



Powermatic Model 2700 Shaper Safety Rules

The shaper has a vertical rotating spindle that cutters are attached to, to cut a molding profile on the workpiece. To avoid accidents, the following operational safety rules must be observed by everyone using the CLUB Powermatic Model 2700 Shaper. Failure to follow the safety rules will result in a loss of shop privileges.

Shaper Safety Rules:

1. Follow the 3” rule; always keep your fingers at least 3” from the cutters.
2. Don’t cut stock that is not flat on the bottom without a jig that will hold the work in a stable position.
3. Keep a balanced stance at the shaper.
4. Never clear small pieces with your hand while the spindle is moving.
5. Use the guards provided whenever possible.
6. If additional guards are needed, discuss this with the Shop Leader and make arrangements to get them.
7. Never draw the workpiece back through the cutters while they are rotating.

Start with a Risk Assessment to ensure a safe work area:

1. A three foot perimeter around the shaper should be kept clear of people, debris and sawdust that might impair traction or footing to avoid slips and falls.
2. Safety glasses with side shields or a face shield and hearing protection must be worn.
3. Wear a dust mask if dust is generated and not captured by the dust collection system.
4. Remove loose fitting clothing, jewelry, and tie back long hair.
5. Give the work your undivided attention.

Operational Safety Rules:

1. Approach your work in the CLUB Shop and on the shaper with a safe attitude!

2. Make sure that the cutter is installed on the spindle so that the blades on the cutter point towards the direction that the workpiece will be fed from. Never climb cut unless the stock feeder is used to control the workpiece.
3. Match the spindle speed to the diameter of the cutter. 10,000 rpm for cutters 3" diameter and smaller, 7500 rpm for cutters larger than 3".
4. Use the smallest diameter table insert that will allow the cutter to pass through it.
5. Never adjust the fence position or gap with the shaper running.
6. Minimize the gap in the fence. Adjust the fence halves so that they come to within 1/16" to 1/8" from the cutter
7. Ensure that the spindle is rotating in the direction that matches the intended cutting direction of the cutter.
8. The minimum length of the workpiece that can be processed is dependent on the diameter of the cutter and the distance between the fence halves. The longer, the better, but at least three time the distance between the fence halves.
9. To control the stock, use push sticks, push blocks, feather boards, or any other safety device when ever possible. This is required when cutting small or short stock.
10. Always use a jig to hold the work piece when pattern shaping.
11. When pattern shaping, ensure that the pattern is in contact with the rub bearing at all times the cut is being made.
12. Use a starting pin when pattern shaping using a jig that does not have an extended portion to rub against the rub bearing prior to the cut starting. Support the workpiece by the rub bearing only after the pattern contacts the rub bearing. Do not let the pattern ride on the starting pin after the rub bearing is contacted.
13. Always use a coping sled when shaping the ends of boards less than 12" wide;
14. Cut at a moderate feed rate. Feeding too fast may cause the workpiece to have tearout or excessive machine marks. Feeding too slow will cause the cutter to heat up and burn the workpiece.
15. If the work is too large for one person to handle, get help holding the stock or use infeed or outfeed supports.
16. Ensure that the base cabinet door is closed when the shaper is running. This door is interlocked so that the shaper will not start if it is open and the shaper will stop if it is opened while the shaper is running.
17. Ensure that the Onida dust collector is running and that the blast gates (2) to the shaper are open before starting the shaper. Close the blast gates when you are finished using the shaper and turn off the Onida dust collector if no one else is using it.
18. Lockout/Tagout the Shaper before changing the cutters or performing any other maintenance operation. All cutter changes must be done under the direction of the Shop Leader.
19. When you have finished your use of the shaper, push the stop button and turn the direction of rotation switch to "Off". Then close the blast gates. Never stick an object into the cutter to stop the machine quicker.

20. Use the Power Feeder when practical. It will feed the material past the cutter at a constant rate and minimize burning. More importantly, it keeps your hands far from the cutter.
21. When using the Power Feeder:
- a. Position the feeder so that the cutter is centered between the second and third rollers. This maximizes the clearance with the cutter.
 - b. Ensure that the drive wheels are rotating so that the stock will be fed into the cutter.
 - c. Ensure that the Power Feeder is angled towards the fence about 1/8" to 1/4" in the direction of feed so that the stock is held tight against the fence.
 - d. Keep your hands away from the infeed side of the Power Feeder. If your hand gets into the drive rollers, you may not be able to remove it and serious injury (e.g. crushing, amputation) might occur.
 - e. Ensure that the outfeed fence is adjusted so that the stock smoothly feeds through without jamming.
 - f. Use only Turtle (slow) speed.
 - g. Do not stand directly behind or in front of the workpiece.