

# Jointer Safety Rules and Operating Procedures



**Powermatic 8" Jointer**



**SAC 12" Jointer**

The jointer is used to make one side or edge of a board flat and straight. The jointer can remove cups and twists so that the board can be then planed, or ripped to provide a straight board with

parallel sides. The jointer is used to surface both the face and the edge of boards. The jointer uses a horizontal cutterhead that is located between the infeed and the outfeed tables. The outfeed table surface is level with the top of the cutterhead. The infeed table is adjustable with a lever located at the right-front of the machine. A scale mounted near the lever indicates the amount of material that will be removed in each pass. A fence is mounted at the far side of the tables and is used to steady the work when jointing the face of a board. The fence is also used to support the board when jointing the edge of a board. The angle of the fence relative to the tables is adjustable and determines the angle between the surface and edge of a board. A guard is attached to the infeed table and covers the cutterhead. The guard swings away from the fence as a board is passed by the cutterhead but still covers the portion of the cutterhead to the left of the board. To avoid accidents, the following operational safety rules must be observed by everyone using a jointer. Failure to follow the safety rules will result in a loss of shop privileges.

### **Jointer Safety Rules:**

**WARNING! The jointer has sharp rotating carbide inserts that can cause serious injury including amputation and death. Do not allow any portion of your body to contact the rotating cutters. Use all guards provided and push sticks and push pads as required.**

**Read and understand** these operating procedures for this machine before attempting operation.

**Personal Protective Equipment.** At a minimum eye protection and hearing protection must be worn when operating this machine. Eye protection must be safety glasses with side shields, goggles, or face shield, which meet ANSI Z87.1.

**Remove loose clothing and loose jewelry.** Button sleeves or roll up sleeves above the elbow. Remove loose outer clothing and confine long hair.

**Use the appropriate NIOSH approved respirator** in dusty work conditions (N95, N100, P95 or P100). Wood dust has been listed as a known carcinogen by the U.S. government.

**Guards.** Keep the machine guards in place for every operation for which they can be used.

**Work Area.** Keep the floor around the machine clean to minimize the danger of tripping or slipping. Be sure the infeed and outfeed tables are free of scrap or foreign material. Make sure the dust collector is hooked up and operating. Ensure that three-foot perimeter around the jointer should be kept clear of people, debris and sawdust that might impair traction or footing to avoid slips and falls and to provide easy access to both the infeed and outfeed tables of the machine. However, a helper may assist with supporting long boards and in the removal of boards from the outfeed table.

**Operator Position.** Maintain a balanced stance and keep your body under control at all times, so that you do not fall or lean against the cutterhead or moving parts. Do not overreach or use excessive force to perform any machine operation. Stand next to the infeed table and walk the board past the cutterhead.

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

**Disconnect machine** before performing any service or maintenance. A machine under repair must be Locked Out using the Club Lockout procedure until the maintenance is complete.

**Maintain Tools In Top Condition.** Keep knives sharp and clean for safe and best performance. Dull knives increase noise levels, tearout and glazed surfaces. If a carbide insert is chipped or broken, it must be replaced. Notify the Shop Leader.

**Hand Safety.** Keep hands clear of the cutting area. Follow the 3-inch rule: The hands must never be closer than 3 inches to the cutter head at any time.

**Always** use a two push blocks when surfacing (face jointing) stock.

**Material Condition.** CAUTION! Do not joint boards with loose knots or with nail or any foreign material on its surface. Do not joint chipboard or panel board. **Reclaimed or pressure treated wood is not to be jointed on this machine.**

**Machine Adjustments.** Make all machine adjustments with power disconnected, except depth of cut adjustments and fence position adjustments. Make fence angle adjustments only when the machine is not running.

**Fence Position.** By loosening a locking lever, the position of the fence can be moved across the table. This changes the amount of the cutterhead that is exposed and ultimately the maximum width of the board that can be jointed. By positioning the fence to expose a width of the cutter head that is equivalent to the width of the board being jointed, The potential for contacting a hand with the cutterhead is minimized and the wear on the cutterhead knives is made more uniform.

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

**If you are not** thoroughly familiar with the operation of jointer, obtain advice from the Shop Leader.

**Drugs, Alcohol, Medication.** Do not operate this machine while under the influence of drugs, alcohol, or any medication. Do not operate this machine if you are tired, sick, or distracted.

**Familiarize yourself** with all caution and warning decals used on this machine.

**Never clear small pieces** from the input or output tables with your hand while the jointer is running. Use a brush, or stop the jointer.

**WARNING!!!** The jointer has a horizontal cutterhead that is partially exposed while the machine is in use. The guard over the cutterhead can also be intentionally or accidentally swung to the side exposing the cutterhead. The rotating cutterhead can easily amputate fingers or hands if they come in contact.

## **Operational Safety Rules:**

Approach your work in the CLUB Shop and on the jointer with a safe attitude!

Do not joint MDF or Chip Board (OSB). The resin in the board will quickly dull the knives.

Place a square on the outfeed table just past the cutter head. Adjust the fence as necessary to square it with the table. Note that the Powermatic jointer fence tends to go out of square. Check the squareness prior to using the Powermatic jointer.

The fence can be tilted to allow jointing the edge of a board at an angle. The Powermatic jointer allows the fence to be tilted both toward and away from the operator. Tilting the top of the fence towards the operator, to cut an acute bevel is dangerous and not permitted. The fence on the SAC jointer only tilts away from the operator.

**DANGER! Do not tilt the jointer fence so that the top of the fence is towards the operator.**

Open the blast gate from the Powermatic dust collector before starting the jointer. Ensure that the Powermatic dust collector started and is running. Close the blast gate when you are finished using the jointer if no one else is using it.

Do not surface boards with loose knots, nails or any foreign material on the surface.

Always use two push blocks when face jointing. If the board is not too long, use a push block with a cleat at the rear of the board to prevent slippage of the push block.

Do not face joint boards thinner than 1/4", and takes cuts of no more than 1/64" deep when jointing boards 3/8" or thinner. Always use push blocks.

Do not face joint boards narrower than 3/4". When jointing boards that are not very wide, use the orange push block with the "V" shaped rubber sole to hold the stock against the fence and tables.

Do not edge joint the end grain of boards narrower than 10". When edge jointing the end grain, cut far enough for the leading edge to land on the outfeed table. Then rotate the board 180° and joint the entire edge. This will minimize tearout. A backup board at least 6" high and 12" long will also help control the cut and minimize tearout.

Always feed the stock from right to left. Never feed the stock in the direction of rotation of the cutter head. This can cause the blades to grab the stock and propel it off the infeed table.

Do not try to join boards that are shorter than 8" long. It is difficult to control short boards and short boards are not supported very well by the infeed and outfeed tables. As a result, the board may dive into the cutterhead causing a kickback resulting in an increased potential for your hand to fall into the cutterhead and the stock to be thrown back at you violently.

Do not make freehand cuts. Keep the stock against the fence or you may lose control.

The amount of effort required to pass a board over the jointer is dependent on the depth of cut. The jointers can remove as much as 5/16" of material per pass. This is may be fine for edge jointing wide boards. In most instances however, you should not remove more than 1/4" per pass when edge jointing. When face jointing, removal of more than 1/16" per pass may make it difficult to feed the board and there is the potential for slipping or losing you balance. For most face jointing operations, a stock removal of 1/32" or less is recommended.

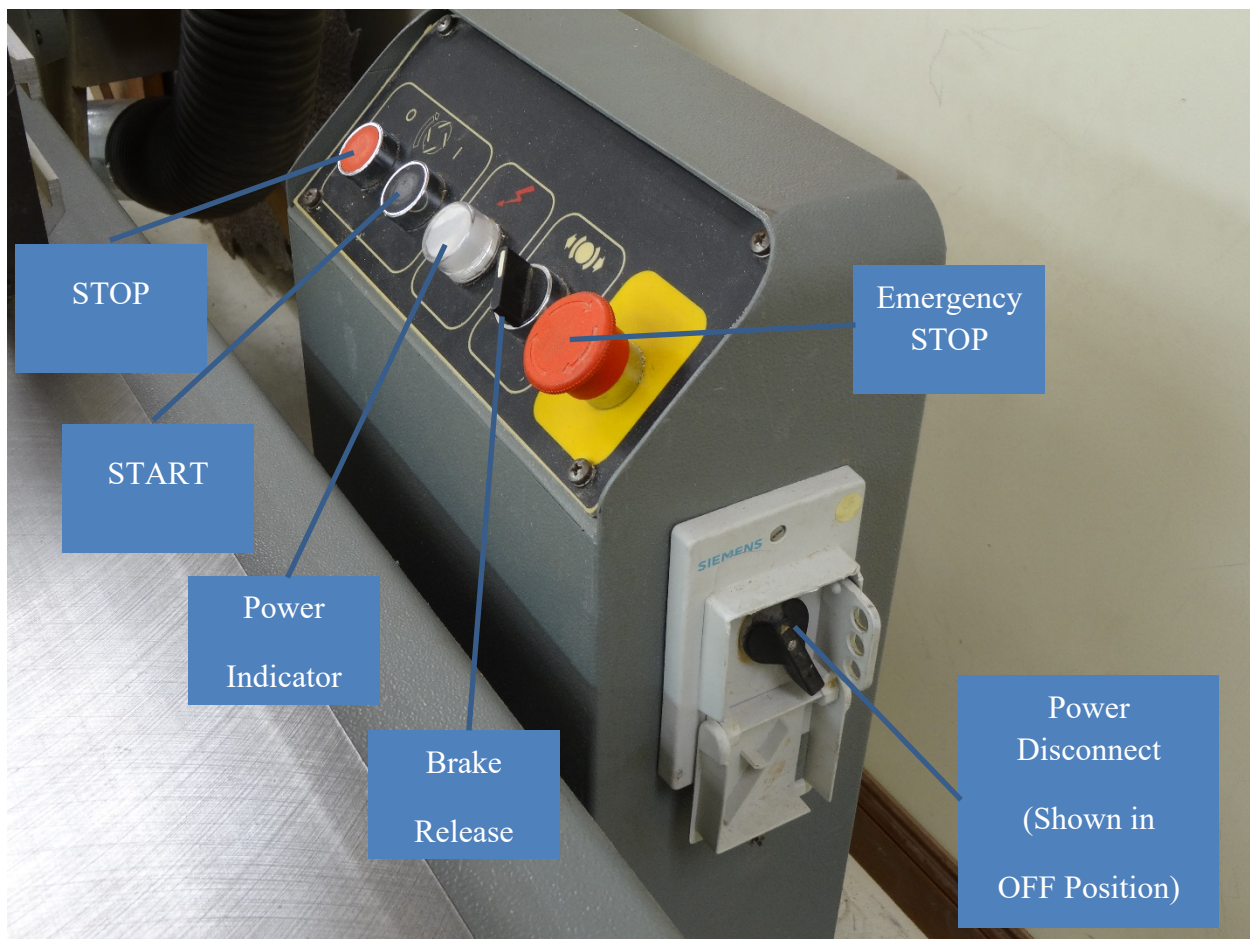
If the work is too large for one person to handle, Cut it into manageable lengths (4-6' or less) if possible. If longer lengths are needed, consider getting help to holding the stock or use infeed or outfeed supports.

Lockout/Tagout the jointer before changing the cutterhead's carbide inserts or performing any other maintenance operation. All insert changes must be done under the direction of the Shop Leader.

When you have finished your use of the jointer, push both the stop button and close the blast gate to the Powermatic dust collector. Then cleanup the area.

### SAC Jointer Specific Procedures

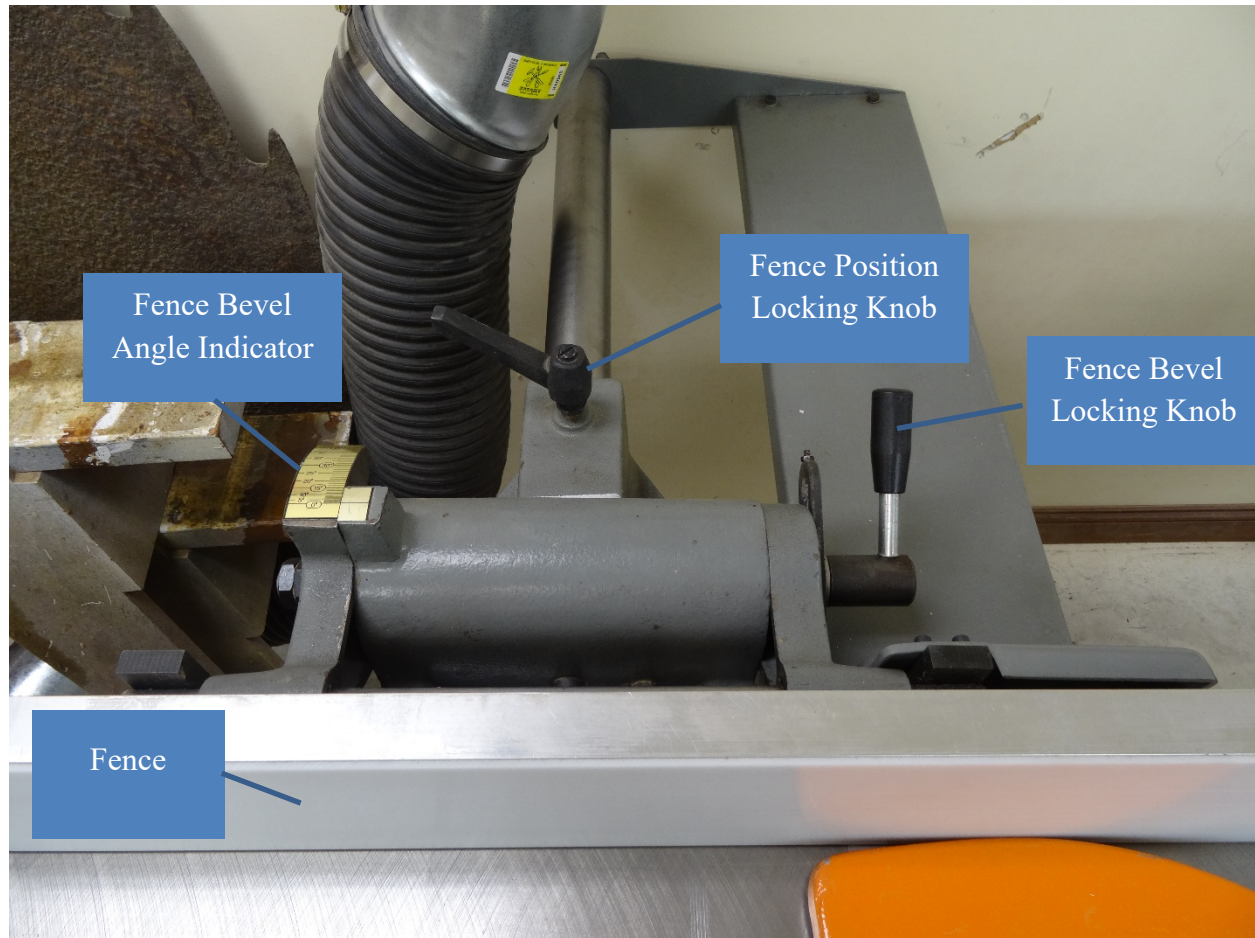
The SAC jointer is an industrial machine made to comply with all EU and OSHA regulations. One EU requirement is that the cutterhead must stop rotating within 10 seconds after the STOP button is pushed. There is also an emergency STOP button and a lockable power disconnect switch.



**Figure 1 - SAC Jointer Control Panel**

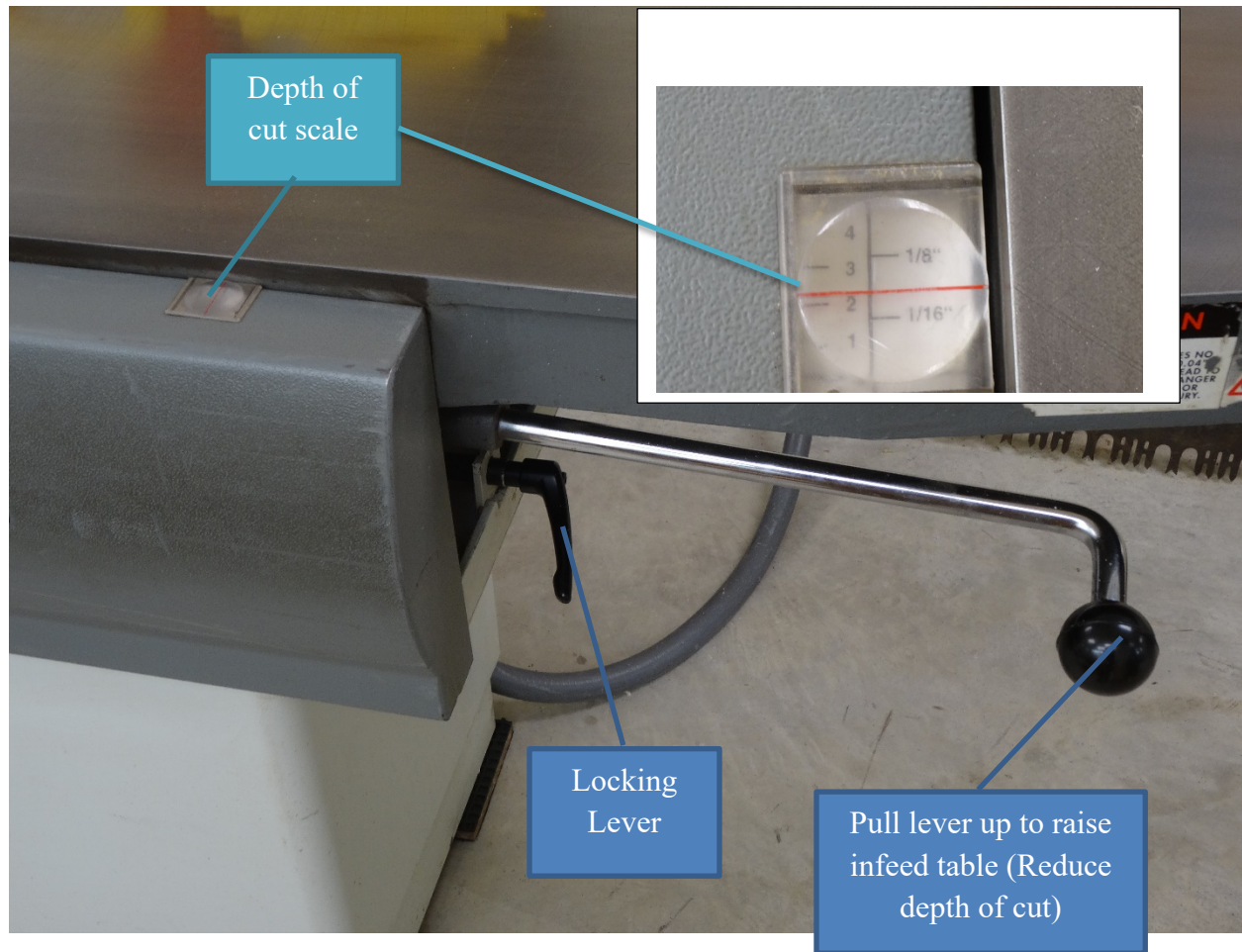
The Brake Release is a momentary contact two position switch. It is spring loaded to hold in the left-hand deenergized state (brake on). Holding it to the right releases the brake. When the START button is pushed, the jointer control system releases the brake. Pushing the STOP or Emergency STOP button applies the brake. The brake release switch is only to be used by Shop Leader for setup or maintenance work.

When the Jointer is not in use, place the power supply switch in the OFF position



**Figure 2 - SAC Jointer Fence and Fence Controls**

The blast gate to the dust collection system is located at the back of the jointer. Reaching over the top of the jointer provides access to it.



**Figure 3 – Depth of cut adjustments**

## **OPERATION**

1. Release the depth of cut locking knob.
2. Push the depth of cut lever down, or pull it up, to reach the desired depth of cut.
3. Snug the depth of cut locking knob. Do not over tighten. It only takes a little pressure to hold the table at the desired depth of cut.
4. Position the fence to provide a cutting with of about 1” more than the width of the board to be jointed.
5. Face joint the board first.
6. Place the board on the infeed table. Turn it one face up and then the other to determine which is the most stable. Position the board on the infeed table in the most stable position.
7. Lift the blast gate fully and loosely lock it in position. This will start the dust collection system.
8. Start the jointer.
9. Using two push blocks, push the board through the cutterhead while keeping the right-hand edge against the fence.
10. Try to push the board past the cutterhead in a continuous motion. If you pause, a divot or burn mark may be created.

11. Repeat as necessary to obtain a smooth surface.
12. Joint an edge next.
13. Verify that the fence is square to the outfeed table.
14. Place the board on the infeed table with the edge to be jointed facing down.
15. To ensure that a square edge is formed, in one motion; lift the board slightly above the infeed table, hold it tight against the fence with your left hand, drop the board back down to the infeed table and with the right hand, push the board across the cutterhead while maintaining pressure against the fence.
16. Repeat as necessary.
17. Push the
18. STOP button.
19. Unlock and close the blast gate.
20. If the jointer will not be used for a while, turn off the power.