User Manual

Read and understand this manual before using machine.

6” DELUXE JOINTER

C US
233282

STEEL CITY TOOL WORKS

VER. 10.13

Model Number 40535GH

Manual Part No. OR40535

THANK YOU for purchasing your new Steel City Jointer. This jointer has been designed, tested, and inspected with you, the customer, in mind. When properly assembled, used and maintained, your jointer will provide you with years of trouble free service, which is why it is backed by one of the longest machinery warranties in the business.

This jointer is just one of many products in the Steel City's family of woodworking machinery and is proof of our commitment to total customer satisfaction.

At Steel City we continue to strive for excellence each and every day and value the opinion of you, our customer. For comments about your jointer or Steel City Tool Works, please visit our web site at **www.steelcitytoolworks.com** .

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INTRODUCTION

This user manual is intended for use by anyone working with this machine. It should be kept available for immediate reference so that all operations can be performed with maximum efficiency and safety. Do not attempt to perform maintenance or operate this machine until you have read and understand the information contained in this manual.

The drawings, illustrations, photographs, and specifications in this user manual represent your machine at time of print. However, changes may be made to your machine or this manual at any time with no obligation to Steel City Tool Works.

PRODUCT SPECIFICATIONS

Motor Specifications:

Type	Induction
Continuous Duty Horsepower	1HP
Voltage	120 V
Phase	Single
Hertz	60
RPM	3450 (no load)

Product Dimensions:

Footprint	26” x 18.5” / 672 x 470mm
Length	48" / 1219mm
Width	18” / 457mm
Height	31” / 787mm

Product Specifications:

Table	45” x 6.5” / 1145 x 166mm
Number of Cutters	12
Cutterhead Diameter	2” / 51mm
Cutterhead Speed	8,000 RPM
Cuts per Minute	9,500
Fence Size Overall	5” x 25” x1” / 127 x 635 x 22mm
Maximum Depth of cut	1/8" / 3mm
Table Thickness	1 3/4” / 35mm

Shipping Dimensions:

Length	49” / 1253mm
Width	20” / 499mm
Height	17” / 423mm
Gross Weight	141lb. / 64kg
Net Weight	130lb. / 59kg

ACCESSORIES AND ATTACHMENTS

- 40930 HSS Cutter Tips (10 Pack)
- 40938 Carbide Cutter Tips (10 Pack)
- 40932 Torx Screws (25 Pack)
- 40933 T-Handle Torx Tool

There are a variety of accessories available for your Steel City Product. For more information on any accessories associated with this and other machines, please contact your nearest Steel City distributor, or visit our website at: **www.steelcitytoolworks.com**

DEFINITION OF TERMS

Edge Jointing: The process of making the edge of a piece of stock straight and square

Face Jointing: Similar to edge jointing except rather then the edge it is the face of the board that is being machined flat and square.

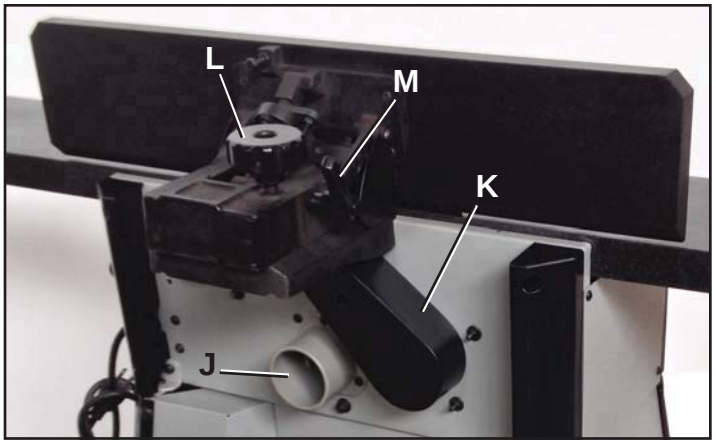
Gum, Pitch or Resin: A sticky sap based residue that comes from wood products.

Rabbet: A rectangular cut or groove along or near the edge of a piece of wood that allows another piece to fit into it to form a joint

Snipe: Gouging or depression of the board at the ends. Snipe can occur either at the beginning of the board going into the jointer or at the end of the board as it comes out of the jointer.

FEATURE IDENTIFICATION

A. Fence
B. Depth Gauge
C. Infeed Table Adjustment Handwheel
D. Infeed Table
E. Outfeed Table
F. Power Switch
G. Cutterhead Guard
H. Rubber Foot
I. Power Cord
J. Dust Port
K. Belt Guard
L. Lock Knob/Fence
M. Tilt Lock Handle/Fence



(REAR VIEW)

PRODUCT SAFETY

1. Serious personal injury may occur if normal safety precautions are overlooked or ignored. Accidents are frequently caused by lack of familiarity or failure to pay attention. Obtain advice from supervisor, instructor, or another qualified individual who is familiar with this machine and its operations.

2. Every work area is different. Always consider safety first, as it applies to your work area. Use this machine with respect and caution. Failure to do so could result in serious personal injury and damage to the machine.

3. Prevent electrical shock. Follow all electrical and safety codes, including the National Electrical Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.

⚠WARNING

4. **TO REDUCE** the risk of electrical shock. **DO NOT** use this machine outdoors. **DO NOT** expose to rain or moisture. Store indoors in a dry area.

5. **STOP** using this machine, if at any time you experience difficulties in performing any operation. Contact your supervisor, instructor or machine service center immediately.

6. Safety decals are on this machine to warn and direct you to how to protect yourself or visitors from personal injury. These decals **MUST** be maintained so that they are legible. **REPLACE** decals that are not legible.

7. **DO NOT** leave the unit plugged into the electrical outlet. Unplug the unit from the outlet when not in use and before servicing, performing maintenance tasks, or cleaning.

8. **ALWAYS** turn the power switch “OFF” before unplugging the jointer.

⚠WARNING

9. **DO NOT** handle the plug or jointer with wet hands.

10. **USE** accessories only recommended by Steel City.

11. **DO NOT** pull the jointer by the power cord. **NEVER** allow the power cord to come in contact with sharp edges, hot surfaces, oil or grease.

12. **DO NOT** unplug the jointer by pulling on the power cord. **ALWAYS** grasp the plug, not the cord.

13. **REPLACE** a damaged cord immediately. **DO NOT** use a damaged cord or plug. If the jointer is not operating properly, or has been damaged, left outdoors or has been in contact with water.

14. **DO NOT** use the jointer as a toy. **DO NOT** use near or around children.

15. **ENSURE** that the machine sits firmly on the floor before using. If the machine wobbles or is unstable, correct the problem by using shims or blocks prior to operation.

16. **ALWAYS** keep hands and fingers away from the blades when operating.

17. **USE** push blocks on any materials less than 3” in height or thickness.

18. **DO NOT** use the jointer on pieces less than 10” in length.

19. **NEVER** use the jointer with the depth of cut at more than 1/8”.

20. **MAINTAIN** the proper relationship between the infeed and outfeed tables and the cutterhead knives.

21. **NEVER** remove any chips without turning off the machine and disconnecting the power.

22. **NEVER** turn on the machine if the workpiece is in contact with the cutterhead.

23. **ALWAYS** feed against the rotation of the cutterhead. Never apply feed pressure with your hands directly over the cutterhead. Always lift your hands, one at a time, over the cutterhead as you pass the work along the jointer bed. Always support the workpiece and maintain control throughout the operation.

24. **KEEP** cutterhead knives sharp and free of all rust and pitch.

25. **ALWAYS** disconnect the machine from the power source before making any adjustments.

26. **NEVER** perform “free hand” operations. Use the fence to position and guide the workpiece.

GENERAL SAFETY

⚠WARNING

TO AVOID serious injury and damage to the machine, read and follow all Safety and Operating Instructions before assembling and operating this machine.

This manual is not totally comprehensive. It does not and can not convey every possible safety and operational problem which may arise while using this machine. The manual will cover many of the basic and specific safety procedures needed in an industrial environment.

All federal and state laws and any regulations having jurisdiction covering the safety requirements for use of this machine take precedence over the statements in this manual. Users of this machine must adhere to all such regulations.

Below is a list of symbols that are used to attract your attention to possible dangerous conditions.

⚠

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠WARNING

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

⚠WARNING

Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. The dust may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

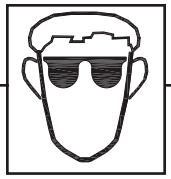
Some examples of these chemicals are:

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

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

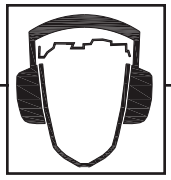
1. To avoid serious injury and damage to the machine, read the entire User Manual before assembly and operation of this machine.

⚠WARNING



2. **ALWAYS** wear eye protection. Any machine can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are **NOT** safety glasses. **ALWAYS** wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.

⚠ WARNING



3. **ALWAYS** wear hearing protection. Plain cotton is not an acceptable protective device. Hearing equipment should comply with ANSI S3.19 Standards.

⚠ WARNING

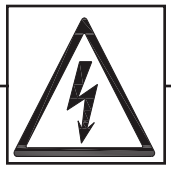
4. **ALWAYS** wear a NIOSH/OSHA approved dust mask to prevent inhaling dangerous dust or airborne particles.

5. **ALWAYS** keep the work area clean, well lit, and organized. **DO NOT** work in an area that has slippery floor surfaces from debris, grease, and wax.

6. **ALWAYS** unplug the machine from the electrical receptacle when making adjustments, changing parts or performing any maintenance.

7. **AVOID ACCIDENTAL STARTING**. Make sure that the power switch is in the "OFF" position before plugging in the power cord to the electrical receptacle.

⚠ WARNING



8. **AVOID** a dangerous working environment. **DO NOT** use electrical tools in a damp environment or expose them to rain or moisture.

⚠ WARNING

9. **CHILDPROOF THE WORKSHOP AREA** by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks.

10. **DO NOT** use electrical tools in the presence of flammable liquids or gasses.

11. **DO NOT FORCE** the machine to perform an operation for which it was not designed. It will do a safer and higher quality job by only performing operations for which the machine was intended.

12. **DO NOT** stand on a machine. Serious injury could result if it tips over or you accidentally contact any moving part.

13. **DO NOT** store anything above or near the machine.

14. **DO NOT** operate any machine or tool if under the influence of drugs, alcohol, or medication.

15. **EACH AND EVERY** time, check for damaged parts prior to using any machine. Carefully check all guards to see that they operate properly, are not damaged, and perform their intended functions. Check for alignment, binding or breakage of all moving parts. Any guard or other part that is damaged should be immediately repaired or replaced.

16. Ground all machines. If any machine is supplied with a 3-prong plug, it must be plugged into a 3-contact electrical receptacle. The third prong is used to ground the tool and provide protection against accidental electric shock. **DO NOT** remove the third prong.

17. Keep visitors and children away from any machine. **DO NOT** permit people to be in the immediate work area, especially when the machine is operating.

18. **KEEP** protective guards in place and in working order.

19. **MAINTAIN** your balance. **DO NOT** extend yourself over the tool. Wear oil resistant rubber soled shoes. Keep floor clear of debris, grease, and wax.

20. **MAINTAIN** all machines with care. **ALWAYS KEEP** machine clean and in good working order. **KEEP** all blades and tool bits sharp.

21. **NEVER** leave a machine running, unattended. Turn the power switch to the OFF position. **DO NOT** leave the machine until it has come to a complete stop.

22. **REMOVE ALL MAINTENANCE TOOLS** from the immediate area prior to turning the machine ON.

23. **SECURE** all work. When it is possible, use clamps or jigs to secure the workpiece. This is safer than attempting to hold the workpiece with your hands.

24. **STAY ALERT**, watch what you are doing, and use common sense when operating any machine. **DO NOT** operate any machine tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

25. **USE ONLY** recommended accessories. Use of incorrect or improper accessories could cause serious injury to the operator and cause damage to the machine. If in doubt, **DO NOT** use it.
26. **THE USE** of extension cords is not recommended for 230V equipment. It is better to arrange the placement of your equipment and the installed wiring to eliminate the need for an extension cord. If an extension cord is necessary, refer to the chart in the Grounding Instructions section to determine the minimum gauge for the extension cord. The extension cord must also contain a ground wire and plug pin.
27. Wear proper clothing, **DO NOT** wear loose clothing, gloves, neckties, or jewelry. These items can get caught in the machine during operations and pull the operator into the moving parts. Users must wear a protective cover on their hair, if the hair is long, to prevent it from contacting any moving parts.
28. **SAVE** these instructions and refer to them frequently and use them to instruct other users.
29. Information regarding the safe and proper operation of this tool is also available from the following sources:

    Power Tool Institute
    1300 Summer Avenue
    Cleveland, OH 44115-2851
    www.powertoolinstitute.org

    National Safety Council
    1121 Spring Lake Drive
    Itasca, IL 60143-3201

    American National Standards Institute
    25 West 43rd Street, 4th floor
    New York, NY 10036
    www.ansi.org

    ANSI 01.1 Safety Requirements for
    Woodworking Machines, and the U.S. Department of Labor regulations
    www.osha.gov

ELECTRICAL REQUIREMENTS

⚠ WARNING

To reduce the risk of electric shock, follow all electrical and safety codes, including the National Electric Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.

The switch provided with your jointer is designed to function at 110-120V. The switch and jointer comes prewired for 110-120V operation.

GROUNDING INSTRUCTIONS

⚠ WARNING

This machine **MUST BE GROUNDED** while in use to protect the operator from electric shock.

In the event of a malfunction or breakdown, **GROUNDING** provides the path of least resistance for electric current and reduces the risk of electric shock. The plug **MUST** be plugged into a matching electrical receptacle that is properly installed and grounded in accordance with **ALL** local codes and ordinances.

If a plug is provided with your machine **DO NOT** modify the plug. If it will not fit your electrical receptacle, have a qualified electrician install the proper connections to meet all electrical codes local and state. All connections must also adhere to all of OSHA mandates.

IMPROPER ELECTRICAL CONNECTION of the equipment-grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment-grounding conductor. **DO NOT** connect the equipment-grounding conductor to a live terminal if repair or replacement of the electric cord or plug is necessary.

Check with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

PLUGS/RECEPTACLES

⚠ WARNING

- Electrocution or fire could result if this machine is not grounded properly or if the electrical configuration does not comply with local and state electrical codes.
- **MAKE CERTAIN** the machine is disconnected from power source before starting any electrical work.
- **MAKE SURE** the circuit breaker does not exceed the rating of the plug and receptacle.

The motor supplied with your machine is a 110/120 volt, 60 hertz, single phase motor. Never connect the green or ground wire to a live terminal.

The machine should only be connected to an outlet having the same configuration as the plug.

EXTENSION CORDS

⚠ WARNING

To reduce the risk of fire or electrical shock, use the proper gauge of extension cord. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw.

The smaller the gauge-number, the larger the diameter of the extension cord is. If in doubt of the proper size of an extension cord, use a shorter and thicker cord. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.

⚠ CAUTION

USE ONLY a 3-wire extension cord that has a 3-prong grounding plug and a 3-pole receptacle that accepts the machine's plug.

If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.

Make certain the extension cord is properly sized, and in good electrical condition. Always replace a worn or damaged extension cord immediately or have it repaired by a qualified person before using it.

Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

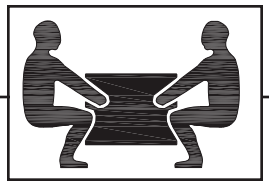
MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)

115 VOLT OPERATION ONLY

	25' LONG	50' LONG	100' LONG
0 to 6 Amps	18 AWG	16 AWG	16 AWG
6 to 10 Amps	18 AWG	16 AWG	14 AWG
10 to 12 Amps	16 AWG	16 AWG	14 AWG
12 to 15 Amps	14 AWG	12 AWG	Not recommended

UNPACKING & INVENTORY

⚠ WARNING



- The machine is heavy, two people are required to unpack and lift.
- Use a safety strap to avoid tip over when lifting machine.

Check shipping carton and machine for damage before unpackaging. Carefully remove packaging materials, parts and machine from shipping carton. Always check for and remove protective shipping materials around motors and moving parts. Lay out all parts on a clean work surface.

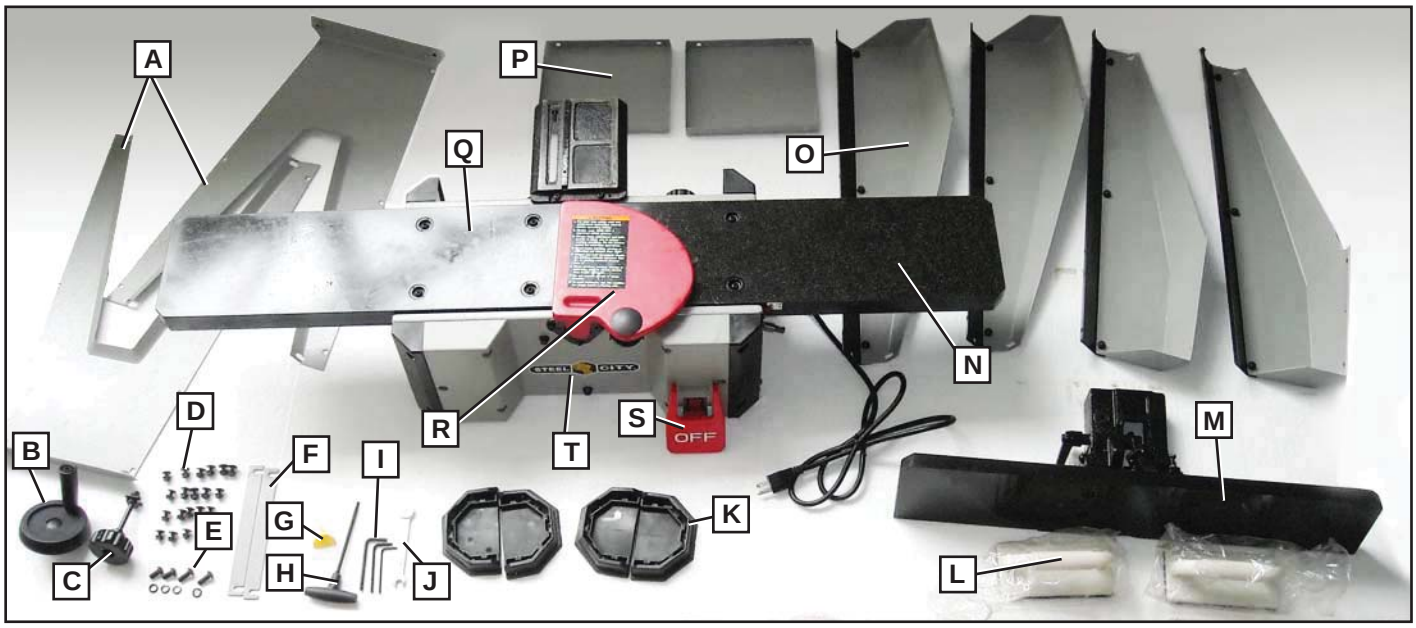
Remove any protective materials and coatings from all of the parts and the jointer. The protective coatings can be removed by spraying WD-40 on them and wiping it off with a soft cloth. This may need to be redone several times before all of the protective coatings are removed completely.

After cleaning, apply a good quality paste wax to any unpainted surfaces. Make sure to buff out the wax before assembly.

Compare the items to inventory figures; verify that all items are accounted for before discarding the shipping box.

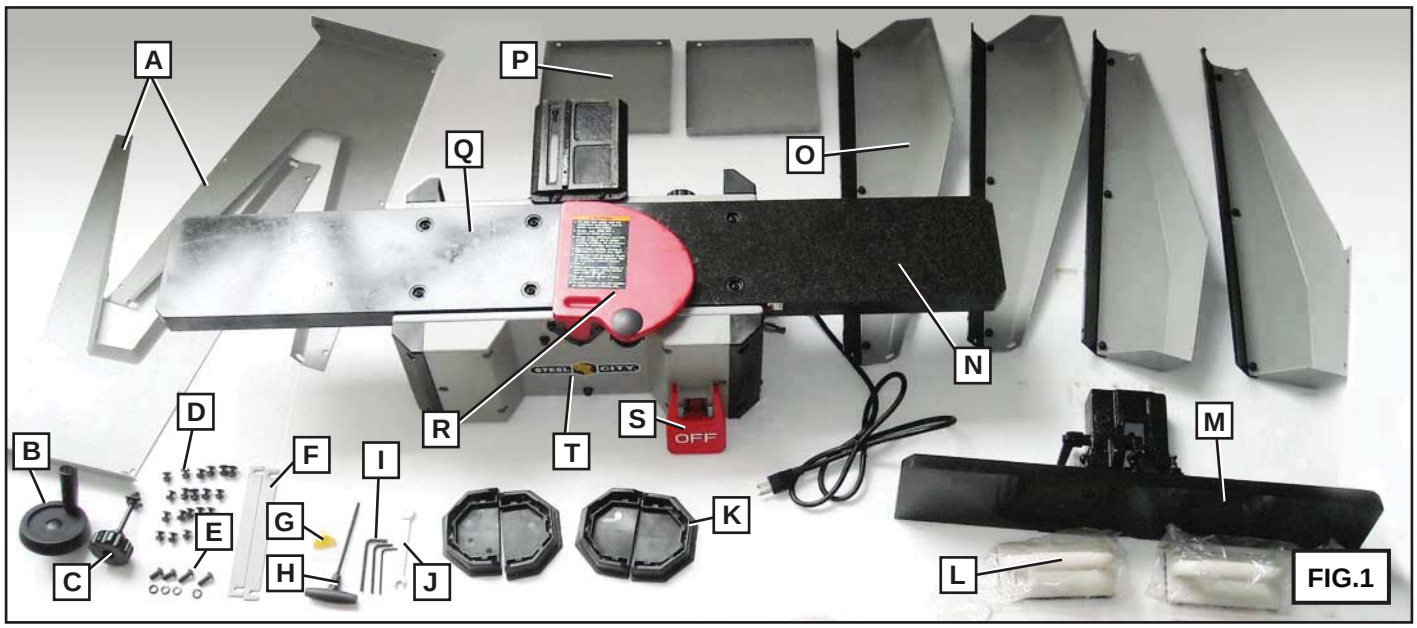
⚠ WARNING

If any parts are missing, do not attempt to plug in the power cord and turn “ON” the machine. The machine should only be turned “ON” after all the parts have been obtained and installed correctly. For missing parts, contact Steel City at 1-877-SC4-TOOL.



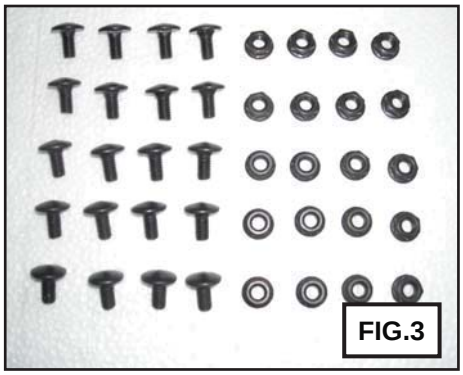
PARTS	QTY.	PARTS	QTY.
A. Side panels (left, right)	2	**K.** Rubber feet (for stand)	4
B. Infeed handle assembly	1	**L.** Push blocks	2
C. Fence locking knob	1	**M.** Granite fence assembly	1
D. Carriage bolts/nuts (for stand)	20	**N.** Granite infeed bed	1
E. Cap screws and lock washers (for mounting bed to stand)	4	**O.** Leg support assembly	4
F. Cross bracket and stand support	2	**P.** Front/rear stand supports	2
G. Safety key	1	**Q.** Granite outfeed bed	1
H. Torx tool	1	**R.** Cutter guard assembly	1
I. 3-4-5mm Allen wrenches	3	**S.** Paddle switch	1
J. Open end wrench/spanner	1	**T.** Jointer bed assembly	1

ASSEMBLY



1. With assistance, remove the bed assembly from the carton.
2. Carefully turn the bed upside down and support infeed or outfeed tables to protect the cutterhead guard.

3. Locate hardware (see FIG.2 and 3).



4. Install side panels (FIG.1(A)) using cap screws (4) and lock washers (4) (FIG.2). Do not tighten at this time.

5. Attach legs (FIG.1 (O)) using carriage bolts (12) and nuts (12) (FIG.3). Do not tighten at this time.

6. Install front and rear stand supports (FIG.1 (P)) using carriage bolts (8) and nuts (FIG.3). Do not tighten at this time.

7. Install cross bracket stand supports (FIG.1 (F)) (2) between the front and rear support panels using the installed carriage bolts and nuts closest to the bottom of the stand. Do not tighten at this time.

8. Starting with the cap screws, tighten all 4, then tighten 8 on the front and rear stand supports. Finish by tightening the remaining 12 carriage bolts and nuts from the legs.

9. Install the rubber feet (Fig.1 (K)). You may need to use a rubber mallet.

10. With assistance, turn the jointer over onto the rubber feet.

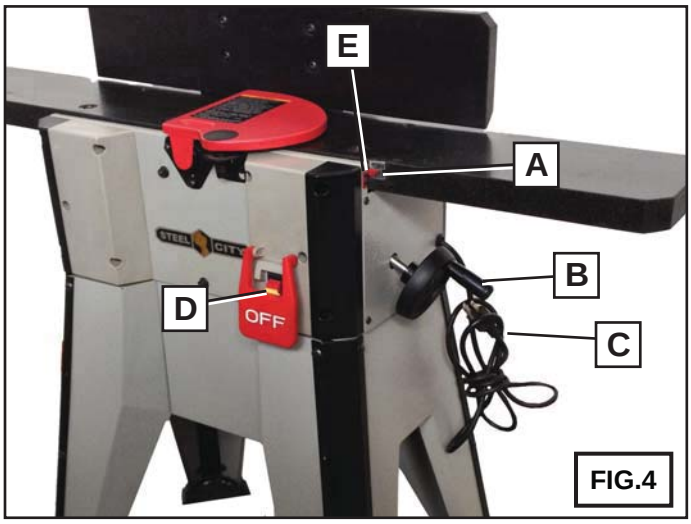
11. Install the fence assembly (FIG.1 (M)) onto the carriage. Insert the fence locking knob (FIG.1 (C)) and attached the knob to the T-nut as shown. Locate the fence in the position you wish on the bed and tighten the handle. You may need to move the cutter guard away if it is already installed.

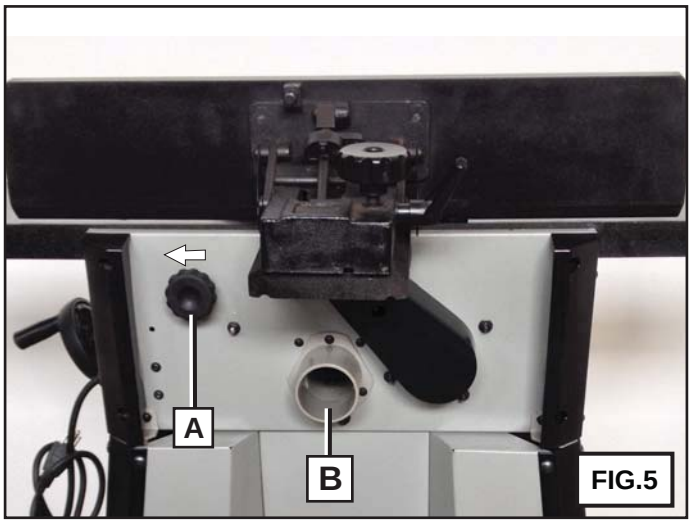
12. Install infeed handle asembly, Fig.1 (B) onto the elevation shaft. Tighten set screw.

13. Take the yellow safety key (FIG.1 (G)). Insert into the switch. Set push blocks on the beds (FIG.1 (L)).

ADJUSTMENTS

INFEED TABLE ADJUSTMENT



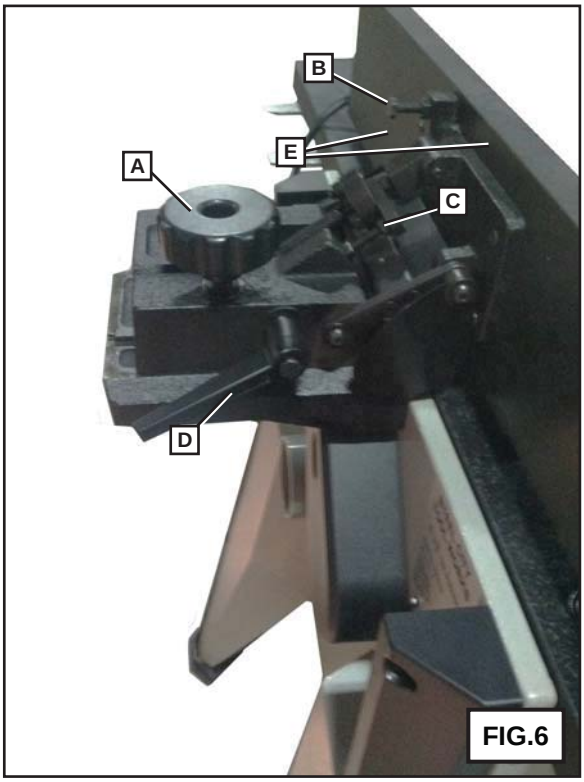


1. For safety, unplug from power source (FIG.4(C)), remove yellow key from under the red paddle (FIG4(D)).
2. To raise or lower the infeed table, make sure the tables coplanar and that the pointer is at zero (FIG.4(A)). If beds are level and pointer is off, loosen the 2 small screws (FIG.4(E)) to shift the pointer to 0.
3. If you need to adjust, release the lock knob (FIG.5(A)) by turning counter clockwise.
4. Grab the infeed handle (FIG.4(B)) and turn clockwise to raise and counter clockwise to lower.
   A. Maximum removal is 1/8”
   B. Lock the bed knob (FIG.5(A))

ADJUSTING FENCE POSITIVE STOPS

The granite fence on your jointer can be positioned 45°, 90°,135°.

1. FIG.6 (A) is the lock knob, turn counter clockwise to move the fence body (FIG.6 (E)) forward or backwards.
2. FIG.6 (B) is the positive stop adjustment for 45°/135°. Release handle (FIG.6 (D)) to be able to tilt the fence backwards.
3. FIG.6 (C) is adjustment for 90° and the positive stop as well. Flip out of the way to allow fence to tilt.
4. When adjustments are complete, tighted (FIG.6 (A & D)).



OPERATIONS

According to many OSHA, ANSI, STATE, and LOCAL CODES, it is the Employers Responsibility to:

- **PERMIT ONLY** trained and authorized employees to operate equipment.
- **INSPECT AND MAINTAIN** guards, safety devices and start/stop controls.
- **INSTRUCT**, **TRAIN** and **SUPERVISE** the safe method of work.

⚠WARNING

Serious personal injury may occur if normal safety precautions are overlooked or ignored. Accidents are frequently caused by lack of familiarity or failure to pay attention. Obtain advice from supervisor, instructor, or another qualified individual who is familiar with the machine and its operations.

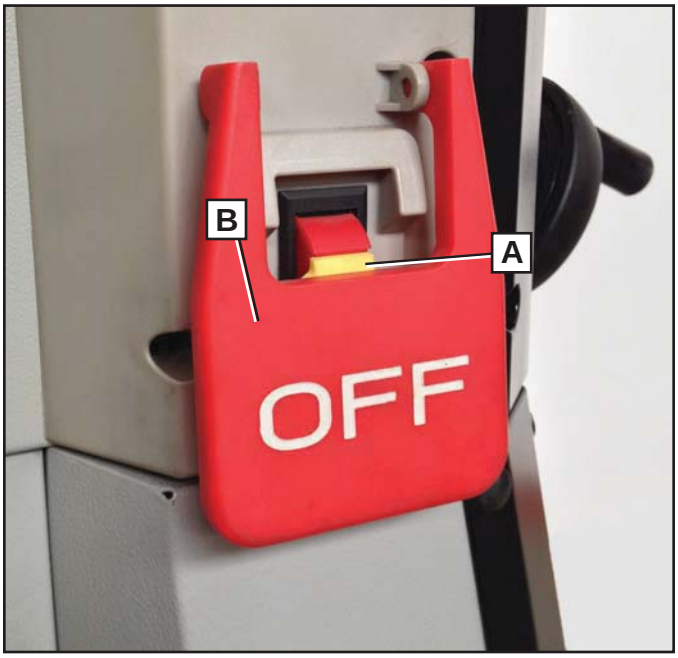
Every work area is different. Always consider safety first, as it applies to your work area. Use any machine with respect and caution. Failure to do so could result in serious personal injury and damage to the machine.

STOP using the machine, if at any time you experience difficulties in performing any operation. Contact your supervisor, instructor or machine service center immediately.

START/STOP SWITCH

The START/STOP switch assembly is located below the infeed table. To turn the jointer “ON”. push the yellow start button (A). To turn the jointer “OFF”, push the red stop paddle (B). **SEE FIG.7**.

FIG.7



⚠WARNING

CHILDPROOF THE WORKSHOP AREA by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks if necessary.

⚠CAUTION

THE KNIVES ON THE JOINTER WILL NOT WEAR EVENLY BY FEEDING THE WOOD THROUGH THE SAME SPOT ON THE TABLE EVERY TIME. FEED THE WOOD THROUGH THE JOINTER AT DIFFERENT SPOTS ON THE TABLE BY REPOSITIONING THE FENCE WHEN POSSIBLE, TO HELP ELIMINATE UNEVEN WEAR OF THE KNIVES.

⚠WARNING

ALWAYS USE CUTTERHEAD GUARD AND KEEP HANDS AWAY FROM CUTTERHEAD. ALWAYS USE PUSH BLOCKS WHENEVER POSSIBLE. NEVER MAKE JOINTING AND PLANING CUTS DEEPER THAN 1/8” IN ONE PASS.

LOCKING SWITCH IN THE “OFF” POSITION

When the jointer is not in use, the start button can be locked so that it cannot be started by removing the yellow key. **SEE FIG.8**.

FIG.8

The following directions will give the beginner a start on jointer operations. Use scrap pieces of lumber to check settings and to get the feel of the operations before attempting regular work.

PLACEMENT OF HANDS DURING FEEDING

At the start of the cut, the left hand holds the work firmly against the infeed table and fence, while the right hand pushes the work toward the knives. After the cut is underway, the new surface rests firmly on the outfeed table. The left hand should then be moved to the work on the outfeed table, at the same time maintaining flat contact with the fence. The right hand presses the work forward, and before the right hand reaches the cutterhead, it should be moved to the work on the outfeed table.

⚠WARNING

NEVER PASS HANDS DIRECTLY OVER THE CUTTERHEAD.

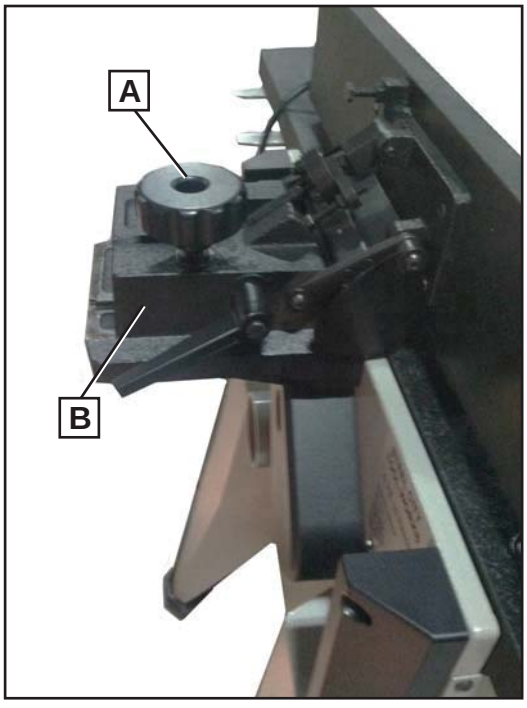
DIRECTION OF GRAIN

Avoid feeding work into the jointer against the grain. The result will be chipped and splintered edges. Feed with the grain to obtain a smooth surface.

FENCE OPERATION

The fence can be moved across the table by loosening the lock knob (A), moving the fence to the desired position, and retightening the lock knob securely. As the fence is moved across the table, the sliding portion of the fence bracket (B) guards the cutterhead in back of the fence. **SEE FIG 9**.

FIG.9



JOINTING AN EDGE

This is the most common operation for the jointer. These cuts are made to square an edge of a workpiece. Set the guide fence square with the table. Depth of cut should be the minimum required to obtain a straight edge. Hold the best face of the piece firmly against the fence throughout the feed. **SEE FIG.10**.

Fig.10

⚠CAUTION

MAXIMUM DEPTH OF CUT SHOULD NOT BE MORE THAN 1/8” IN ONE PASS.

⚠CAUTION

DO NOT PERFORM JOINTING OPERATIONS ON MATERIAL SHORTER THAN 10 INCHES, NARROWER THAN 3/4 INCH, OR LESS THAN 1/2 INCH THICK.

SURFACING

Surfacing is identical to the jointing operation except for the position of the workpiece. For surfacing, the major flat surface of the workpiece is placed on the infeed table of the jointer with the narrow edge of the workpiece against the fence, as shown in Fig.10. The workpiece is moved from the infeed table, across the cutterhead to the outfeed table, establishing a flat surface on the workpiece. **SEE FIG.11**.

Fig.11

⚠WARNING

ALWAYS USE PUSH BLOCKS WHEN PERFORMING SURFACING OPERATIONS AND NEVER PASS YOUR HANDS DIRECTLY OVER THE CUTTERHEAD.

⚠CAUTION

MAXIMUM DEPTH OF CUT SHOULD NOT BE MORE THAN 1/8" IN ONE PASS.

BEVELING

To cut a bevel, lock the fence at the required angle and run the work across the knives while keeping the work firmly against the fence and tables. Several passes may be necessary to arrive at the desired result. When the angle is small, there is little difference whether the fence is tilted in or out. However, at greater angles approaching 45 degrees, it is increasingly difficult to hold the work properly when the fence is tilted out. The advantage of the double-tilting fence is appreciated under such conditions. When tilted in, the fence forms a V-shape with the tables, and the work is easily pressed into the pocket while passing it across the knives. If the bevel is laid out on the piece in such direction that this involves cutting against the grain, it will be better to tilt the fence out.

TAPER CUTS

One of the most useful jointer operations is cutting an edge to a taper. This method can be used on a wide variety of work. Tapered legs of furniture are a common example. Instead of laying the piece on the infeed table, lower the forward end of the work onto the outfeed table. Do this very carefully, as the piece will span the knives, and they will take a "bite" from the work with a tendency to kick back unless the piece is firmly held. Now push the work forward as in ordinary jointing. The effect is to surface off all the stock in front of the knives, to increasing depth, leaving a tapered surface. The ridge left by the knives when starting the taper may be removed by taking a very light cut according to the regular method for jointing, with the infeed table raised to its usual position. Practice is required in this operation, and the beginner is advised to make trial cuts on waste material. Taper cuts over part of the length and a number of other special operations can easily be done by the experienced craftsman.

SURFACING WARPED PIECES

If the wood to be surfaced is dished or warped, take light cuts until the surface is flat. Avoid forcing such material down against the table; excessive pressure will spring it while passing the knives, and it will spring back and remain curved after the cut is completed.

SURFACING SHORT OR THIN WORK

⚠CAUTION

WHEN SURFACING SHORT OR THIN PIECES, ALWAYS USE PUSH BLOCKS TO MINIMIZE ALL DANGER TO THE HANDS.

Fig.10 illustrates using the push blocks properly. **SEE FIG.10**.

⚠CAUTION

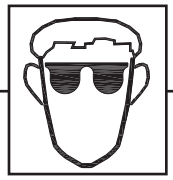
DO NOT PERFORM SURFACING OPERATIONS ON MATERIAL SHORTER THAN 10 INCHES, NARROWER THAN 3/4 INCH, WIDER THAN 6 INCHES, OR LESS THAN 1/2 INCH THICK.

MAINTENANCE

- **DO NOT** begin cleaning up until you have read and understand all of the clean up instructions.
- **DO NOT USE FLAMMABLE MATERIALS TO CLEAN JOINTER.**

CLEANING

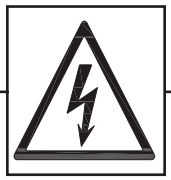
⚠ WARNING



With the machine unplugged, blow off motor with low pressure air to remove dust or dirt. Air pressure above 50 P.S.I. should not be used as high-pressured air may damage insulation. The operator should always wear a respirator and eye protection when using compressed air.

Do not allow chips and dust to accumulate under jointer. Keep area clean and in safe order.

⚠ WARNING



Turn the power switch “OFF” and unplug the power cord from its power source prior to any maintenance.

LUBRICATION

The jointer has sealed lubricated bearings in the motor housing that do not require any additional lubrication from the operator.

⚠ WARNING

Repairs to the jointer should be performed by trained personnel only. Contact your nearest Steel City Dealer for authorized service. Unauthorized repairs or replacement with non-factory parts could cause serious injury to the operator and damage to the jointer.

After considerable use, the knives will become dull and it will not be possible to do accurate work.

⚠ WARNING

DISCONNECT MACHINE FROM POWER SOURCE.

REMOVING, REPLACING, AND RESETTING CUTTER TIPS

If the knives are removed from the cutterhead for replacement cutter tips, care must be used in removing, replacing, and resetting them.

1. Move the fence to the rear and remove the cutterhead guard.

   (Refer to helical instruction pages).

⚠ WARNING

BE EXTREMELY CAREFUL THAT YOUR HANDS DO NOT COME IN CONTACT WITH THE CUTTER TIPS. THE KNIVES ARE VERY SHARP. WEAR PROTECTIVE GLOVES WHEN HANDLING THE KNIVES.

TROUBLESHOOTING GUIDE

Motor and Machine Operation

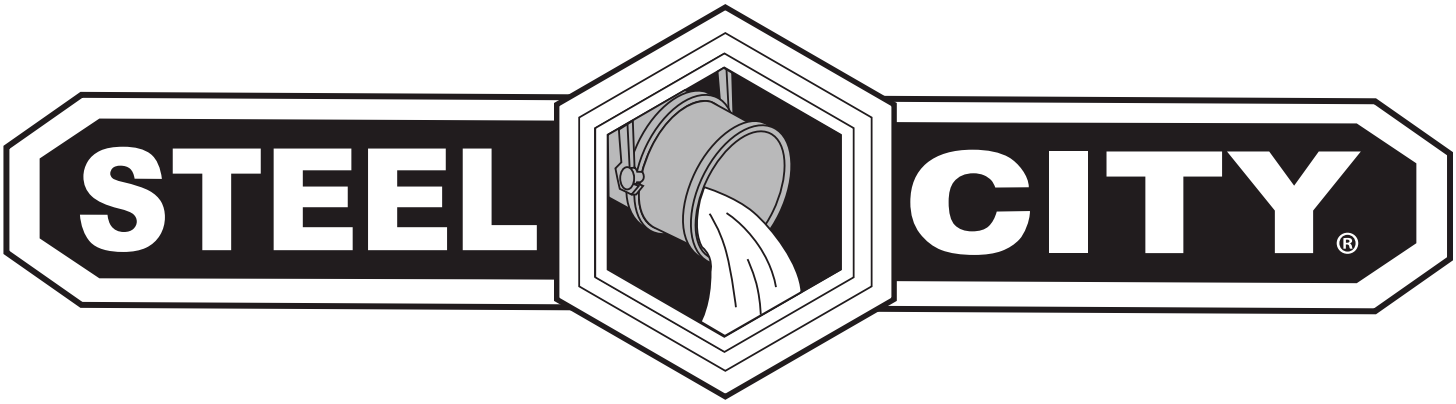
PROBLEM	LIKELY CAUSE(S)	SOLUTION
Motor will not start.	1. Low voltage. 2. Open circuit in motor or loose connections.	1. Check power line for proper voltage. 2. Inspect all lead connections on motor for loose or open connections.
Fuses or circuit breakers blow.	1. Short circuit in line cord or plug.	1. Repair or replace cord or plug for damaged insulation and shorted wires
Motor fails to develop full power (output of motor decreases rapidly with decrease in voltage at motor terminals).	1. Power supply circuit overloaded with lights, appliances, and other motors. 2. Undersized wires or circuits too long.	1. Reduce load on circuit. 2. Increase wire sizes or reduce length of the circuit.
Motor overheats.	1. Motor overloaded during operation. 2. Air circulation through the motor restricted.	1. Reduce load on motor; take lighter cuts. 2. Clean out motor to provide normal air circulation.
Motor stalls or shuts off during a cut.	1. Motor overloaded during operation. 2. Short circuit in motor or loose connections. 3. Circuit breaker tripped.	1. Reduce load on motor; take lighter cuts. 2. Repair or replace connections on motor for loose or shorted terminals or worn insulation. 3. Install correct circuit breaker; reduce number of machines running on that circuit (circuit overload).
Blade slows when cutting or makes a squealing noise, especially on start-up.	1. V-belt loose. 2. V-belt worn out.	1. Tighten V-belt. 2. Replace V-belt.
Loud, repetitious noise coming from machine.	1. Pulley setscrews or keys are missing or loose. 2. Motor fan is hitting the cover. 3. V-belts are damaged.	1. Inspect keys and setscrews. Replace or tighten if necessary. 2. Adjust fan cover mounting position, tighten fan, or shim fan cover. 3. Replace V-belts.
Vibration when running or cutting.	1. Loose or damaged knife. 2. Damaged V-belt. 3. Worn cutterhead bearings.	1. Tighten or replace knife. 2. Replace. 3. Check/replace cutterhead bearings.

Table

PROBLEM	LIKELY CAUSE(S)	SOLUTION
Tables are hard to adjust.	1. Table lock is engaged or partially engaged.	1. Completely loosen the table lock.

Cutting

PROBLEM	LIKELY CAUSE(S)	SOLUTION
Excessive snipe (gouge in the end of the board that is uneven with the rest of the cut).	1. Outfeed table is set too low. 2. Operator pushing down on end of workpiece.	1. Align outfeed table with cutterhead knife at top dead center. 2. Reduce/eliminate downward pressure on that end of workpiece.
Workpiece stops at the beginning of the cut.	1. Outfeed table is set too high.	1. Align outfeed table with cutterhead knife at top dead center.
Chipping.	1. Knots or conflicting grain direction in wood. 2. Nicked or chipped blades. 3. Feeding workpiece too fast. 4. Taking too deep of a cut.	1. Inspect workpiece for knots and grain; only use clean stock. 2. Adjust one of the nicked knives sideways; replace knives. 3. Slow down the feed rate. 4. Take a smaller depth of cut. (Always reduce cutting depth when surface planing or working with hard woods.)
Fuzzy grain.	1. Wood may have high moisture content. 2. Dull knives.	1. Check moisture content and allow to dry if moisture is too high. 2. Replace knives.
Long lines or ridges that run along the length of the board.	1. Nicked or chipped knives.	1. Adjust one of the nicked knives sideways; replace knives.
Uneven cutter marks, wavy surface, or chatter marks across the face of the board.	1. Feeding workpiece too fast. 2. Knives not adjusted at even heights in the cutterhead.	1. Slow down the feed rate. 2. Adjust the knives so they are set up evenly in the cutterhead.
Board edge is concave or convex after jointing.	1. Board not held with even pressure on infeed and outfeed table during cut. 2. Board started too uneven. 3. Board has excessive bow or twist along its length. 4. Insufficient number of passes.	1. Hold board with even pressure as it moves over the cutterhead. 2. Take partial cuts to remove the extreme high spots before doing a full pass. 3. Surface plane one face so there is a good surface to position against the fence. 4. It may take 3 to 5 passes to achieve a perfect edge, depending on the starting condition of the board and the depth of cut.
Uneven cut or breakout when rabbeting.	1. Uneven feed rate. 2. Depth of cut too deep. 3. Knives not adjusted evenly with each other in the cutterhead. 4. Nicked or chipped knives.	1. Feed the board evenly and smoothly during the cut. 2. Raise the infeed table to take a smaller depth of cut. Never exceed 1/16” per pass when rabbeting. 3. Adjust the knives so they are set up evenly in the cutterhead. 4. Adjust one of the nicked knives sideways; replace knives.



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