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Woodworking machinery at its best!

12” x 9” PLANER THICKNESSER OPERATING INSTRUCTIONS

MODEL: W590

CE

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Foreword

These instructions have been created by the device manufacturer and are an integral part of the machine delivery. They contain basic information for qualified operating staff and describe the environment and manners of the machine use for which it has been designed, and also contain any information necessary for the correct and safe operation.
The machine is equipped with various safety devices protecting both the operator and the machine for its common technological use. Nevertheless these measures cannot cover all safety aspects and therefore it is necessary that the operator should read and understand these instructions before starting to use the machine. Errors made in the course of installation as well as during operation itself will thus be avoided.

Do not try therefore to put the machine into operation before you have read all instructions for use supplied together with the machine and before you have understood all its functions and working procedures.

Certain information or drawings may not be intended directly for the machine purchased by you as these instructions contain any information for various variants of this type made by our company. By comparing the respective part of the instructions with a particular machine you will find out whether or not they correspond to each other.

The manufacturer reserves the right to make partial alterations within continuous technical machine development.

Use of the machine

Purpose of the machine

The machine is designed as a combined planer and thicknesser machine for use in joiners shops(plants) at lengthwise (related to wood fibres) processing of wood and materials on its base within workpiece width of 310 mm.
The machine is designed for operation performed by one worker only.

The machine may not be handled by children and youngsters in any manner.

Workers' qualifications

Only an expert skilled in the field of wood-machining or a worker instructed and trained by such expert may operate the machine, regardless of the sex. While working on the machine the operator must get familiar with these instructions and comply with any safety rules, regulations and provisions in force in the respective

country.

Working environment

The machine must be operated in a workshop environment the temperature of which does not exceed +40℃and does not drop below +5℃. The relative humidity of ambient is from 30% to 95%, non-condensing. The height above the sea level is up to 1000 m.

Storage and transportation temperature: -25~55℃

The environment classification

- danger of inflammable dust fire.

Safety instructions

General

This machine is equipped with various safety devices protecting both the operator and the machine. Nevertheless, this cannot cover all safety aspects and therefore the operator, before putting the machine into operation, must read this chapter and understand it fully. Furthermore the operator must also take into account other aspects of danger relating to the surrounding conditions and material.

Basic safety requirements

- Before connecting the machine to the mains make sure that all safety items are in their active positions and check their functioning. If it is necessary to remove the doors or protective covers, turn off the switch and disconnect the plug from its socket.
- Kick-back catchers must be freely movable and their functioning must be checked regularly, maybe several times a day.
- Do not connect the machine to the mains while the door or protective cover is removed.
- In order to avoid improper operation get acquainted with the location of switches before switching the machine on.
- Remember the position (location) of the emergency stop switch so that you can use it promptly at any time.
- Be careful and do not touch any switches while the machine is being operated.
- Do not touch any rotating tool by hands or with any other object under any

circumstances.

- In the case that you are not going to work on the machine, turn off the machine by the switch and disconnect the plug from the supply socket.
- Before cleaning the machine, switch off the machine and disconnect the plug of the machine.
- Before doing any maintenance work inside the machine, switch off the machine and disconnect the plug of the machine.
- Do not alter the machine in any manner which might cause any risk to its safe operation.
- If you have any doubts on correctness of your procedure, contact a responsible person.
- Do not neglect performance of regular inspections in accordance with the instructions for use.
- Check and make sure that no disturbances occur on the machine caused by the user.
- After the work is finished, adjust the machine so that it is ready for another series of operations.
- Should a failure in power supply occur, switch off the machine immediately.
- Do not paint, make dirty, cause any damage to, alter or remove safety plates. If they become illegible or lost, contact the manufacturing plant and renew the plates.
- Keep work area clear. Cluttered areas and benches cause injuries.
- Consider work area' s environment. Do not expose tools to rain. Do not use tools in damp or wet location. Keep work area well lighted .Do not use tools in the presence of flammable liquids or gases.

Clothes and personal safety

- Experience shows that injuries are caused by various personal articles, e.g. rings, watches, bracelets, necktie etc. Therefore take them off before starting the work, button the sleeves, take off a tie, which may be caught with various parts of the working machine. Wear hair protection and fasten hair properly to avoid catching by moving part. Wear suitable tight cloth, shoes recommended or prescribed by labour-safety regulations of all countries.
- Wear safety outfit (goggles, apron, safety shoes, hearing protection etc.).
- In the case of any obstacles above your head – in the working area – wear a helmet.
- Always wear a protective mask while machining any material that produces dust while being machined.
- Never wear any loose working clothes.
- Do not work on the machine under influence of drugs or alcohol, and when you are tired.

Safety regulations for operators

Do not put the machine into operation before you get acquainted with the contents of the instructions for use.

- Make sure that electric cables are not damaged so that injuries caused by electric current leaking (electric shocks) are avoided.
- Check regularly that safety covers are mounted properly and that they are not damaged. Repair damaged covers immediately or replace with other ones by a qualified person.
- Do not put the machine into operation with the cover removed.
- Never use any tools that are distorted, broken or blunt.
- Always use the tool suitable for the work given, which corresponds to the machine specifications. The tools, cutter blocks, must be in accordance with EN 847-1.
- Replace blunt tools as soon as possible, as blunt tools may cause injuries or damage.
- Never use the tools at speeds higher than their recommended rated speeds by the respective manufacturer.
- Stop all functions of the machines before replacing tools and pull out the plug from the supply socket.
- Do not remove or interfere otherwise in safety devices such as covers, limit switches.
- While handling parts above your possibilities, ask for helps from a qualified person.
- It is not recommended to work on the machine during a storm.

Safety regulations for maintenance

Maintenance and repair must be performed by a qualified person. Do not do maintenance work before you get acquainted with the instructions for maintenance thoroughly.

- Before you start to perform any maintenance work, always turn off the switch and pull out the plug from supply socket. A possibility of accidental putting the machine into operation by another person is thus avoided.
- Any maintenance work on electric parts of the equipment may be done by a qualified person only.
- Even if the machine is stopped, the power supply is not disconnected. Always disconnect the plug from supply socket.
- Do not clean the machine or its peripheral devices even if the machine is completely out of operation, unless the plug has been disconnected from supply socket. Keep your fingers in a distance from belts and belt pulleys.
- While replacing electrical parts of the equipment, turn off the switch and disconnect the plug from supply socket. Faulty parts should be replaced only with products having the same specifications as the original ones.

- Do not remove or interfere otherwise in safety devices such as covers, limit switches, and do not block them mutually.
- Do not switch the machine on before all covers removed for the purposes of maintenance are put in their places again.
- Always keep the maintenance area including the working place clean.
- Any maintenance work must be done by a qualified staff in accordance with the instructions issued by the machine manufacturer.
- Read the instruction manual for maintenance men carefully and completely.
- For replacement of parts and necessary things, get in advance those being identical with the original type and complying with standards.

- Use only specified kinds or lubricating oils and grease or those equivalent to them.
- If any belt in the set of belts used gets longer than the limit prescribed, replace the whole set completely.
- Do not use compressed air to clean the machine or to remove chips.
- Always check the results while a responsible person is present.

Safety regulations for place of work

- Always ensure a sufficient working area and free access to the machine and peripheral devices.
- Put tools and any other obstacles in the place designed for this purpose, in a distance from the machine.
- Ensure sufficient lighting in the working area which will not create shadows or cause the stroboscopic effect. For safe and quality work the hygienic standards specify the minimum intensity 500 lux.
- Never put any tools or any other objects on working tables or covers.
- Always keep the working area clean and tidy.

Transport and storage

Transport and storage

While transporting or handling the machine, be most careful and let this activity be done by qualified personnel especially trained for this kind of activity.

While the machine is being loaded or unloaded, make sure that no person or subject gets pressed by the machine !
Do not enter the area under the machine lifted by a crane or a high-lift trolley!

During transporting or storing the machine, means must be taken to protect the machine against excessive vibrations and humidity.
It should be stored in a shelter at temperatures ranging from -25° C to 55° C.
As standard, the machine is wrapped up in a plastic tray and is transported this way.
Upon request the machine may also be packed in a robust wooden box.

Technical specifications

Machine Length	mm	1300
Machine width	mm	750
Machine height	mm	1000
Table height	mm	850
Table of planing machine	mm	1300X310
Table of thicknessing machine	mm	545X308

Machine weight	kg	225
Rated voltage	V	230
Rated frequency	Hz	50
Cutter block Ø	mm	70
Cutter block knives number	pcs.	3
No load cutter block rotation speed	min^{-1}	5500
Feeding rollers Ø	mm	32
Max. planing width	mm	310
Max. depth of planing	mm	3
Angle of workpiece fence		0^0–45^0
Max. thicknessing width	mm	308
Max. depth of thicknessing	mm	4.5
Max. workpiece height of thicknessing	mm	225
Feeding speed	m/min	7
Motor power output	kW	2.5

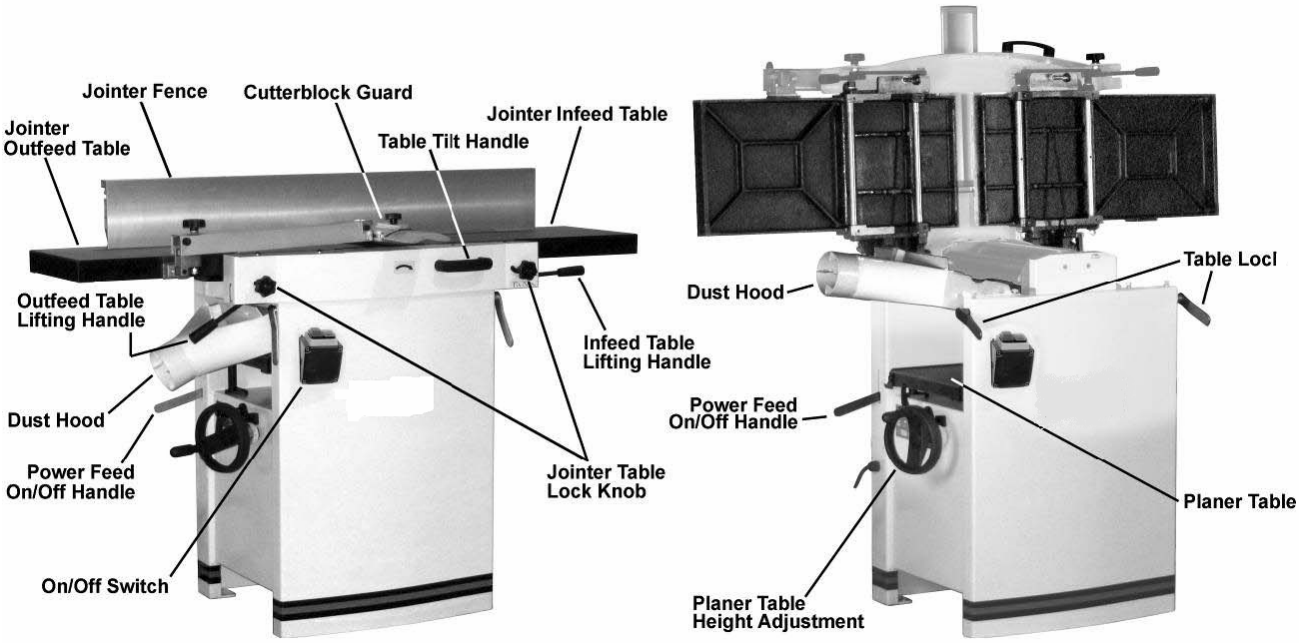
Specifications concerning noise of the device

Level of noise A in the place of operation (LpAeq)	No-load	L_pA_{eq} =81.7 dB(A)
	Load	L_pA_{eq} =89.5 dB(A)
Level of acoustic power A (LWA)	No-load	L_{WA} = 94.5 dB(A)
	Load	L_{WA} = 103 dB(A)

Operating conditions for noise measurement comply with annex B of ISO 7960.

The values given are those of emissions and do not necessarily mean any safe working values. Although there is a correlation between the value of emissions and the levels of exposure, these values cannot be used for reliable determination whether or not additional measures are necessary. The factors influencing actual levels of workers' exposure include the properties of the working area, other sources of noise etc., e.g. the number of machines and the other neighbouring procedures. Also the highest permissible levels of exposure may vary in different countries. This information should help the machine user to evaluate the risk and the risk rate in a better manner.

Features and Terminology



Receiving

Carefully unpack the machine and any loose items from the wood crate 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 screws that hold the machine to the shipping skid. Remove the protective coating from the table, bed rolls, feed rolls, cutterhead
and loose items packed with the machine. 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.

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.

Tools Required for Assembly

1 Accurate Straight Edge (approximately 2 ft)
1 Cross-point Screwdriver
1 4mm Hex Wrench (included)
1 5mm Hex Wrench
1 6mm Hex Wrench (included)
1 10mm Box Wrench
1 13mm Box Wrench

Note: Use of sockets and ratchets will speed assembly time but are not required.

Electrical Connection

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 PT310 Jointer–Planer is rated at 230V. This machine is not supplied with a plug. Use a plug and outlet rated at least 20amps.

The circuit for the machine should also be protected by at least a 20 amp circuit breaker or fuse.

Make sure that the cutterhead moves in thecorrect direction. If it does not, simply reverse two of the phase wires on the supply input.

Operating Controls

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

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

Jointer to Planer Setup

To change the machine configuration jointer to planer (refer to Figure 2):

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).

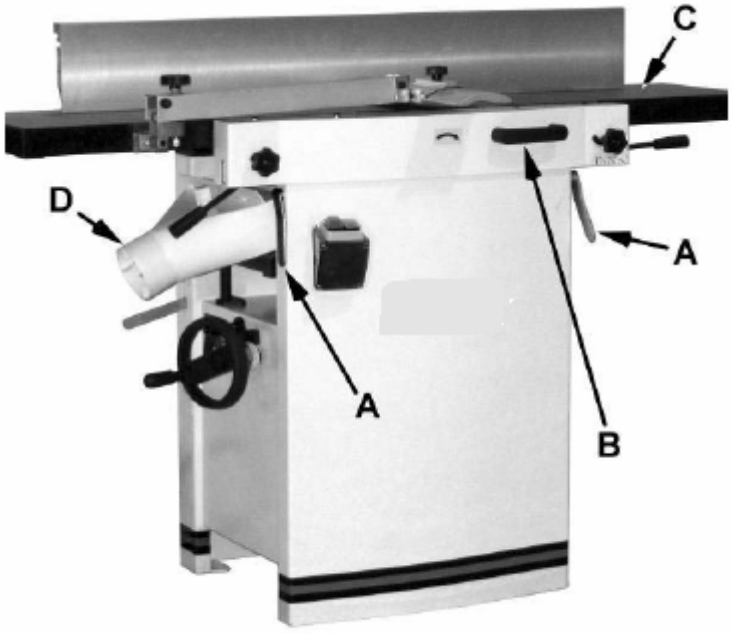


Figure 2

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

When raised, the table should be in the vertical position as shown in C, Fig. 3. The latch (E, Fig. 3) should be engaged, preventing the table from an accidental forward fall.

3. Position the dust chute (D,H Fig. 3) to the right. 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.

Planer to Jointer Setup

Referring to Figure 3: To change the machine configuration from planer to jointer:

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

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

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

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

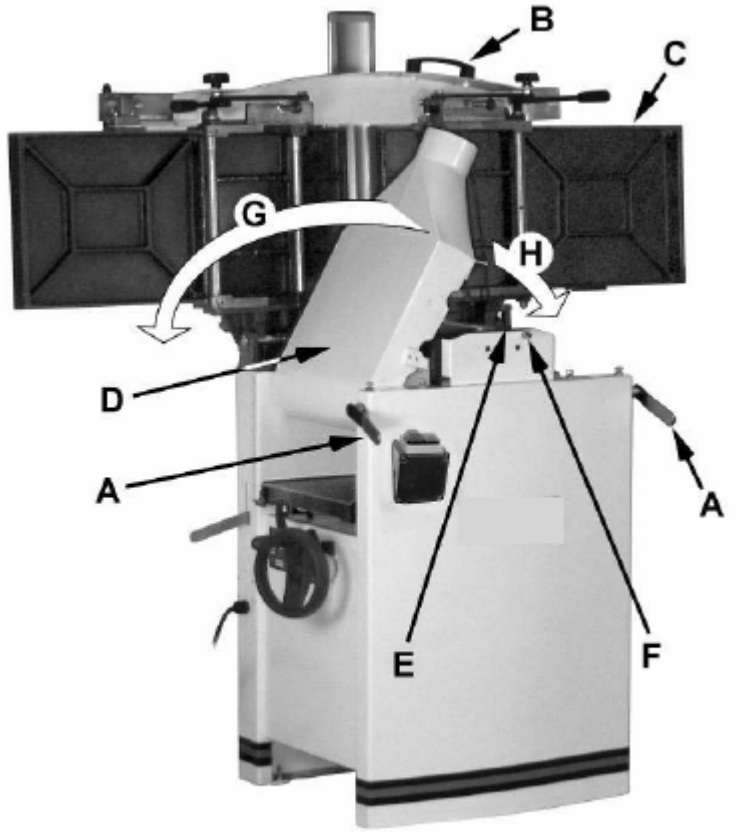


Figure 3

Power

Once a properly rated plug is connected, plug power cord into outlet. Press the green on button (A, Fig. 4) to start. Press the red off button (B, Fig. 4) to stop.

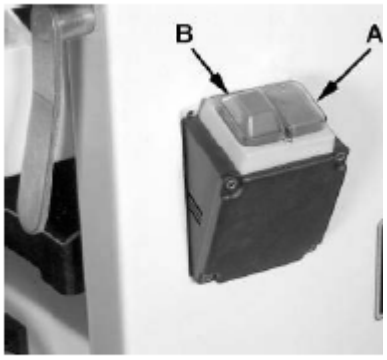


Figure 4

Planer Controls and Adjustments

Referring to Figure 5:

Power Feed

Placing the planer power feed handle (D) in the up position turns the planer power feed on (see arrow). Placing the handle in the down position turns the power feed off.

Table Lock

Turn the table lock (E) clockwise to lock the height adjustment handwheel (F) and secure the planer table (C) in its selected position. Turn the table lock (E) counterclockwise to release and permit table adjustment.

Table Height Adjustment

The planer table height is set as follows:

1. Unlock the table lock (E).
2. Rotate the height adjustment handwheel (F) clockwise to raise the planer table (C), counterclockwise to lower.
3. Lock the table lock (E). Each revolution of the handwheel (F) results in a 4mm 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.

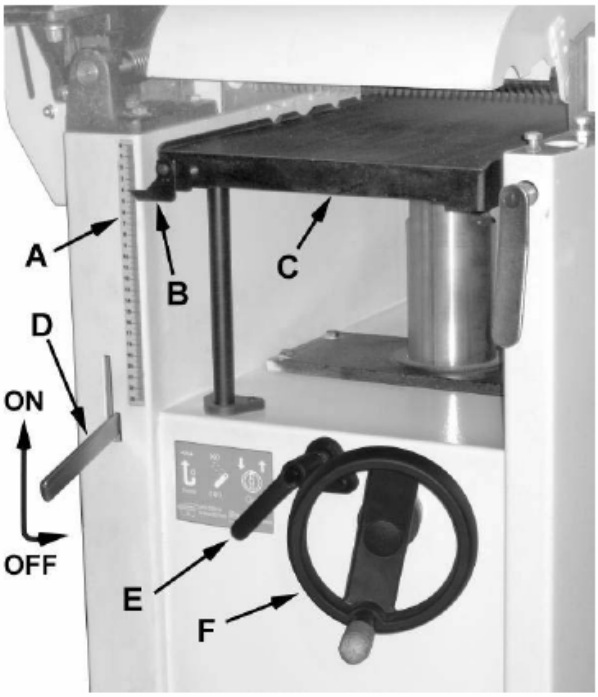


Figure 5

Jointer Controls and Adjustments

Referring to Figure 6:

Outfeed Table Height Adjustment

Lock knob (C) and lifting 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.

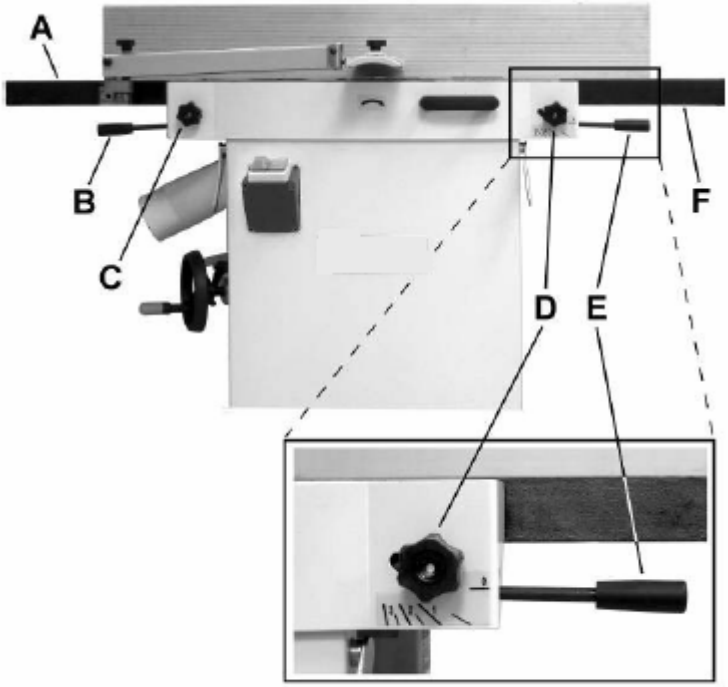


Figure 6

Infeed Table Height Adjustment

Lock knob (D) and lifting handle (E) control the height adjustment of the infeed table (F).To adjust:

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

Note: A depth of cut of 1.5mm or less is recommended.

Cutterhead Guard

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

Fence Movement

Referring to Figure 7:

The fence (A) can be moved forward (B) or backward (C) across the width (W) of the table. It also tilts up to 45 degrees backwards (D).

Loosen the lock knob (J), slide the guard into position, then tighten the lock knob.

To slide fence forward or backward:

When edge jointing, the fence assembly should periodically be moved to different positions to distribute wear on the cutterhead knives. This is done as follows:

1. If necessary, loosen the cutterhead guard (H) to permit the fence assembly to move freely without being constrained by the

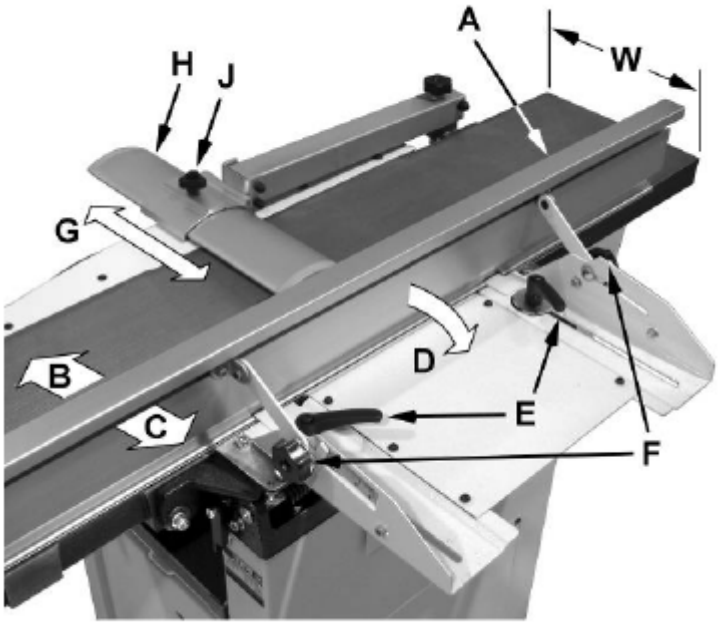


Figure 7

guard.
2. Loosen two fence assembly locking handles (E).
3. Move the entire fence assembly to the desired position; then re-tighten the handles (E).
4. Readjust and secure the cutterhead guard. To tilt fence backward:
The fence (A) can be tilted backward (D) up to 45° (that is, for a total included angle of 135° from table surface) as follows:
1. Loosen locking handles (F).
2. Tilt the fence back (A, C) to the desired angle up to 135 degrees. Or you can place your beveled reference piece on the table and against the fence, adjusting the fence until the angle of the fence matches the bevel of your gauge piece.
3. Tighten the locking handles (F).
4. Readjust and secure the cutterhead guard.

Adjustments

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.

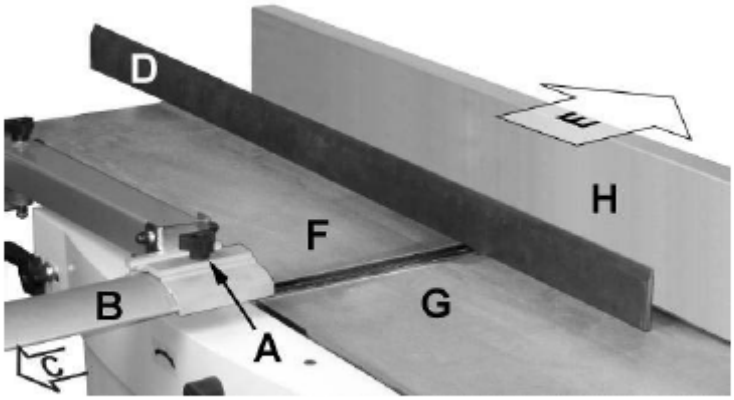


Figure 8

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

Coplanar Alignment

Definition of coplanar

When the infeed table is set to the same level as the outfeed table and together both tables form 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 jointed its width or length.

Determining if tables are coplanar

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.

Referring to Figures 8 and 9:

1. Disconnect jointer from power source.
2. Loosen the lock knob (A) and slide the cutterhead guard (B, C) to clear the table.
3. Slide the fence assembly back (H, E) as far as it will go, or remove it from the machine entirely.
4. Rotate the cutterhead to avoid knife interference.
5. Place a straight edge (D) across the front of the outfeed table (F) and extending over the infeed table (G). Note the position of the infeed table (G). Note the position of the straight edge in Figure 6 with respect to the fence (H).
6. Raise the infeed table (G) until it contacts the straight edge (D).

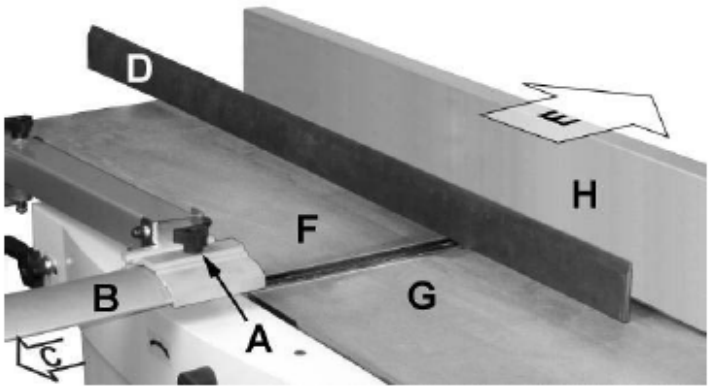


Figure 8

The straight edge should lie level across both tables. Move the straight edge to the back of the outfeed table as shown in Figure 7 and perform the same test.

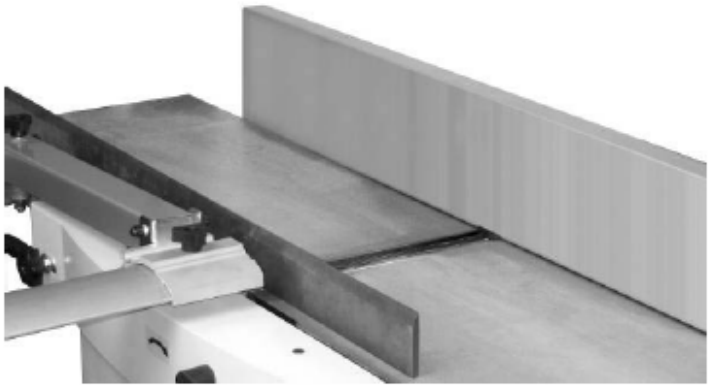


Figure 9

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

If alignment is required as determined in the previous section, proceed as follows:

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

1. Disconnect power from machine.
2. Unlock both cabinet lock handles (A2).
3. Raise the table (D) fully upright. Adjustment is performed by means of four setscrews (B2) that adjusts the table pitch and tilt at the back (towards the fence) and two hex cap screws (A1) that adjusts the table toward the front.

Adjustment can consist of a front adjustment, rear adjustment or (more probable) a combination of both.

Rear adjustment

Tools required – 13mm wrench, 4mm hex wrench

1. With a 13mm wrench, loosen three hex cap screws (B1).
2. Using a 4mm hex wrench, make very slight adjustments of 1/8 to 1/4 turns to four setscrews (B2) as required. A clockwise turn will raise the table; a counterclockwise turn will lower the table. Adjusting the two right setscrews will have greatest adjustment impact to the table's right side; adjusting the two left setscrews will have greatest adjustment impact to the table's left side.
3. When adjustment is complete, tighten the hex cap screws (B1)

Front adjustment

Tools required – two 13mm wrenches
1. Hold the hex cap screws (A1) in place with one wrench while using the other to loosen the locking hex nuts.
2. Adjust the screws (A1) slightly from 1/8 to 1/4 turn. A counterclockwise turn will raise the table; a clockwise turn will lower the table. Adjusting the right screw will have greatest adjustment impact to the table's right side; adjusting the left screws will have greatest adjustment impact to the table's left side.
3. When adjustment is complete, secure by tightening the hex nut while maintaining the position of the screw with the second wrench. It may be necessary to repeat the exercise in this
section more than once to achieve co-planar alignment.

Note: If the tables do not lock properly after the adjustment, see Jointer Table Lock Handle Adjustment on page next.

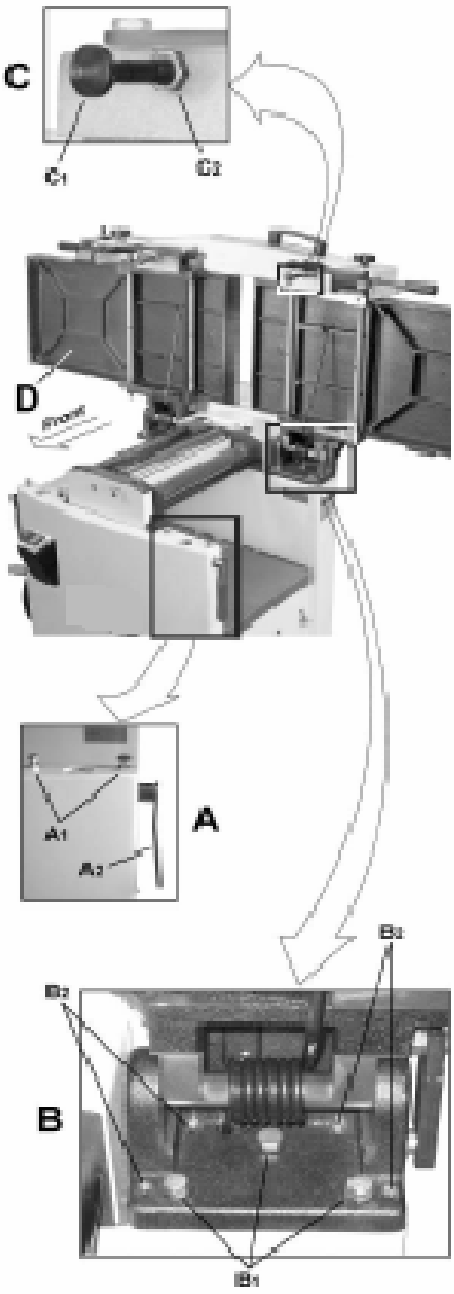


Figure 10

Setting Cutterhead Knives

Important: Before performing any adjustments in this section, the infeed and outfeed tables must be coplanar.

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 the power source.
2. Remove the cutterhead guard (B, Fig. 8). Referring to Figures 11 and 12:
3. Carefully number each knife blade (C) with a magic marker to differentiate each.
Note: To rotate the cutterhead the cutterhead pulley must be turned. This requires removing the panel on the back of the cabinet for access.
4. Rotate the cutterhead (E) and determine the 12 o'clock position of knife number one. The 12 o'clock position is the highest point a blade will reach in the cutting arc (C, Fig. 12).
5. Set a straightedge (J) on the outfeed table (F) near the fence (H). One end of the straightedge should be positioned over the cutting knife (C) near the end of the blade as shown in Fig. 9.

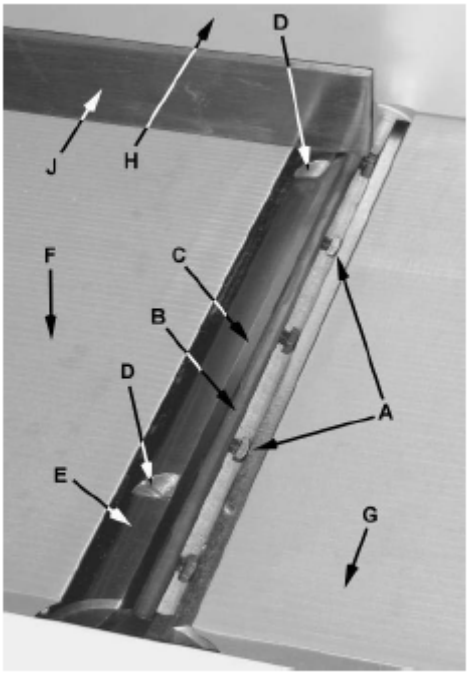


Figure 11

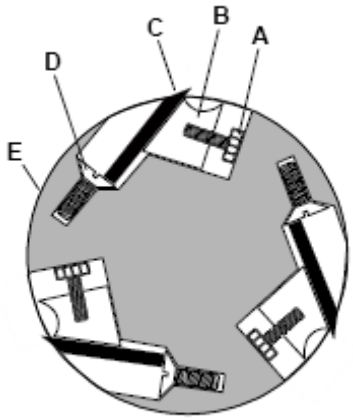


Figure 12

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

Note the position of the knife blade with respect to the straightedge, then move the straightedge to the other side of the table and again note the position of the knife blade with respect to the straight–edge. Blade number one must be at the same height at each end and must also be at the same height as the outfeed table (bottom of straightedge). If this is not the case, adjustment is required as follows:
6. Slightly loosen five gib lock screws (A) by turning into the lock bar (B), clockwise as viewed from the infeed table (G).
7. Adjust the blade height by turning jack screws (D) upon which the blades rest. To lower the blade, turn the screw clockwise. To raise, turn the screw counter–clockwise.
8. When the blade is at the proper height, alternately tighten the five gib lock

screws(A).
Repeat steps 4 – 8 for blades two and three.

Replacing Cutter Knives

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

1. Disconnect machine from the power source.
2. Remove the cutterhead guard (B, Fig. 6).

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.

3. Turn all five screws (A) into the lock bar (B) by turning in a clockwise direction as viewed from the infeed table (G).
4. Carefully remove the cutter knife (C) and lock bar (B).
5. Repeat for remaining two knives.
6. Thoroughly clean all surfaces of the cutterhead, knife slots and lock bars of any dust or debris.
7. Insert replacement knife (C) into the knife slot, making sure it faces the proper direction.
8. Insert lock bar (B) and tighten just enough to hold in place.
9. Repeat for other two blades.

Jointer Table Lock Handle Adjustment

For best performance, the jointer table lock handles (A2) should be approximately in the fully down position when in the locked position. If adjustment is required:

1. Disconnect machine from power source.
2. Unlock the lock handle (A2) and raise the table to the upright position.
3. Loosen locking nut (C2) with an 18mm wrench.
4. Adjust the table locking shaft (C1) 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 (C2).
6. Test the locking function and repeat if necessary.

Belt Replacement

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

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 and two 13mm wrenches are required.

1. Remove the jointer fence assembly (A) by first loosening and removing two lock handle assemblies (B). A 4mm hex wrench is helpful, but not necessary.

2. Remove two button head socket screws (C) and upper back panel (D).
3. Remove four button head socket screws (O) and lower back panel (P).

Cutterhead Drive Belt Replacement

4. Loosen four motor mount screws (L). Lift the motor and rest it in the horizontal slot side of the motor mount opening. This will create a slack in the cutterhead drive belt (F).
5. Remove the cutterhead drive belt (F) from around the cutterhead pulley (E) and motor pulley (M).
6. If the feed-roller belt (K) is to be replaced, continue. Otherwise proceed to step 10.

Feed-roller Belt Replacement

Note: If the feed-roller belt is to be replaced, steps 1-5 must be performed to remove the cutterhead drive belt before the feed-roller belt can be replaced.
7. Place the power feed handle (J) in the down (off/disengaged) position, which provides belt slack for the next step.
8. Remove the feed-roller belt (G) from around the feed-roller pulley (K) and motor pulley (M).
9. Loop the new belt around the smaller (inner) motor pulley (M) and feed-roller pulley (K).
Note: The lower stretch of the feed-roller pulley must be positioned between the beltbrake plates (N).

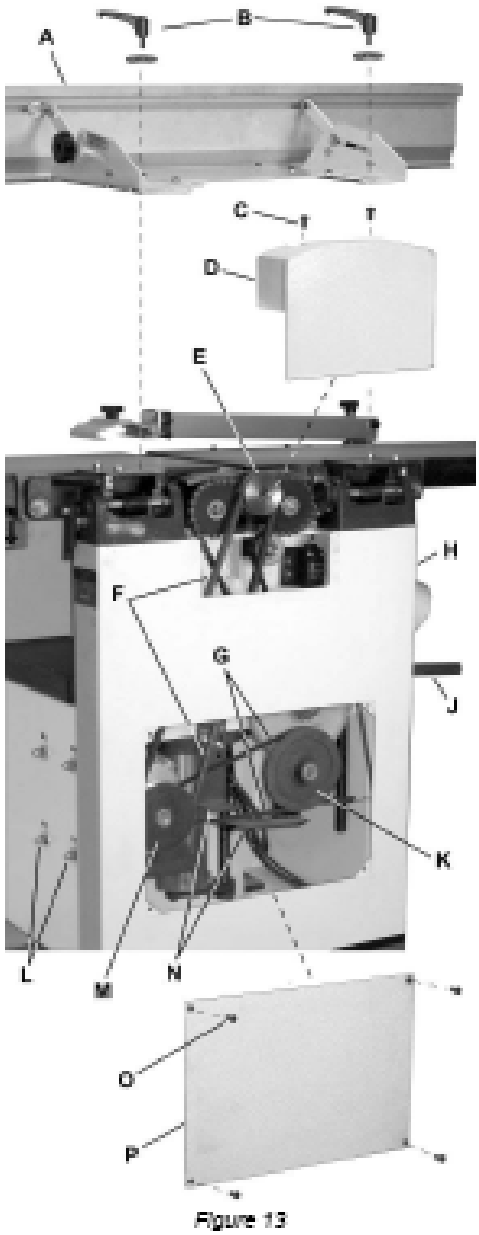


Figure 13

Concluding Steps

10. Replace the cutterhead drive belt (F) by looping it around the cutterhead pulley (E), then the larger (outside) motor pulley (M).
11. Slide the motor so the mounting screws (L) rest back in the vertical slot openings, then tighten the mounting screws.
12. Replace the lower back panel (P) and secure with four button head socket screws (O).
13. Replace the upper back panel (D) and secure with two button head socket screws (C).
14. Replace the jointer fence assembly (A) and secure with two lock handle assemblies (B).

Planer Table Adjustment

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

Checking Planer Table Parallel to Cutterhead

The planer table is set parallel to the cutterhead at the factory 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 Setting Cutterhead Knives on page 14) 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.
1. Disconnect machine from power source.
2. Rotate the cutterhead such that one of the knife blades (A, Fig. 14) is at the 6 o'clock position.

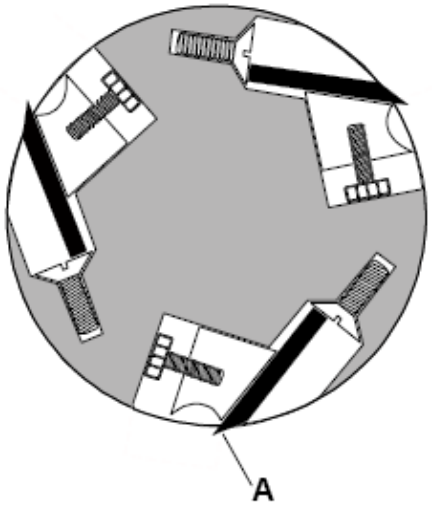


Figure 14

Referring to Figure 15:
3. Place a gauge block (B) or another measuring device on the work table (C) at one edge (D) directly under the cutterhead.
4. Unlock the table lock handle (F).
5. With the handwheel (G), gently raise the table (C) until the gauge block (B) makes slight contact with the tip of the knife blade, then lock the table.
6. 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.

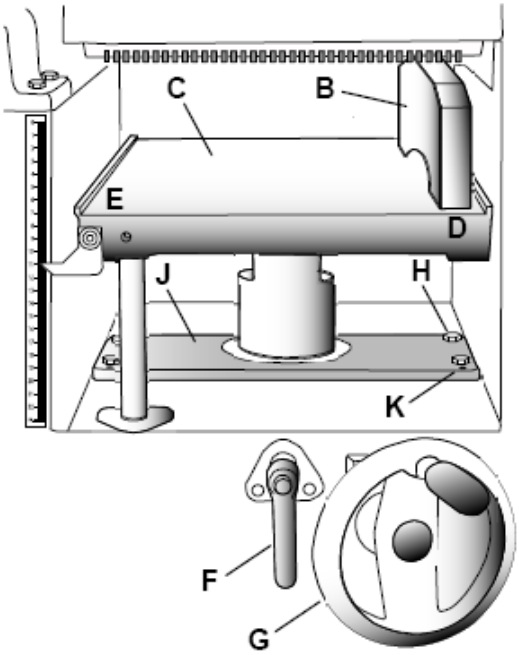


Figure 15

Adjusting Work Table Parallel to Cutterhead
If the work table is not parallel to the cutterhead, perform the adjustment procedure as follows:
7. With a 13mm wrench, loosen four hex cap screws (H) located at each corner of the column support (J).
8. Bring the table parallel to the cutterhead by adjusting four setscrews (K) located at each corner of the column support (J) next to the hex cap screws (H).
9. Repeat steps 3 – 6, and if further adjustment is necessary, repeat steps 8, 9.
10. When the table is determined to be parallel to the cutterhead, tighten the hex cap screws (H).

Basic Operations

Dust Collection

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

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.

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.

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 sections Jointer to Planer Setup and Planer to Jointer Setup.

Jointer Operations

Correct operating position

The operator must be positioned offset to the infeed table (Figure 16).

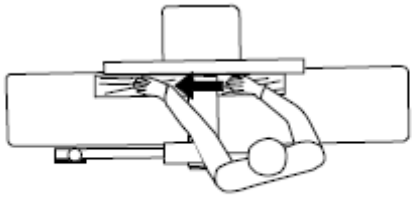


Figure 16

Hand placement

Referring to Figure 16:

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 16) 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.

Surfacing

The purpose of planing on a jointer is to produce one flat surface (Figure 17). 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 inches or thinner than 3/8 inch without the use of a special work holding fixture.

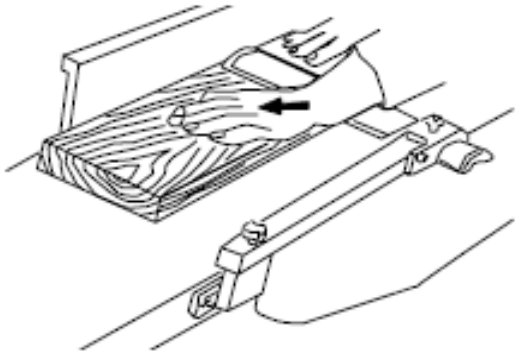


Figure 17

Never surface pieces thinner than 3 inches 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.

Direction of Grain

Avoid feeding work into the jointer against the grain (Figure 18).

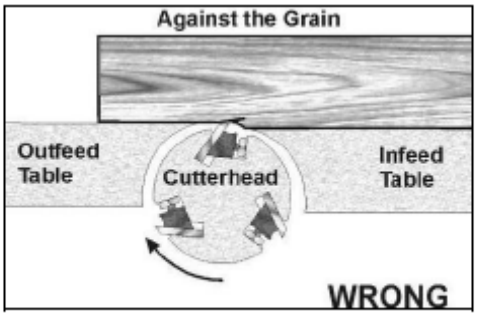


Figure 18

This may result in chipped and splintered edges. Feed with the grain to obtain a smooth surface, as shown in Figure 19.

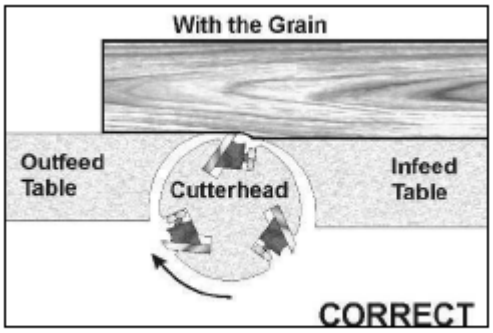


Figure 19

Jointing

Jointing (or edging) is the process of creating a finished, flat edge surface that is suitable for joinery or finishing (Figure 20). 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 inches wide, less than 1/4 inch thick, or 12 inches long, without using a push block.

When edging wood wider than 3 inches 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 forward) to expose only the amount of cutterhead required.

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

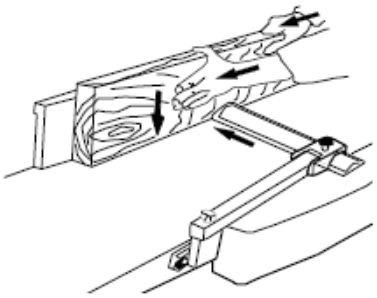


Figure 20 – Surfacing

direction (refer to Direction of Grain on previous page).
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 1.5mm.
5. Hold the stock firmly against the fence and table, feed the stock slowly and evenly over the cutterhead.

Beveling

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

Make certain material being beveled is over 12 inches long, more than 1/4 inch thick and 1 inch 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 on previous page).
3. Set the infeed table for a cut of approximately1.5mm.
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 21).

For wood wider than 3 inches – 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 inches 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 will probably take several passes.

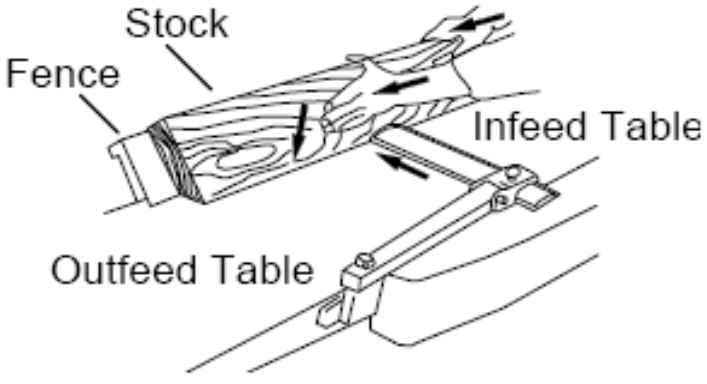


Figure 21 – Beveling

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. Board thickness that the planer will produce is indicated by the scale and the depthof- cut gauge . 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 (F, Fig. 5).

The quality of thickness planning depends on the operator's judgment about the depth of cut.

The depth of cut depends on the width, hardness, dampness, grain direction and grain structure of the wood.

The maximum thickness of wood that can be removed in one pass is 1/8" for planning operations on workpieces up to 5-1/2" wide.
The workpiece must be positioned away from the center tab on the rollercase to cut 1/8".

The maximum thickness of wood that can be removed in one pass is 1/16" for planning operations on workpieces from 5-1/2" up to 12" wide.

For optimum planning 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 planning 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 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 lose 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. Rip 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.

Do not plane a board that is less than 6" long. It is recommended that when planning 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 rollercase 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 that the handle is attached.

Boards longer than 24" should have additional support from free standing material stands.

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.

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 of the 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 looses contact with the board.

When planning 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.

Maintenance

Blade Care

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 build up may result in excessive friction, blade wear and overheating. When blades become dull, touch up blades. See Sharpening the Knives.

Sharpening the Knives

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

1. Disconnect the machine from the power source.
2. Remove the blade guard and belt cover.
3. To protect the infeed table from scratches, partially cover the sharpening stone with paper (Figure 22).
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 amount of passes for all three blades.

When 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.

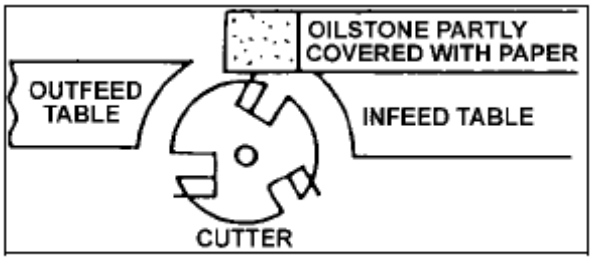


Figure 22

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.

Troubleshooting

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 *Setting Cutterhead Knives*.
Finished stock is concave on front end.	Outfeed table is higher than knife.	Align cutterhead knives with outfeed table. See *Setting Cutterhead Knives*.
Chip out.	Cutting against the grain.	Cut with the grain whenever possible.
	Dull knives.	Sharpen or replace knives.
	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 the *Setting Cutterhead Knives* section. 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 the *Setting Cutterhead Knives* section. Replace nicked knives.

Performance Troubleshooting – Planer

Trouble	Probable Cause	Remedy
Snipe Note: Snipe can be minimized but not eliminated	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.
	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.
Torn Grain	Too heavy a cut.	Adjust proper depth of cut
	Knives cutting against grain.	Cut along the grain.
	Dull knives.	Sharpen knives.
Rough/Raised Grain	Dull knives.	Sharpen knives.
	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.
	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 achieve, 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.

Mechanical Troubleshooting – Planer/Jointer

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. If problem persists, check amp setting on the motor starter inside the electrical box.
	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 then there is probably a loose electrical lead. Check amp setting on motor starter.
	Building circuit breaker trips or fuse blows.	Verify that planer is on a circuit of correct size. If circuit size is correct, there is probably a loose electrical lead. Check amp setting on motor starter.
	Loose electrical connections.	Go through all the electrical 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.

Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1541031	Lock Nut	M8	4
2	JJP12-002	Washer		4
3	JJP12-003	Outfeed Table Bracket Shaft		1
4	JJP12-004	Outfeed Table Bracket, Right		1
5	TS-1504121	Socket Head Cap Screw	M8x60	4
6	JJP12-006	Eccentric Shaft		4
7	JJP12-007	Table		2
8	JJP12-008	Cutterhead Guard Assembly - Complete		1
9	JJP12-009	Bracket		1
10	TS-1503071	Socket Head Cap Screw	M6x30	2
11	JJP12-011	Washer	H12	4
12	TS-2342121	Lock Nut	M12	4
13	TS-1503051	Socket Head Cap Screw	M6x20	4
14	JJP12-014	Adjusting Handle		2
15	JJP12-015	Knob		2
16	JJP12-016	Bracket Screw		2
17	JJP12-017	Bracket Screw		2
18	JJP12-018	Eccentric Shaft Bracket		2
19	JJP12-019	Eccentric Shaft Clamp		2
20	JJP12-020	Table Locking Shaft		2
21	TS-1540081	Hex Nut	M12	2
22	JJP12-022	Outfeed Table Bracket, Left		1
23	TS-1524021	Socket Set Screw	M8x10	8
24	JJP12-024	Plastic Disc	D6	8
25	TS-1490051	Hex Cap Screw	M8x30	6
26	TS-1550081	Flat Washer	M8	6
27	JJP12-027	Table Support		2
28	JJP12-028	Spring		2
29	TS-1490021	Hex Cap Screw	M8x16	2
30	TS-1540081	Hex Nut	M8	3
31	JJP12-031	Big Cam Wheel		1
32	TS-1522031	Socket Set Screw	M5x10	1
33	JJP12-033	Cutterhead Guard with Cap		1
34	TS-1524031	Socket Set Screw	M8x12	8
61	JJP12-061	Small Cam Wheel		1
62	JJP12-062	Washer	H16	1
63	JJP12-063	Dust Collector Assembly		1
64	JJP12-064	Roll Pin	M5x18	1
65	JJP12-065	Shaft		1
66	JJP12-062	Washer	H16	1
67	BB-6205ZZ	Bearing	6205ZZ	2
68	708821	Knife (Set of 3)		1
69	JJP12-069	Knife Locking Bar		3
70	JJP12-070	Knife Locking Bar Screw		15
71	JJP12-071	Cutterhead		1
72	TS-2246122	Button Head Socket Screw	M8x12	4
73	JJP12-073	Belt Cover		1
74	JJP12-074	Screw		4
75	JJP12-075	Spring		4
76	TS-1490021	Hex Cap Screw	M8x16	4
77	TS-1540081	Hex Nut	M8	4
78	TS-1491031	Hex Cap Screw	M10x25	4
79	TS-1550071	Flat Washer	M10	4
80	JJP12-080	Adjusting Washer		48

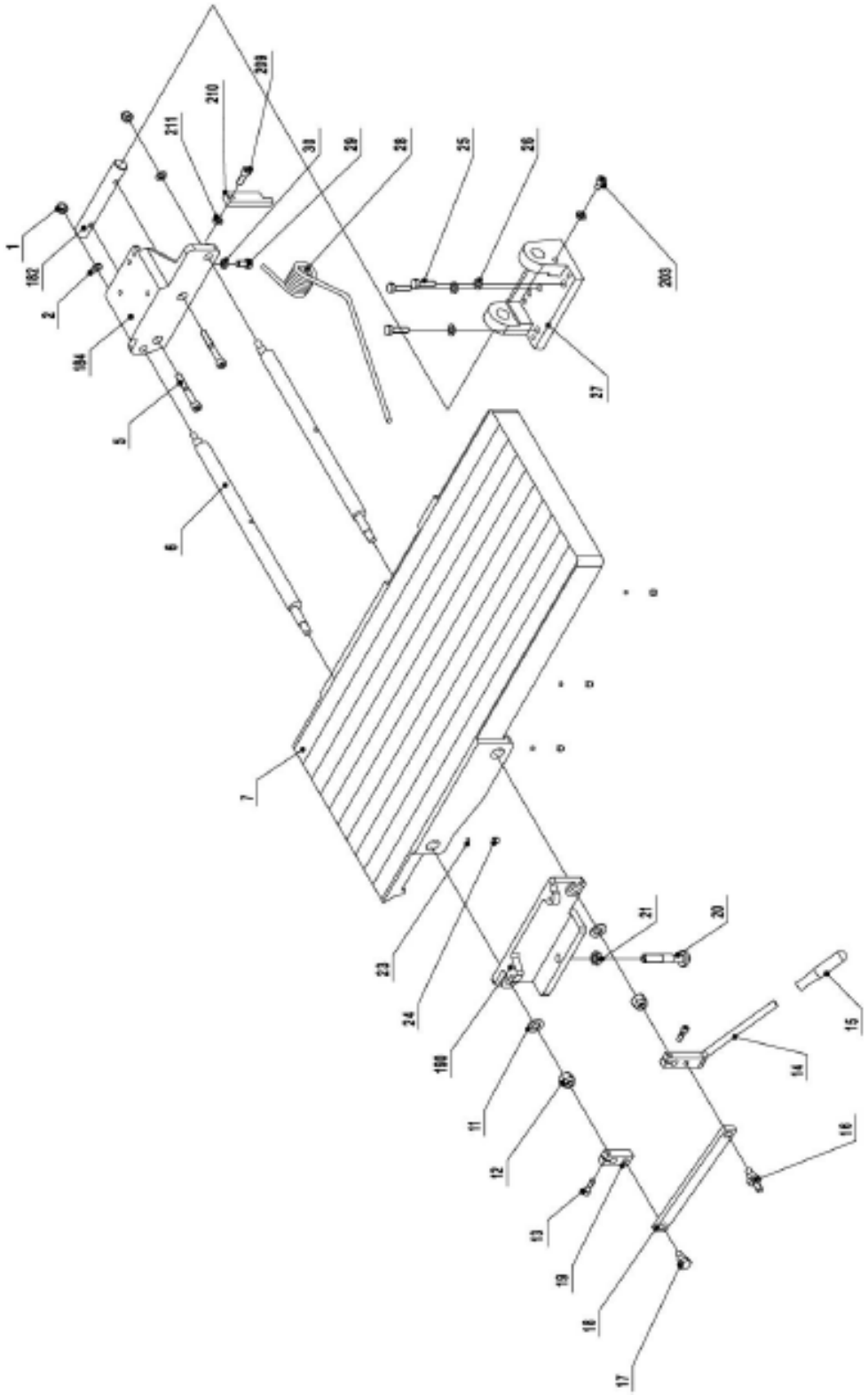
Index No.	Part No.	Description	Size	Qty
81	JJP12-081	Anti-Kickback Finger		38
82	JJP12-082	Infeed Roller		1
83	JJP12-083	Anti-Kickback Shaft		1
84	JJP12-084	Cutterhead Cover		1
85	JJP12-085	Cutterhead Bracket, Right		1
86	TS-1550041	Flat Washer	M6	4
87	TS-1503031	Socket Head Cap screw	M6x12	4
88	JJP12-088	Cutterhead Bracket Cover		1
89	TS-2246122	Button Head Socket Screw	M6x12	2
90	TS-2331061	Cap Nut	M6	1
91	JJP12-091	Spring		1
92	JJP12-092	Stop Pin		1
93	JJP12-093	Support Rod		1
94	JJP12-094	Outfeed Roller		1
95	JJP12-095	Bushing		4
96	JJP12-096	Cutterhead Bracket, Left		1
97	JJP12-097	Wave Washer	D52	2
98	JJP12-098	Retaining Ring	CLP52	2
99	JJP12-099	Washer		2
100	JJP12-100	Drive Chain Sprocket		2
101	JJP12-101	Washer	WSH10	2
102	TS-1541041	Lock Nut	M10	2
103	JJP12-103	Socket Set Screw	M8x6	2
104	JJP12-104	Key	PLN6x16	1
105	JJP12-105	Spindle Pulley		1
106	JJP12-106	Washer	D52	2
131	JJP12-131	Carriage Bolt	N12x65	1
132	JJP12-132	Square Washer		1
133	JJP12-133	Bushing		1
135	JJP12-135	Bearing	BRG80101	1
136	JJP12-136	Chain Wheel		1
137	TS-2342121	Lock Nut	M12	1
138	JJP12-138	Pan Head Screw	M4x35	2
139	TS-1541021	Lock Nut	M6	2
140	TS-1550041	Flat Washer	M6	2
141	JJP12-141	Safety Switch		1
142	JJP12-142	Safety Switch Bracket		1
143	TS-1541001	Lock Nut	M4	2
144	TS-1550041	Washer	M6	4
145	TS-1540041	Hex Nut	M6	2
146	JJP12-146	Safety Switch Rocker		1
147	JJP12-147	Safety Switch Rocker Shaft		1
148	TS-1503061	Socket Head Cap Screw	M6x25	2
151	JJP12-151	Bolt		4
152	TS-1540061	Hex Nut	M8	4
153	JJP12-153	Outfeed Table Lock Handle		1
154	JJP12-154	Retaining Ring	CLP20	4
155	JJP12-155	Spring		2
156	JJP12-156	Direction Label (not shown)		1
157	JJP12-157	Switch	230/60/1	1
158	JJP12-158	Pan Head Screw		2
159	TS-1514021	Flat Head Socket Screw	M6x16	2
160	TS-2246122	Button Head Socket Screw	M6x12	2
161	JJP12-161	Washer	H6	7
162	JJP12-162	Front Cover		1
163	JJP12-163	Handle		1
164	JJP12-164	Lock Knob		4
165	JJP12-165	Cabinet		1

Index No.	Part No.	Description	Size	Qty
166	JJP12-166	Infeed Table Lock Handle		1
167	JJP12-167	Infeed Scale, Inch		1
168	JJP12-168	Thickness Scale, Inch		1
169	JJP12-169	Washer	H8	2
170	JJP12-170	Retaining Ring		1
171	JJP12-011	Washer	H12	1
172	TS-1504041	Socket Head Cap Screw	M8x20	2
182	JJP12-182	Infeed Table Bracket Shaft		1
184	JJP12-184	Infeed Table Bracket, Right		1
190	JJP12-190	Infeed Table Bracket, Left		1
203	TS-1504031	Socket Head Cap Screw	M8x16	1
209	TS-1504081	Socket Head Cap Screw	M8x40	1
210	JJP12-210	Table Stopper		1
211	TS-1540061	Hex Nut	M8	3
221	JJP12-221	V-Belt for Cutterhead, 60Hz		1
222	JJP12-222	Drive Chain		1
223	JJP12-223	Cam Wheel Bracket		1
224	JJP12-224	Cam Wheel Shaft		1
225	JJP12-225	Cam Wheel with Sprocket/Key		1
226	JJP12-226	Bushing		1
229	JJP12-229	Washer		1
230	JJP12-230	Retaining Ring	CLP15	1
231	JJP12-231	Retaining Ring	CLP10	2
232	TS-1522031	Socket Set Screw	M5x10	2
233	JJP12-233	Flat Belt Feed Roller Pulley		1
234	JJP12-234	Cam Wheel		1
235	JJP12-235	Bearing	BRG80100	2
236	JJP12-236	Bearing Spacer		1
238	TS-1524031	Socket Set Screw	M8x12	2
239	JJP12-239	Motor Pulley, 60Hz		1
240	JJP12-240	Flat Belt for Feed Roller		1
241	TS-1490041	Hex Cap Screw	M8x25	4
242	TS-1550061	Flat Washer	M8	4
243	JJP12-243	Motor	3HP, 230V, 60Hz, 1Ph	1
244	JJP12-244	Washer	H8	4
245	TS-2361081	Lock Washer	M8	4
246	TS-2331081	Cap Nut	M8	4
247	JJP12-247	Capacitor 230/60/1 (not shown)		1
248	JJP12-248	Shaft		1
249	TS-2361101	Lock Washer	M10	1
250	TS-1540071	Hex Nut	M10	1
251	JJP12-251	Small Motor Pulley		1
288	JJP12-288	Indicator		1
289	TS-2246122	Button Head Socket Screw	M6x12	1
290	TS-1524031	Socket Set Screw	M8x12	1
291	JJP12-291	Table Guide Bar		1
292	TS-1503051	Socket Head Cap screw	M6x20	2
293	JJP12-293	Guide Bar Bracket		2
294	TS-1550041	Flat Washer	M6	2
295	TS-1540041	Hex Nut	M6	2
297	TS-1524031	Socket Set Screw	M8x12	1
298	JJP12-298	Indicator Seat		1
299	TS-2246202	Button Head Socket Screw	M6x20	1
300	JJP12-300	Screw		2
301	JJP12-301	Cover		1
302	JJP12-302	Washer		2

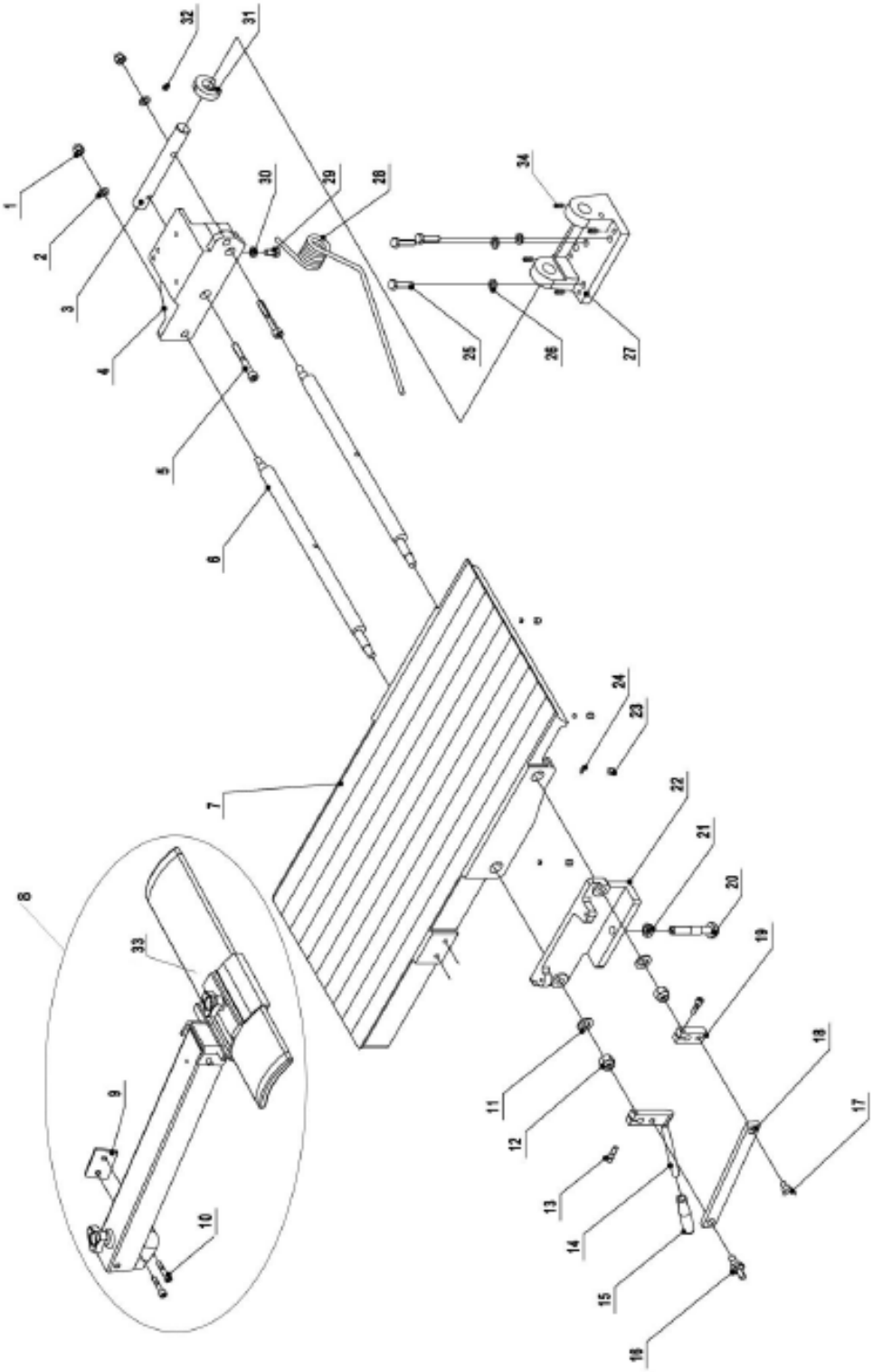
Index No.	Part No.	Description	Size	Qty
303	JJP12-303	Nut		2
304	JJP12-304	Locking Bar		1
305	JJP12-305	Locking Shoe		1
306	JJP12-306	Crank Handle		1
307	JJP12-307	Hand Wheel		1
308	TS-1503051	Socket Head Cap Screw	M6x20	1
312	JJP12-154	Retaining Ring	CLP20	1
313	JJP12-313	Retaining Ring		1
314	JJP12-314	Washer		1
315	JJP12-315	Crank Bar		1
316	TS-2246122	Button Head Socket Screw	M6x12	2
317	TS-1540041	Flat Washer	M6	2
318	JJP12-318	Bevel Gear		2
319	JJP12-319	Retaining Ring	CLP35	1
320	JJP12-320	Bearing	BRG80202	1
321	JJP12-321	Bevel Gear Bracket		1
322	TS-1550061	Flat Washer	M8	5
323	TS-1490061	Hex Cap Screw	M8x35	2
324	JJP12-324	Thread Rod		1
325	JJP12-325	Bolt	M6x40	1
326	TS-1540041	Hex Nut	M6	1
327	TS-1490061	Hex Cap Screw	M8x35	2
329	TS-1550061	Flat Washer	M8	2
330	JJP12-330	Thread Rod Bracket		1
331	JJP12-331	Column Support		1
332	TS-1550061	Flat Washer	M8	4
333	TS-1524051	Socket Set Screw	M8x20	4
334	TS-1490061	Hex Cap Screw	M8x35	4
335	JJP12-335	Column		1
336	TS-149105	Hex Cap Screw	M10x35	2
337	TS-2361101	Lock Washer	M10	2
338	JJP12-338	Planer Table		1
339	JJP12-339	Scale Ring Assembly, Inch		1
368	JJP12-368	Hinge Pin		2
369	JJP12-369	Square Nut	M8	2
370	TS-1541021	Lock Nut	M6	2
371	JJP12-371	Fence Mounting Bracket		2
372	TS-1504031	Socket Head Cap Screw	M8x16	2
374	TS-1514021	Flat Head Socket Screw	M6x16	2
376	JJP12-376	Fence Support, Right		1
377	JJP12-377	Nylon Washer		10
378	JJP12-378	Carriage Bolt	M8x25	2
379	TS-2246122	Button Head Socket Screw	M6x12	6
380	TS-1550041	Flat Washer	M6	6
381	JJP12-381	Cutterhead Cover		1
382	TS-1541021	Lock Nut	M6	4
383	TS-1503031	Socket Head Cap Screw	M6x12	4
384	JJP12-384	Fence Bracket, Left		1
385	JJP12-385	Locking Handle		3
386	JJP12-386	Special Washer		2
387	JJP12-387	Fence		1
388	JJP12-388	Fence Support, Left		1
389	JJP12-389	Fence Bracket, Right		1
390	JJP12-390	Fence Scale		1
391	JJP12-391	Complete Fence Assembly		1

Assembly Drawings

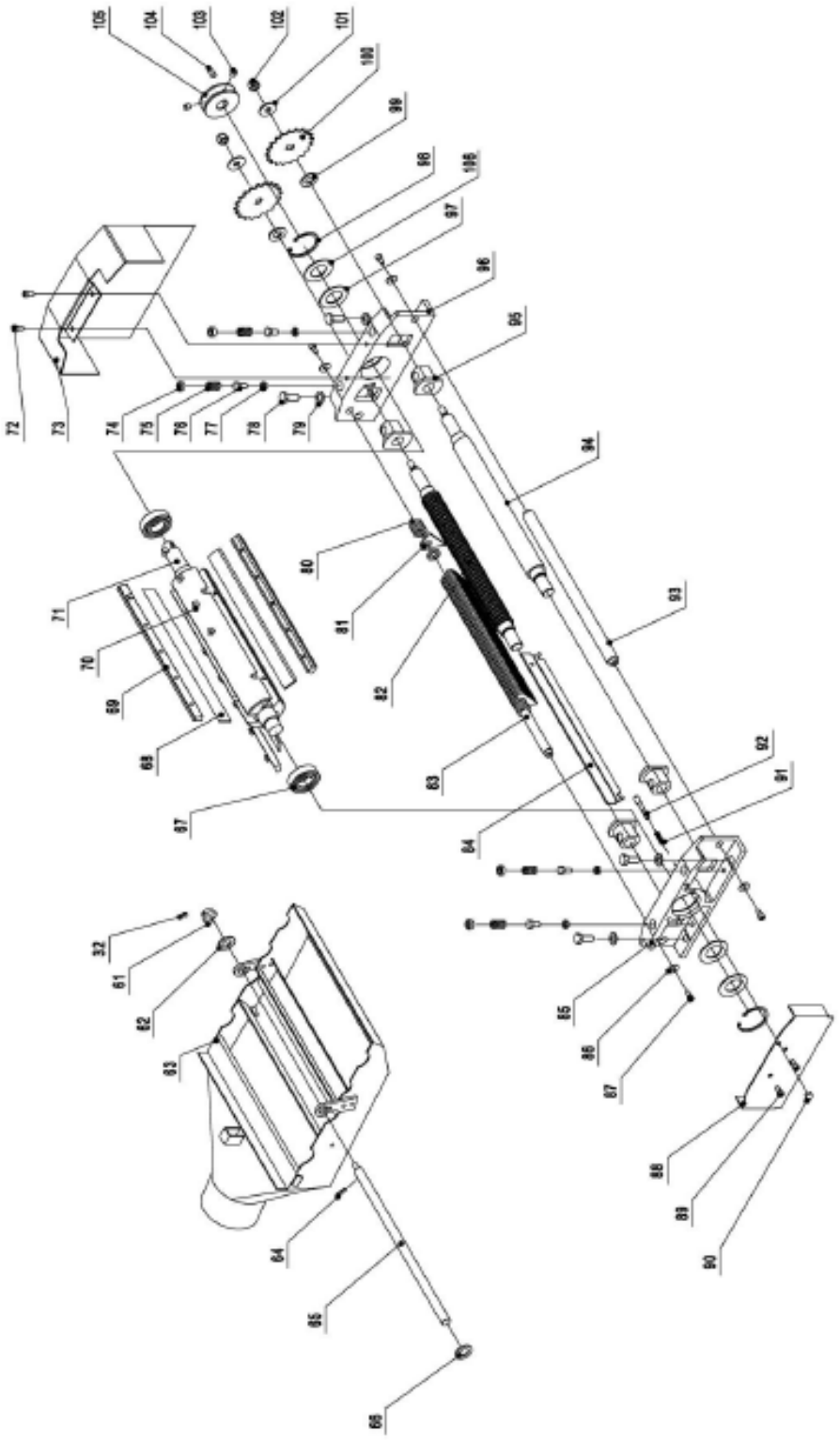
Infeed Table Assembly



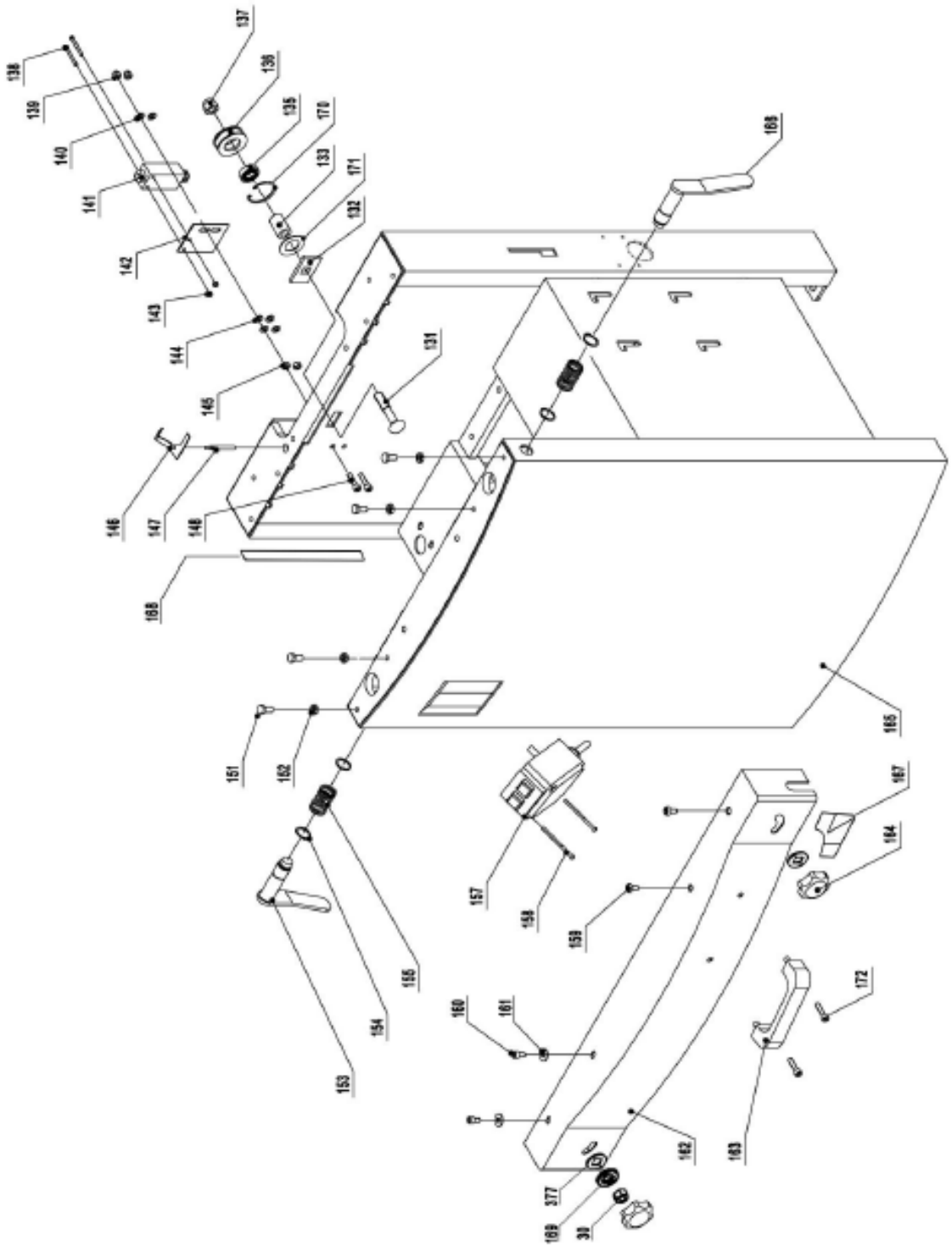
Outfeed Table Assembly



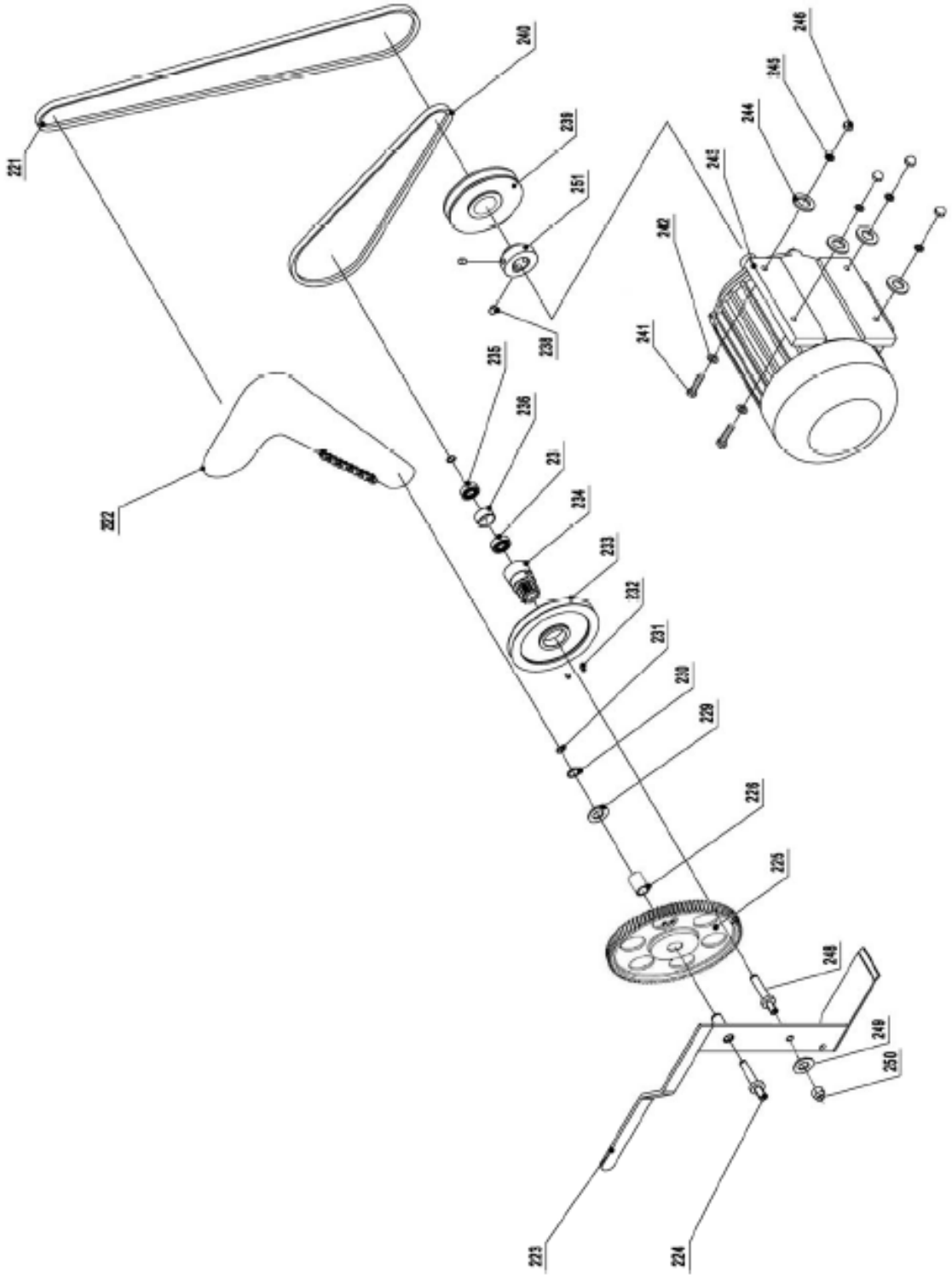
Cutterblock Assembly



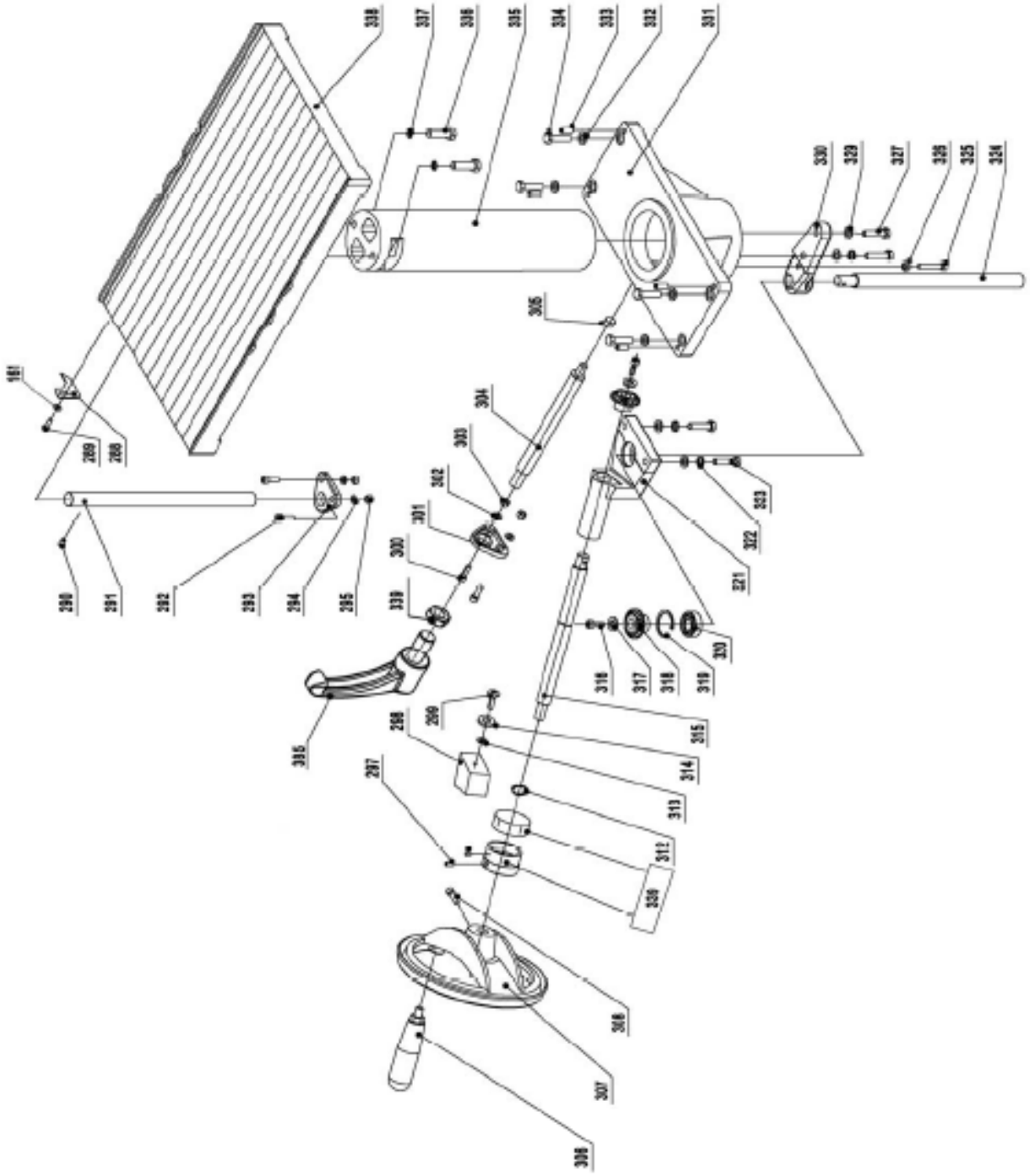
Base Assembly



Motor Assembly



Planer Table Assembly



Fence Assembly