

Timpview High School

Cabinetmaking and Millwork

Safety Rules

GENERAL SHOP SAFETY

1. Reliable studies show that the **number one cause** for all accidents is a **negligent attitude**. The second cause of accidents is failure to recognize the danger, and the third cause of accidents are the emotions which take your mind from your work.
2. Utah state law requires safety glasses be worn the entire time you are in the shop. This includes cleanup time.
3. Compressed air is extremely dangerous and should not be used to clean off your clothes.
4. Students should be safely dressed when entering the shop. This means :
 - (a) Sleeves are rolled up past the elbows, shirt tails tucked in and rings and jewelry removed.
 - b) All coats, sweaters, vests, extra shirts etc. as well as books from other classes should be left in the classroom.
 - c) Long hair must be contained in a hat or with a rubber band.
5. Horseplay is absolutely forbidden. No running, throwing objects etc.
6. Make all adjustments on machines with the machine off, the blade stopped, and the machine unplugged.
7. Do not operate any equipment unless you have watched the demonstration and passed the safety test.
8. Put away and cleanup all tools and equipment you use. Keep work area clean.
9. Ask Permission each time you use a machine.
10. Never leave a machine until the power is turned off and the machine is at a dead stop.
11. Only the operator should be inside the yellow safety zone. Never talk to, push or distract the operator. Only the machine operator should turn on the machine.
12. Concentrate on what you are doing. Never be distracted.
14. Fingers should always be kept minimum 4" away from cutting edges. Keep hands as far away as possible.
15. Never stand directly behind any machine, or where a kickback may happen.
16. Never remove chips, scraps or shavings from any machine with your hands. Use a scrap piece of wood. Wait until the machine has stopped.
17. Turn on exhaust fan before using any machine.
18. When taking the safety test, a student must score 100% to pass.
19. Power cords on electric tools should be inspected constantly.
20. The letters MSDS refer to Materials Safety Data Sheets.
21. Oily or greasy rags should be placed in a metal covered container.

PNEUMATIC NAIL & STAPLE GUNS

1. Always wear safety glasses. Get instructor's permission.
2. Use the proper gun and nails / staples for the job to be done.
3. Keep the gun facing down or on your work. Never point the gun at anyone or anything.
4. Never shoot nails/staples into the bench tops.
5. Keep your hand from the nailing area.
6. Disconnect the gun from the air hose after using and return to the storage cabinet.

DRILL PRESS

1. Always show the instructor the wood, show how it will be clamped and get his permission to operate the drill press. Take off all loose clothing and jewelry.
2. Before drilling a hole on the drill press, mark the center of the hole with a punch mark. When drilling holes 3/8" or larger, a pilot hole of about 1/8" diameter should be drilled first.
3. Tighten the bit and remove the chuck key from the chuck.
4. Set the stop and have a flat board to drill into.
5. To prevent the drill bit from catching the wood as it comes through the opposite side, the feed lever should be moved very slowly as the hole is finished.
6. The following are correct methods of adjusting the table for correct height.
 - A. A block of wood is placed on the table so the bit can drill into that instead of the metal table.
 - B. The "stop" is set so that the bit can not go deeper than just barely into the wood block.
 - C. The drill press table may be raised or lowered. Unlock the handle before raising or lowering the table.
 - D. Two or three scrap boards can be stacked on the table to raise the work high enough. Stack the largest on bottom, smallest on top.
7. Small pieces (6" or less) and irregular shaped pieces must be clamped to the table.
8. Cylindrical stock should be drilled in a v-block.
9. Back the bit out of the wood, frequently, to allow the chips to come out of the hole.

BAND SAW

1. Always obtain the instructor's approval each time you wish to use the machine. When you approach the machine, be sure it has been turned off and is not coasting.
2. When you finish using the band saw, turn off the switch and remain by the saw until it stops coasting. Do not leave until it has stopped running!
3. The plastic guard should not be more than 1/8" - 1/4" above the wood being cut.
4. Maintain a 3" - 4" margin of safety. This means your hands are always 3" - 4" away from the blade and never in front of the blade or pushing toward it.
5. The stock must be flat on the table--DO NOT CUT CYLINDRICAL STOCK.

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6. The following are correct methods of adjusting the table for correct height.
 - A. A block of wood is placed on the table so the bit can drill into that instead of the metal table.
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 - C. The drill press table may be raised or lowered. Unlock the handle before raising or lowering the table.
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7. When following around the **OUTSIDE** of a template or the edge of a board, move the router **COUNTER CLOCKWISE**.
8. When following around the **INSIDE** of a template or an opening in a project, move the router **CLOCKWISE**.
9. Climb cutting (going the opposite way from what you should to avoid chipping) should be done only under the direct supervision of the instructor.

RADIAL ARM CUT OFF SAW

1. Always get permission each time you wish to use this machine.
2. When you approach the machine, be sure it has been turned off and is not coasting. Then check to see that the saw is pushed back against the stop before turning on the power. Be sure the blade is not touching any wood when power is turned on.
3. Be sure the wood is firmly against the fence, and flat on the table.
4. Boards must be at least 12" long or longer to cut on the radial arm saw.
5. Always keep your fingers out of the red zone, at least 4" away from the blade.
6. Never stack pieces of wood on top of another to cut them on this saw. Cut only one piece at a time.
7. Students must remember that this saw pulls itself into the work and it may be necessary to hold back on the handle so that the saw does not propel itself through the wood.
8. Avoid working across the saw line with hands or arms. This is known as cross arming and must never be done.
9. Never leave the saw hanging at the end of the arm. Push it back against the post ready for the next cut.
10. The radial arm saw is to cut across the grain only.
11. Always remove scrap wood after the saw is stopped and with another board.
12. Be sure machine is completely stopped and not coasting when you leave it.

JOINTER

1. Always get approval each time before you operate this machine.
2. When you approach the machine, be sure it is turned off and is not coasting. **MAINTAIN AT LEAST A 4 INCH MARGIN OF SAFETY!** Never move the guard away from over the cutter head.
3. Depth of cut should be no more than **1/16 inch for edges, and 1/32 inch for flat faces**.
4. Stock must be at least 12" or longer to be jointed, and at least 1/2" thick or more.
5. Do not joint a board that is less than 1 1/2" wide (tall).
7. Edges of stock less than 4" wide must be held with push sticks.
8. Always use push sticks when jointing the face of a board.

7. When following around the OUTSIDE of a template or the edge of a board, move the router COUNTER CLOCKWISE.
8. When following around the INSIDE of a template or an opening in a project, move the router CLOCKWISE.
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9. Stand to one side of the blade when cutting. Do not reach over the blade to pull the board from behind. Do not push the board with hands directly in front of the blade.
10. Always keep your hands at least 4" away from the blade. When ripping narrow boards, (4" or less) always use push sticks. Sometimes on narrow cuts, part of the guard must be raised.
11. When ripping stock to width, the piece you want to keep goes between the blade and fence. This is the part you hold, keeping the jointed edge against the fence.
12. Avoid ripping through loose knots or checks, boards that are twisted, warped etc.
13. If the board is long, get a "tail-off" man to support the board as it comes through the blade.
14. When crosscutting, the miter gauge is used and the fence is moved out of the way.
15. Sometimes the fence and miter gauge are used together when cutting two or more pieces to exact length. This can only be done if the MITER GAUGE and fence are both on the same side of the blade.
16. Never pull the board back through the blade. Always push it completely off the saw.
17. Never lower pieces of wood down onto a moving blade.
18. After using the saw, turn off the power, lower blade down---even while it is coasting. Remove all scrapes with another board after the blade is stopped.

WIDE BELT SANDER

1. Always get the instructor's permission each time you wish to use this machine.
2. Boards must be at least 18" or longer to go through the sander without a push stick. Wood must be at least 1/4" or thicker to be sanded.
3. All glue must be scraped off. Do not sand boards with painted or finished surfaces.
4. Always jog the sander before turning it on.
5. When beginning to sand, first lower the table so that the board just barely slides under the orange bar. Second, raise the table each time the board goes through until sanding begins. Watch the load meter because most of the time the shop will be too noisy to hear when the sanding starts.
5. Never turn the handle more than 1/32" (one full turn of the handle) when sanding. On wide boards turn the handle only 1/4 - 1/2 of a turn. Make sure the load meter never goes in the red area.
6. Boards 12"-17" can be sanded if a push stick is used behind the board. Caution: Do not let the push stick slip under the board being helped. Do not sand anything under 12" long.
7. Always keep your hands on top of the board when feeding stock into the machine. Be careful so fingers do not become pinched.
8. Feed the stock with the grain only. Never allow any small piece of material that could twist or roll into the machine. Never sand round, cylindrical stock.

MOTORIZED MITER SAW

1. Always get permission each time you wish to use this machine.

2. Allow a 6" margin of safety when holding stock in place to be cut.
3. If the wood is shorter than 6" clamp it down or use a jig to hold it.
4. Never reach across the line of cut. Cross arming is most dangerous.
5. Use another piece of wood to remove scraps. Stay by the machine until it stops.
6. After cutting on the miter saw, **Do Not** raise the blade until it is completely stopped.

EDGE SANDER

1. Use the edge and form sander for straight edges and ends wider than 8".
2. When using the 48" edge and form sander always watch to see if the belt is centered on the platen. If the belt moves up and down, shut off the machine and tell the instructor.
3. Never sand circles, squares, ends of boards less than 8" wide, or boards less than 2" wide. NEVER shape small pieces of wood freehand.

MORTISER

1. Always have the instructor check your set up each time you wish to use this machine. The stock must be securely clamped in the vise so it will not slip.
3. Check to see that all stops and clearances are set so that the mortising chisel does not hit part of the machine or go through the stock into the table.

TWIN BORING MACHINE

1. Always get permission each time before using this machine. This boring machine is pneumatically controlled, any part of you that is under the clamp will be mashed and drilled when the control is activated.

SHAPERS

1. Always get permission before using the shaper. The shaper is to be used only with the teachers supervision and in most cases only by him.
2. The cutter should be mounted so that most of the cutting will be performed on the bottom side of the board.
3. Use the fence for all straight line cuts. Always use guards, feather boards, and hold down devices when ever possible.
5. Small, irregular pieces that are hard to hold are unsafe and should not be shaped.

PANEL SAW

1. Always get permission before using this machine. Used to cut across grain of large pieces. Cut from the top down towards the bottom of the machine.
3. Leave the saw at the bottom until the blade stops completely, then return it to the top.

PANEL ROUTER

1. Always get permission each time before using this machine.
2. The wood being routed must be clamped tightly in two places.
3. When the router is locked into position, slide the stock from the right side to the left side.

GRINDER

1. Always get permission each time before using the grinder. The grinder should only be used to sharpen metal tools. No wood.
2. The tool rest should be set close to the wheel, no more than 1/8" - 1/4" away. Maintain at least a 4" margin of safety.

WOOD LATHE

1. Always show the instructor the stock and get permission before you turn on the lathe.
2. Do not use wood with knots, cracks, splits or with nails.
3. GLUED-UP STOCK SHOULD CURE AT LEAST 24 HOURS before turning.
4. If a back up block is glued on the stock, be sure the glue is spread evenly on both sides of the paper.
5. Wear safety glasses and a face mask when turning.
6. Remove all loose clothing and take off jewelry
7. Rotate the stock by hand before turning on the lathe.
8. Use the proper speed. Use slow speed for rough turning. Use a fast speed for sanding.
9. Use the largest face plate that will fit the wood when doing a faceplate turning.
10. The tool rest should be kept close to the work, within 1/4 inch. The tool rest should hold the lathe tool so that it cuts right on center or slightly above center.
11. Make sure that both the tool rest and the tailstock are locked in place before turning on the lathe.
13. NEVER move the tool rest closer to the work unless the lathe is at a dead stop. Make all adjustments with the lathe off.
14. When turning between centers, the spur center goes in the head stock and the cup center in the tail stock.
15. Make saw cuts from corner to corner on both ends of the wood. Set the live center at least 1/8" deep into the saw cut .
16. Hand tighten all controls. Never strike them with a hammer or mallet.
17. Hold the tool firmly with both hands.
18. Remove the tool rest before sanding on the lathe.

UP-CUT SAW / TIGER STOP

1. Guards and other safety devices should be in place and used at all times.
2. **KEEP HANDS OUT OF BLADE PATH. NEVER PUT HANDS UNDER YELLOW GUARD/CLAMP OR SENSOR.**
3. Always use a “push stick” or air hose to clear away chips and sawdust. Never use your hands to clear small pieces.
4. Do not work with material that is too large or too small to handle safely.
5. Make all adjustments with the power off.
6. Shut off all power sources and clean the machine before you leave it.
7. Never leave the tool unattended. Turn off power. Don't leave saw until blade comes to a complete stop.
8. Make sure the work deck of the tiger stop is clear from wood, before you type in a dimension.
9. Do not push the wood too hard up against the stop.
10. Always wear safety glasses. Make sure you understand how to use the machine or get help from the teacher.