8         21       JWP13BT-221       Feed Rate Selector         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
21       JWP13BT-221       Feed Rate Selector         22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       S-15         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
22       TS-1501051       Socket Head Cap Screw       M4-0.7Px15         23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       S-15         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	1
23       JWP13BT-223       Bracket (includes #4,16)         24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       M5-0.8Px35         30       TS-1502081       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
24       JWP13BT-224       Spacer         25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       M5-0.8Px35         30       TS-1502081       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
25       JWP13BT-225       Spacer         26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       M5-0.8Px35         30       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       M5-0.8Px35         30       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	2
26       JWP13BT-226       Chain Gear       8T         27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       M5-0.8Px35         30       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	4
27       JWP13BT-227       S-Ring       S-15         28       JWP13BT-228       Gear Guard (Includes Sponge)       M5-0.8Px35         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	3
28       JWP13BT-228       Gear Guard (Includes Sponge)         29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
29       TS-1502081       Socket Head Cap Screw       M5-0.8Px35         30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover       M4-0.7Px6         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
30       TS-1502101       Socket Head Cap Screw       M5-0.8Px45         31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	2
31       JWP13BT-231       Cover         32       F009923       Socket Head Button Screw       M4-0.7Px6         33       TS-1522021       Set Screw       M5-0.8Px8	
32F009923Socket Head Button Screw	
33TS-1522021 Set Screw	
24 IMD42DT 224 Nut /Includes #05 00\	
34JWP13BT-234	
35JWP13BT-235 Chip Deflector	
36JWP13BT-236 Deflector Cover	
37JWP13BT-237 Block	
38JWP13BT-238 Spring	
39JWP13BT-239 Plate	4
40JWP13BT-240 Outfeed Roller	1
41JWP13BT-241 Infeed Roller	1
42JWP13BT-242 Chain	1
43TS-2245102 Socket Round Head Screw	
44JWP13BT-CA Cutterhead Assembly	
48JWP13BT-248 Belt Guard	
49TS-2244102 Socket Head Button Screw	
50JWP13BT-250 Plate	
51TS-2246102 Socket Round Head Screw	
52TS-2248202Socket Round Head ScrewM8x20	
53TS-1490081 Hex Cap Screw	
53 TS-1490061	
55JWP13BT-255 Cursor	
56JWP13BT-256 Dust Chute	
57JWP13BT269-20 Cable Clamp	1
58TS-2245122 Socket Round Head Screw M5x12	
JWP13BT-CDGA Cutting Depth Gauge Assembly (includes #59-67)	6
59TS-1550021 Flat Washer	6
60JWP13BT-260 Cutting Depth Gauge	4
61JWP13BT-261 Arrow Plate	6 4 1
62JWP13BT-262 Spring	6 4 1

Index No Part No	Description	Size	Qty
63JWP13BT-263	Shaft		1
64JWP13BT-264	Pointer		1
65JWP13BT-265	Spacer		1
	Socket Head Button Screw		
	Hex Nut		
	Motor Assembly		
70TS-1501041	Socket Head Cap Screw	M4-0.7Px12	3
72JWP13BT-272	Chain	Long	1
73JWP13BT-273	Chain, Feed Roller	Short	1
75TS-2245202	Socket Head Button Screw	M5-0.8x20	2
76JWP13BT-276	Belt	140J-6	1
77JWP13BT-277	Shaft		1
78TS-2361051	Lock Washer	M5	2
79JWP13BT-279	Bolt, Special	45L	2
80TS-2244102	Socket Head Button Screw	M4-0.7Px10	2
	Flat Washer		
	Flat Washer		
83 F009871	Socket Head Button Screw	M3-0.5x10	1
84TS-2244202	Socket Head Button Screw	M4-0.7Px20	2
85TS-0267021	Set Screw	1/4"-20x1/4"	2
86TS-1521021	Set Screw	M4-0.7Px5	1
	Knob		
88TS-1550061	Flat Washer		2
89JWP13BT-289	PU Block		2

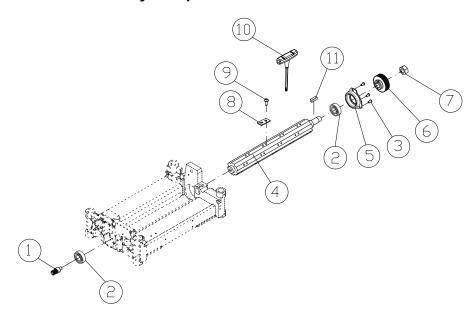
# 12.3.1 Motor Assembly – Exploded View



# 12.3.2 Motor Assembly – Parts List

Index No Part No	Description	Size	Qty
JWP13BT-269	. Motor Assembly (includes #1~18)		1
1JWP13BT269-01	. Motor (includes #17,18)		
2JWP13BT269-02	. Motor Carbon Brush with Cap (not shown)		
3JWP13BT269-03	. Motor Ground Wire (not shown)		1
4JWP13BT269-04	. Overload Protector Assembly	20A	1
5JWP13BT269-05	. Switch Plate		
6JWP13BT269-06	. Machine Screw	M5-0.8x12	5
7JWL1442-118	. Switch		1
JWL1442-118-1	. Safety Key		1
8JWP13BT269-08	. Motor Pulley		1
9JWP13BT269-09	. Flat Washer	M5	2
10JWP13BT269-10	. Lock Washer	M5	2
11TS-2245162	. Socket Round Head Screw	M5-0.8Px16	1
12JWP13BT269-12	. Machine Screw	M5-0.8Px35	1
13JWP13BT269-13	. Power Cable		
14JWP13BT269-14	. Strain Relief		
15JWP13BT269-15	. Wire, Overload to Switch (not shown)		1
16JWP13BT269-16	· - · · · · · · · · · · · · · · · · · ·		1
17LM000367	. Warning Label		1
18LM000368	. Motor Label, JWP-13BT		1
20JWP13BT269-20	. Cable Clamp		1

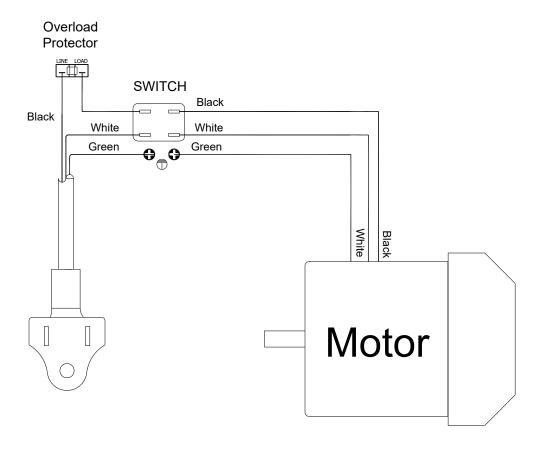
# 12.4.1 Cutterhead Assembly – Exploded View



# 12.4.2 **Cutterhead Assembly – Parts List**

Index No Part No	Description	Size	Qty
JWP13BT-CA	. Cutterhead Assembly (includes #1-9,11)		
1JWP13BT244-01	. Shaft Gear	12t	1
2BB-6203ZZ	. Ball Bearing	6203ZZ	2
3TS-2245102	. Socket Head Button Screw	M5-0.8x10	3
4JWP13BT244-04	. Cutterhead		1
5JWP13BT244-05	. Bearing Seat		1
6JWP13BT244-06	. Spindle Pulley		1
	. Nut (LH)		
8722131	. Knife Insert (set of 10)		26 total
9JWP13BT244-09	. Knife Insert Screw		52
10JWP13BT244-10	. Allen Wrench, T-Handle	3mm	1
11KF2R5512	. Flat Key, Dbl Rd Hd	5x5x12 mm	1

# 13.0 Electrical Connections for JWP-13BT



### 14.0 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 outside recommended guidelines 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.