WOODWORKING

SAFETY CONTRACT
for

THE WOOD SHOP

****

1. **WEAR SAFETY GLASSES!** No *exceptions*, no *excuses*, no *foolin'*.

2. **Never** use machines, tools or equipment *until instruction has been given* on their safe use and care, *and* permission to use them has been granted by the instructor.

3. Report damage to machines or shortages of materials to the instructor **as soon as noticed. Never** touch a broken or tagged machine.

4. Machines must have their proper safety guards in place **at all times!**

5. **Never** wear loose clothing when operating machines or equipment. Sleeves **must** be rolled up.

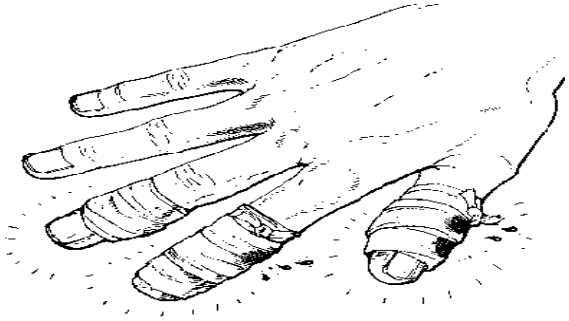
6. Long hair **must** be tied up or covered by a hair net while operating machinery.

7. All tools and equipment **must** be treated with *care and respect*.

8. All waste materials **must** be placed in *appropriate containers.*

9. All tools and equipment **must** be returned to their original storage place after usage.

10. **No horse play.** Be cautious and sensible. Respect yourself and your fellow students.



Look at your fingers;
Count them;
If you can *see* them and can *still count* to *ten*, then you can appreciate the benefits of safety in the wood shop.

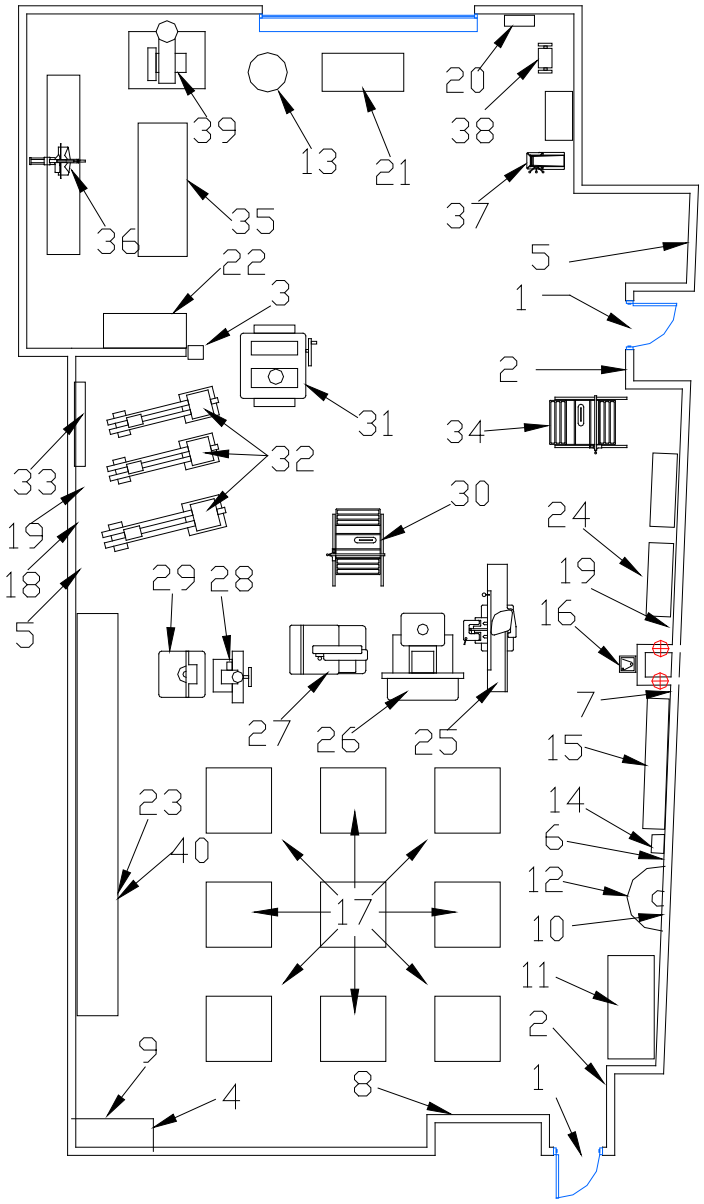
DATE OF LESSON _____

I was present for the instruction on safe conduct in the **Wood Shop** and I understand what safe and responsible behaviour is.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

Wood Shop Orientation



Safety

1. Exits
2. Fire Extinguishers
3. Fire Blanket
4. First Aid Kit
5. Emergency Power Shut Off
6. Safety Glasses Rack
7. Hearing Protector Rack
8. Hall Pass/ Sign out sheet
9. Instructor's Desk

Maintenance

10. Bulletin Board
11. Book Shelf
12. Bradley Sink
13. Garbage Can
14. Hand Dryer
15. Coat Rack
16. Drinking Fountain
17. Work Benches
18. Cleaning Station
19. Dust Collector Floor Sweeps
20. Dust Collector Power Switch
21. Scrap Bin
22. Finish Storage Cabinet

Tools and Machines

23. Hand Tool Cupboards
24. Sanding Bench
25. Jointer
26. Disk and Spindle Sander
27. Bandsaw
28. Mortiser
29. Shaper
30. Main Table Saw
31. Thickness Planer
32. Lathes
33. Lathe Tools
34. Secondary Table Saw
35. Glue Bench
36. Power Miter Saw
37. Drill Press
38. Tool Grinder
39. Radial Arm Saw
40. Portable Power Tool Cupboard

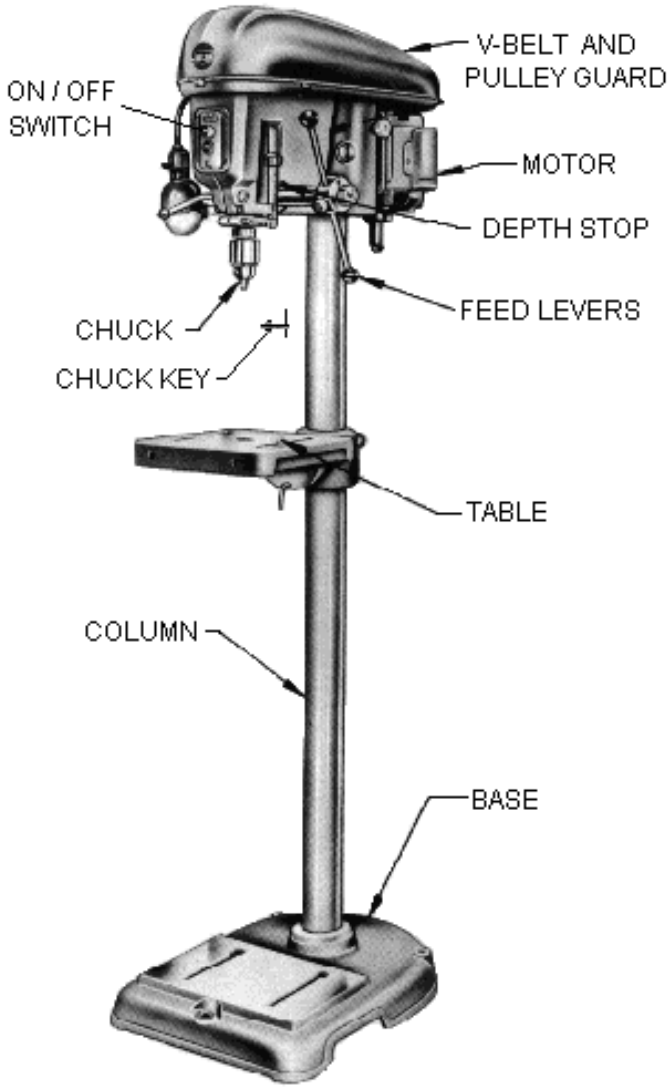
WOODWORKING

INSTRUCTION AID SHEET

for

THE DRILL PRESS

****



DESCRIPTION

The drill press is an accurate, vertical boring or drilling machine. It is also capable of many other operations such as mortising, routing, sanding and shaping using a variety of attachments.

OPERATION

Stock is held by hand, jig or clamp on the drill press table and the chuck is brought down to the work using the feed wheel. The speed can be adjusted for different woods and materials; faster for soft, slower for hard.

THINGS TO REMEMBER

- ☞ Do not force the bit into the work.
- ☞ Use a slow, steady, even feed rate into the work.
- ☞ The depth guide is used to make multiple, same depth holes.

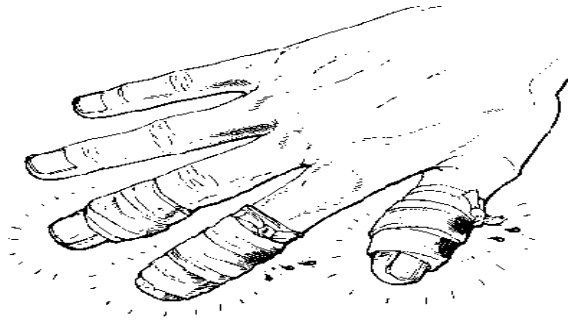
WOODWORKING

SAFETY CONTRACT
for

THE DRILL PRESS

****

1. **WEAR SAFETY GLASSES!**
2. Long hair **must be enclosed** in a hair net or be tied up.
3. When boring small pieces **hold them securely** with a *clamp*.
4. **Be sure** to use a *bottoming piece* (scrap) under the work so that you will not drill into the table.
5. Operate the drill at the **correct speed.**
6. **Make sure** the drill bit is **tight** in the chuck
7. **Never** leave the *chuck key* in the chuck.
8. **Be sure** you have the *right type of drill bit* for the job.
9. **One person** operating the machine at a time.
10. **Turn off** drill press *when finished.*



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Drill Press** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

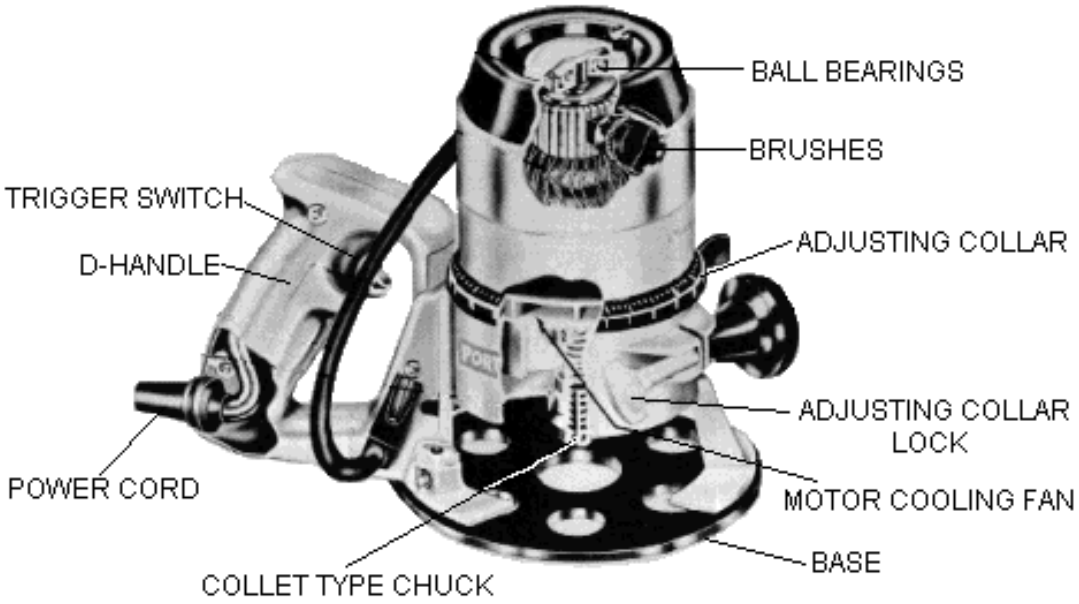
WOODWORKING

INSTRUCTION AID SHEET

for

THE ROUTER

****



DESCRIPTION

The portable router pictured above, consists of a motor unit carried by an adjustable base. A collet type chuck is attached to the motor and holds various cutting tools known as bits. The size of the router is determined by the size of the motor, from 1/4 horsepower to over 3, and by the size of the collet, 6mm, 10mm and 12 mm sizes. Routers cut a variety of shapes and grooves in or on the edge of pieces of wood. This is accomplished by a wide variety of bits that are available for the router. In the past most bits were made of high-speed steel but now they almost always have carbide steel tips for longer life and sharper edges.

OPERATION

The router motor revolves in a clockwise direction and at speeds in excess of 20,000 RPM. You must always move the machine in a counter-clockwise direction and modify the rate of feed in order to compensate for the hardness and grain of the wood you are routing. Routers can be used freehand, with a jig or fixture, or mounted in a table.

THINGS TO REMEMBER

- ☞ The router can be considered to be a portable shaper.
- ☞ Do not try to rout pieces too small to hold safely.

WOODWORKING

SAFETY CONTRACT

for

THE ROUTER

****

1. **WEAR SAFETY GLASSES!**

2. **Be sure** router is **unplugged** *before* changing bit or cleaning housing

3. **Be sure** router is **switched off** *before* plugging router into power socket.

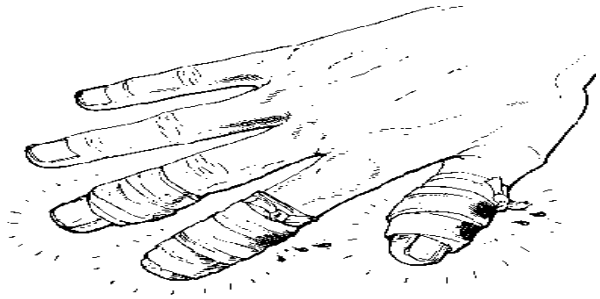
4. **Be certain** that the work is **securely clamped** *and* that it will **remain stationary** during the routing operation.

5. Place the router base on the work or template **with the bit clear of the wood** *before turning on the power.* Hold it **firmly** *when turning on the motor* to overcome starting torque.

6. Hold the router in both hands and feed it smoothly through the cut in the *correct direction;* **against the rotation** of the bit.

7. When the cut is complete, turn the motor off and **do not lift** the machine from the work until the motor has **completely stopped.**

8. *When finished* with routing job, **unplug router** and *return to proper storage area*.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Router** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

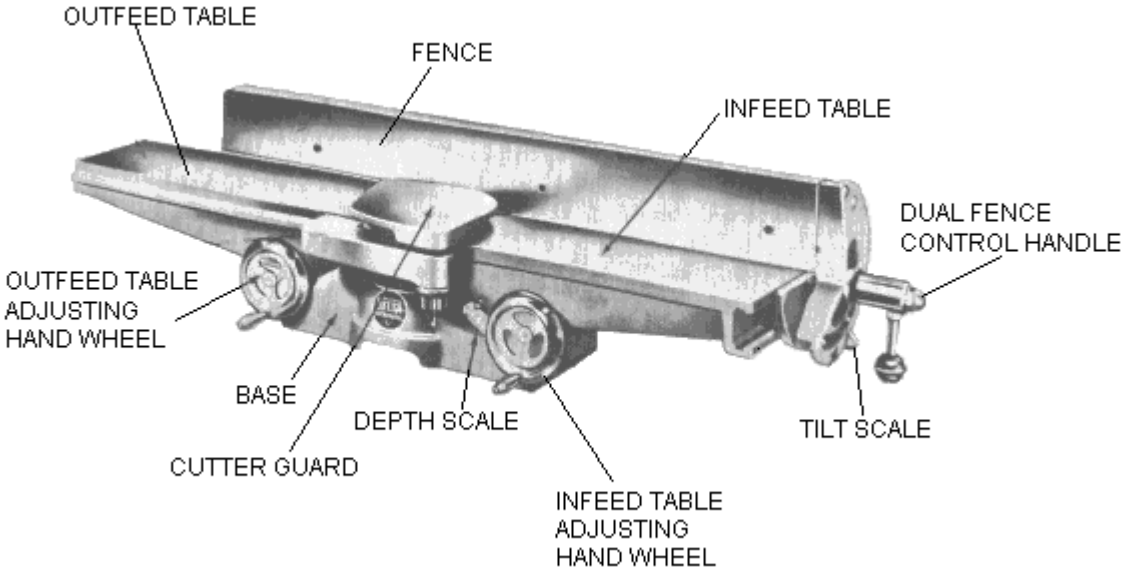
WOODWORKING

INSTRUCTION AID SHEET

for

THE JOINTER

****



Description: The jointer is used to true surfaces and square edges. By making several adjustments, it is possible to cut tapers, angles, chamfers, and rabbets on this machine.

Operation:

1. Check to make sure the jointer is set for the normal cut of 2 mm.
2. Start the machine.
3. Place the wood on the front table and hold it against the fence.
4. Push the work over the cutters and onto the back table. Let the guard snap back into place before removing the stock. Additional cuts may be necessary to smooth the board if it is warped or rough, etc.
5. Turn off the machine when finished jointing.

Things To Remember:

- ☞ Use a *push block* for wide pieces and to keep fingers from getting too close to the cutters when jointing narrow pieces.
- ☞ End grain ***cannot*** be jointed.
- ☞ The *minimum length* that can be safely jointed is 250 mm.

WOODWORKING

SAFETY CONTRACT
for

THE JOINTER

****

1. **WEAR SAFETY GLASSES!**

2. The guard **MUST** be in place at all times

3. When jointing the face edge, use a push stick or stock pusher.

4. Stock **MUST** be against the fence for the whole operation.

5. **DO NOT** allow your hands to rest on the part of the stock that is directly over the cutter-head.

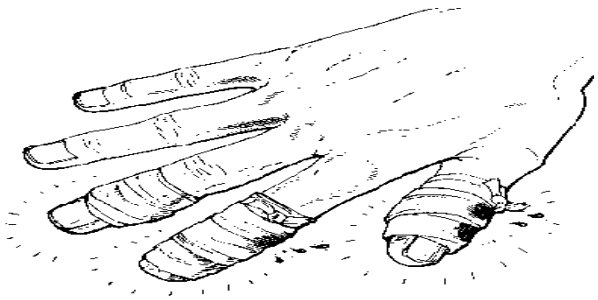
6. **DO NOT** plane stock shorter than 250 mm. or thinner than 15 mm.

7. **NEVER** joint end grain

8. Walk with your work as it progresses through the jointer. Left hand is in front, right hand behind. Keep fingers above the guard.

9. **DO NOT** pull back work over revolving knives.

10. **DO NOT** adjust, clean or move the jointer while the cutter-head is in motion.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Jointer** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

WOODWORKING

INSTRUCTION AID SHEET

for

THE VARIETY SAW

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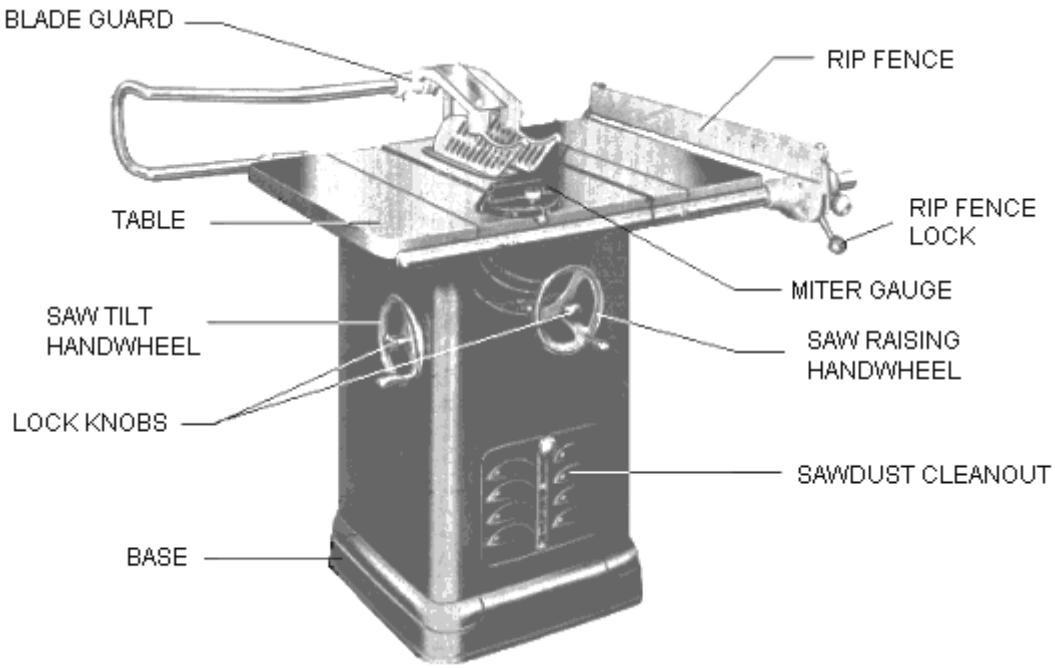


Description: The Variety Saw is a large, powerful, stationary saw that is capable of cutting wood with extreme accuracy. The saw blade protrudes through the top surface or table of the saw through which stock must be pushed. The variety saw is central to most cabinet and woodworking shops.

Operation: The saw blade may be raised or lowered and angled to the table for a variety of cuts. For ripping boards to width the fence is used. For crosscutting boards to length the mitre guage is used. The variety saw can be fitted with a number of different blades and cutters furthur increasing the variety of cuts that can be made.

Things To Remember: In order for the variety saw to produce an accurate cut, at least two adjacent sides of the stock must be square and flat.

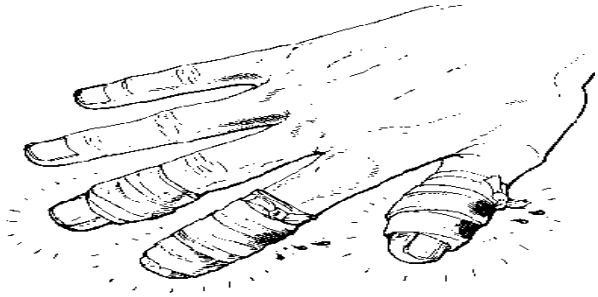
WOODWORKING

SAFETY CONTRACT
for

THE VARIETY SAW

****

1. **WEAR SAFETY GLASSES!**
2. The guard, kick-back pawls and splitter **must** be in good working condition.
3. Stand to one side of the blade while operating the saw.
4. **DO NOT** reach over the saw blade with your hand.
5. A push stick **must** be used when ripping material.
6. When rip-sawing make sure the edge of board placed against the fence is straight.
7. When cross-cutting, **always** use the mitre guage.
8. When cross-cutting, **DO NOT** place the end of the piece against the rip-saw fence.
9. **NEVER** attempt a freehand cut.
10. **DO NOT** clean, adjust or lubricate the saw while the blade is in motion.
11. *One* person operating the machine at a time.
12. Be sure machine is turned off when finished.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Variety Saw** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

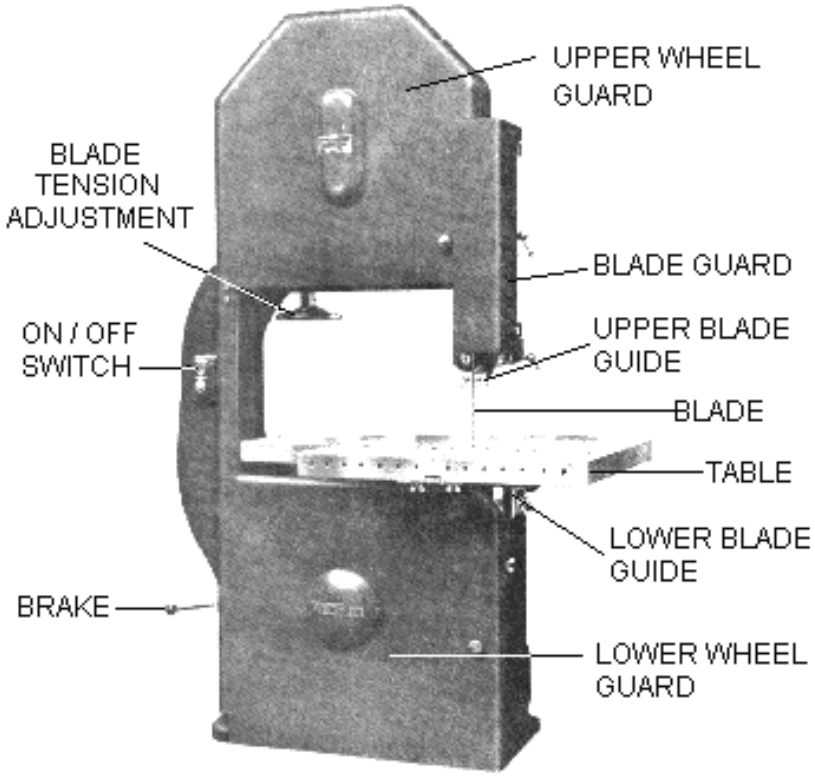
WOODWORKING

INSTRUCTION AID SHEET

for

THE BAND SAW

****



DESCRIPTION

The bandsaw is a powerful motor-driven cutting tool. The saw's blade is a continuous, flexible band of steel with rip-cut teeth filed on one edge. It has a tilting table for cutting on an angle. The size of a bandsaw is determined by the diameter of the wheels that drive and guide the blade. The depth of cut is limited by the distance between the table and the blade guard.

OPERATION

The bandsaw blade travels in a clockwise direction forcing the stock that is being cut down against the table. Although the bandsaw is an excellent machine for cutting curves, it can also rip, crosscut, and resaw stock. Because of its powerful motor and deep depth of cut, the bandsaw can cut large pieces of wood and also odd pieces of wood. The blade must be under tension to maintain a straight cut.

THINGS TO REMEMBER

- ☞ **Wait** for the bandsaw to come up to full speed before starting cut.
- ☞ **Do not** cut curves that are too tight for the width of the bandsaw blade.
- ☞ **Do not** force a cut, always use a smooth, slow feed into the blade

WOODWORKING

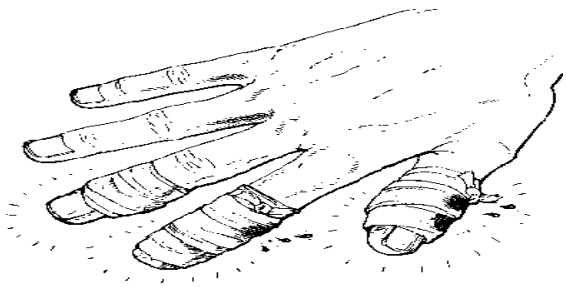
SAFETY CONTRACT

for

THE BAND SAW

****

1. **WEAR SAFETY GLASSES!**
2. **Be sure** that all guards are in place.
3. The *blade guard* **must not be** more than 25mm. above work.
4. Keep hands to the sides of the blade, **never** in front of the blade.
5. Keep work *flat* on the table.
6. Use a *push stick* to move scrap pieces of wood away from the blade.
7. **Do not** try to cut too small a radius, if necessary, make relief cuts first, ninety degrees to the line you must cut.
8. One person at a time operating the machine.
9. If the blade breaks, shut off the power and stand clear until the wheels have stopped turning.
10. When backing out of a cut, **do so with extreme caution** so as not to catch the blade and pull it off the wheels, *otherwise* **stop the machine first.**
11. When finished, *turn machine off* and **use the brake to stop the blade.**



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Bandsaw** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

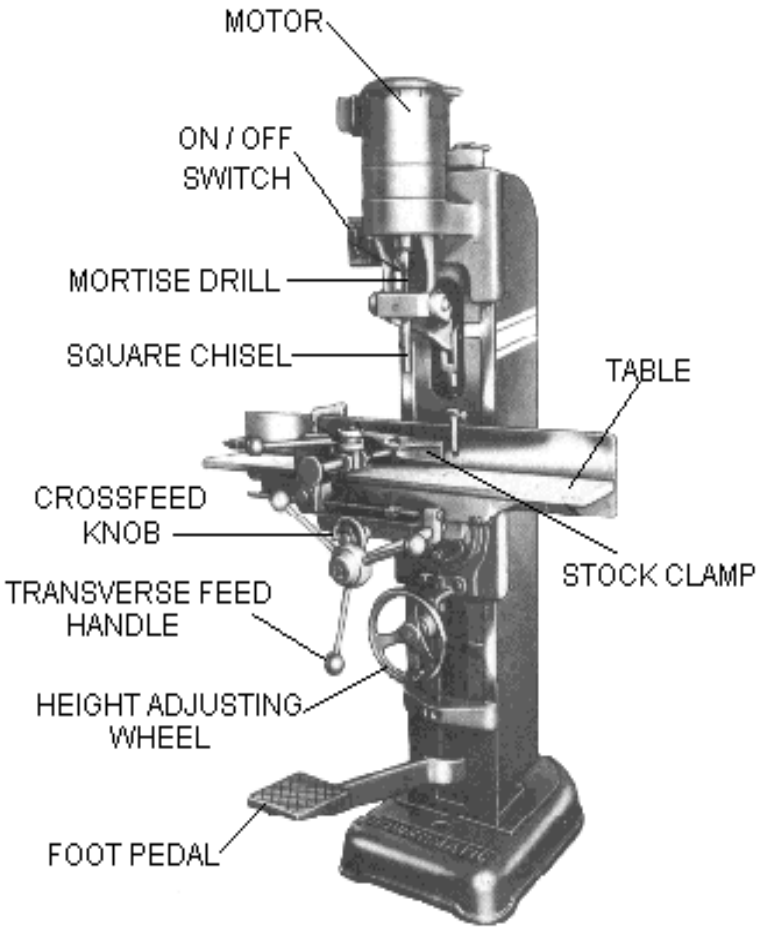
WOODWORKING

SAFETY CONTRACT

for

THE HOLLOW CHISEL MORTISER

****



DESCRIPTION

The hollow chisel mortiser drills and cuts square holes in wood by means of a four sided chisel that has a drill bit in the center of it. The hollow chisel mortiser is a very heavy, powerful and accurate tool. It can be considered to be an extremely specialized drill press as it can only drill square holes. This is called a dedicated operation.

OPERATION

Stepping on the foot pedal forces the hollow chisel into the stock that has been clamped into place on the table. This action is then repeated in order to drill and cut the appropriate size and shape hole. Because of the precise side to side and up and down feed capability of this machine, very clean and accurate cuts can be made.

THINGS TO REMEMBER

- ☞ Before starting a cut, check to see that the stock is secure in the vise and that it is flat against the table and fence.
- ☞ Be sure that the table is not set too high, if the chisel hits the table it will become dull or break.
- ☞ Before turning the machine on, do a 'dry run' to be sure the travel of the table and bit will allow you to do the whole cut.
- ☞ It is easy to heat the chisel up by taking too deep a cut into the wood causing it to become dull. Make multiple, shallow cuts and allow the wood chips to clear away from the open side of the chisel.

WOODWORKING

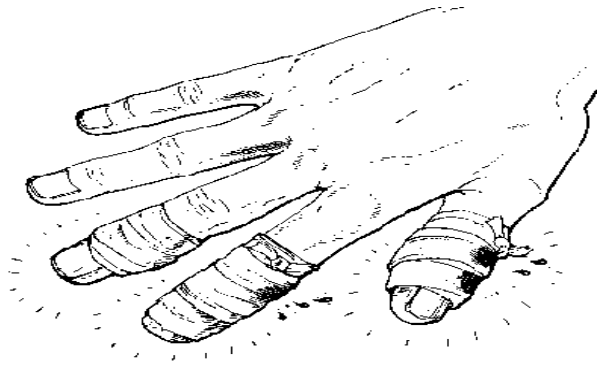
INSTRUCTION AID SHEET

for

THE HOLLOW CHISEL MORTISER

****

1. **WEAR SAFETY GLASSES!**
2. Long hair **must be tied up** or enclosed in a hair -net.
3. All stock must be held **securely** in the mortising machine vise.
4. **Make sure** bit is **tight** in the chuck.
5. ***Never*** leave chuck key in the chuck.
6. **Be sure** hollow chisel is secure and square to the fence.
7. Keep fingers **away from chisel** and *adjust only* when machine is **off and stopped.**
8. Raise chisel **completely out** of work before moving work.
9. Turn mortising machine **off** *before* moving to next piece.
10. ***One*** person operating the machine at a time.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Hollow-chisel Mortiser** and understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

WOODWORKING

INSTRUCTION AID SHEET

for

THE POWER MITRE SAW

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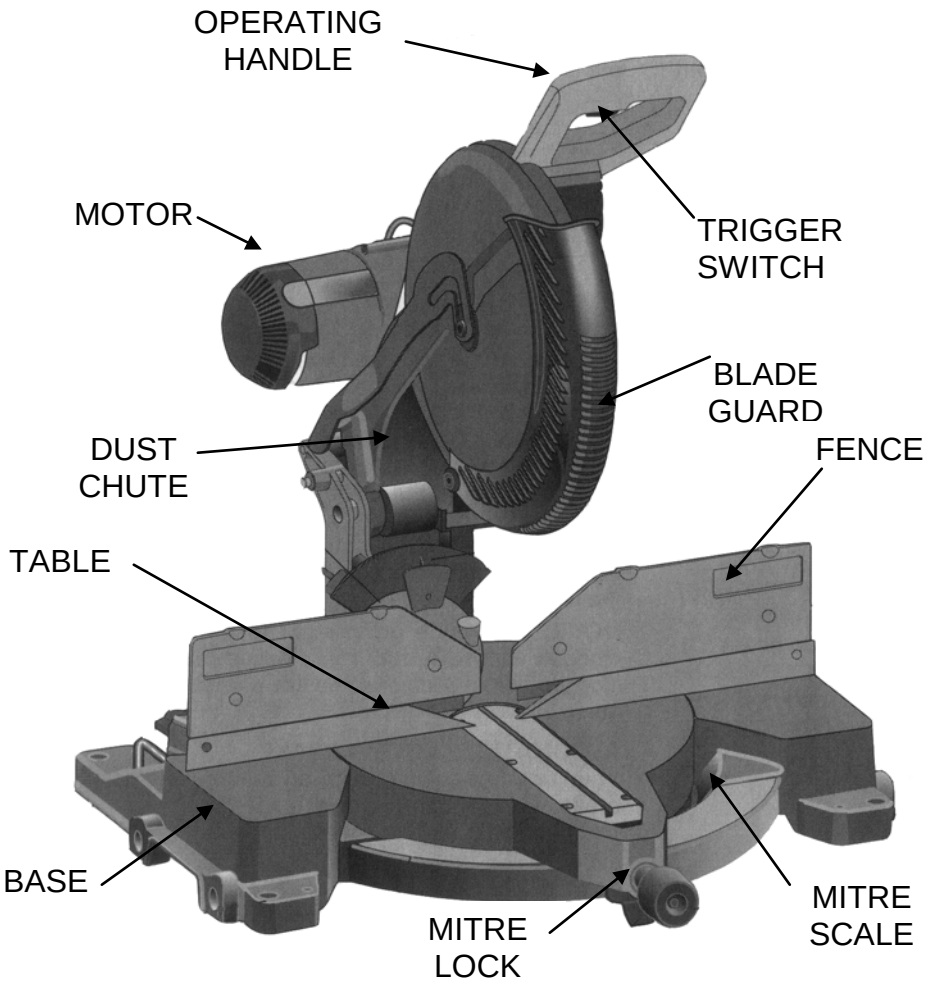


DESCRIPTION

The power mitre saw or chop saw is designed to cross cut accurate angles on the ends of thinner boards or moulded wood such as would be used for picture frames.
The blade can be locked at any angle 45 degrees either side of 90 degrees.

OPERATION

The wood is held in place against the fence and on the table and then the saw is brought down through the wood cross cutting the angle.

THINGS TO REMEMBER

- ☞ Only dressed wood can be cut on the mitre saw.
- ☞ The 90 degree edge and face must be in contact with the fence and table
- ☞ Keep your hands as far from the blade as possible, especially with small pieces of wood
- ☞ Use clamps or jigs for small or complicated cuts.

WOODWORKING

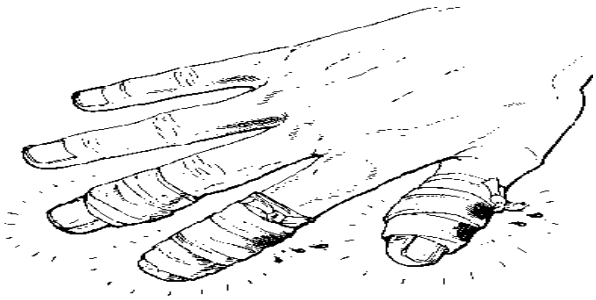
SAFETY CONTRACT

for

THE POWER MITRE SAW

****

1. **WEAR SAFETY GLASSES!**
2. Be sure blade guard is operational
3. One person only operates this saw.
4. Do not cut small pieces without clamping them in place or using a jig.
5. All wood must be supported by the fence and table before cutting.
6. Do not over tighten mitre lock knob on angled cuts.
7. Advance the blade into the wood using a steady, slow motion.
8. Never force a cut.
9. Never cut wood cross handed.
10. Wait until blade has stopped before retrieving cut wood.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the Power Mitre Saw and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

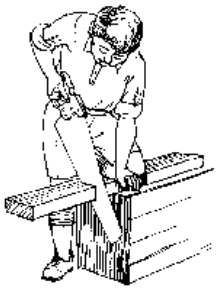
TEACHER'S SIGNATURE _____

WOODWORKING

INSTRUCTION AID SHEET

for

THE RECIPROCATING SPINDLE SANDER



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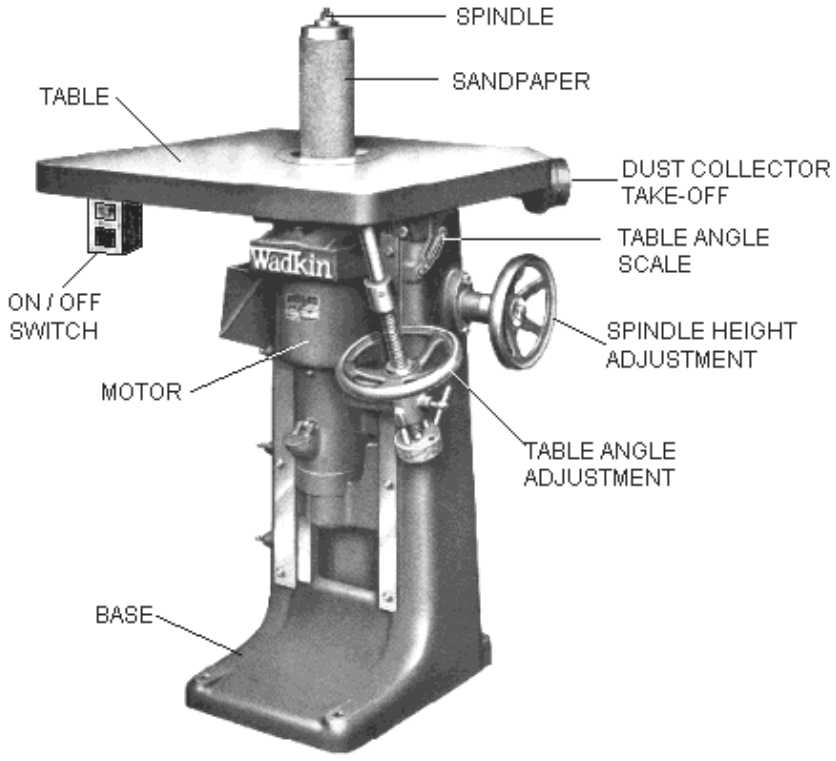


DESCRIPTION

This sanding machine has a spindle or vertical drum that rotates and reciprocates. (moves up and down) It has a tilting table and the table can also be adjusted up and down to use all of the sandpaper mounted on the spindle. The sandpaper is cut from a roll and clamped in place on the spindle. The machine is connected to the dust collector to maintain a clean work area as this machine produces an enormous amount of dust. The reciprocating spindle sander is an excellent machine for sanding inside curved surfaces.

OPERATION

In order to sand surfaces ninety degrees to each other the table must be adjusted accordingly. Turn on the dust collector (or open the blast gate) and turn on the machine. Work must be kept flat on the table and advanced against the direction of rotation of the spindle. Use a smooth motion and adjust pressure according to how much stock you need to sand off.

THINGS TO REMEMBER

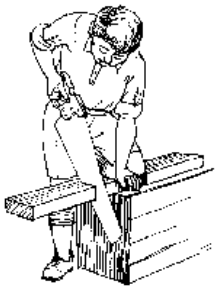
- ☞ When the paper gets loaded with saw dust, adjust the table to a position where the paper is cleaner.
- ☞ Sandpaper can be partially cleaned by pushing a crepe rubber stick against the paper.
- ☞ Do not push the work too hard or stay in one place too long or else the work will burn.

WOODWORKING

SAFETY CONTRACT

for

THE RECIPROCATING SPINDLE SANDER



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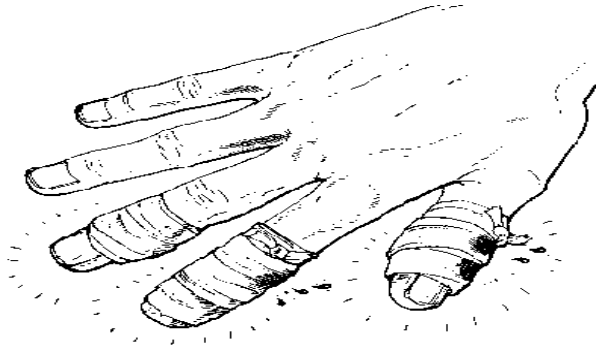
1. **WEAR SAFETY GLASSES!**
2. Turn on the *dust collector* and open the *blast gate* to the collector pipe.
3. **Do not** touch the spindle when it is turning.
4. **Do not** sand pieces of wood that are too small to hold safely.
5. **Do not** try to sand off large amounts of stock, remove excess with a cutting tool first.
6. **Do not** apply too much pressure on stock when sanding or else it will burn.
7. *Replace* sandpaper when ripped or wrinkled from heavy usage.
8. Before replacing paper, ***be sure that power is disconnected.***
9. Turn machine off when finished.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Reciprocating Spindle Sander** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

WOODWORKING

INSTRUCTION AID SHEET

for

THE DISK SANDER

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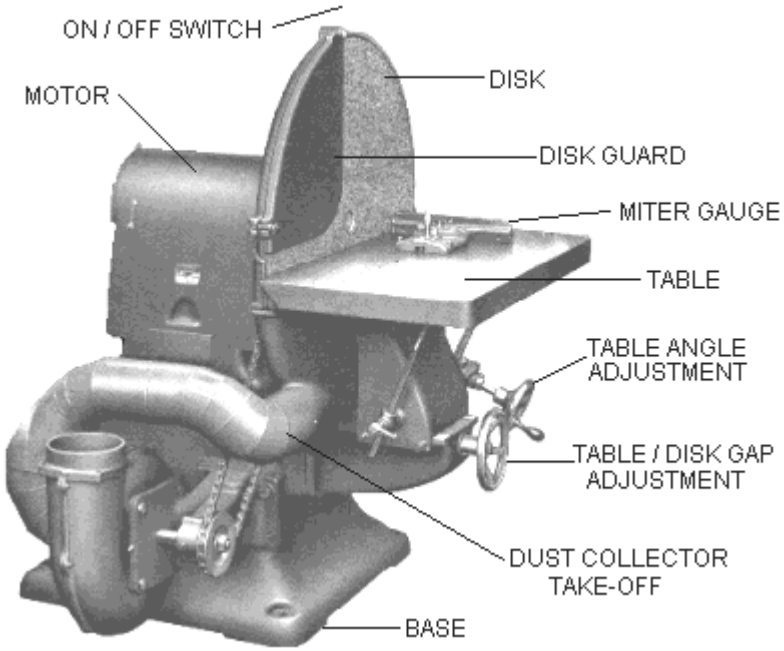

Description: The large disk sander is a fixture in the pattern making shop or custom woodworking shop. It is extremely useful for sanding end grain and outside curves of wooden projects. The disk sander is extemely heavy, powerful, and when properly setup and used, accurate.

Operation: Because the disk is heavy the motor must have time to bring the disk to full speed before it is used. The table can be adjusted for angles or to have a larger gap between the table and disk to compensate for different shaped projects.

Things To Remember:

- ☞ Be sure the machine has been turned off as the disk takes a long time to stop turning.
- ☞ Always work on the downward turning side (right side) of the disk so that the stock is pushed down onto the table.

WOODWORKING

SAFETY CONTRACT

for

THE DISK SANDER

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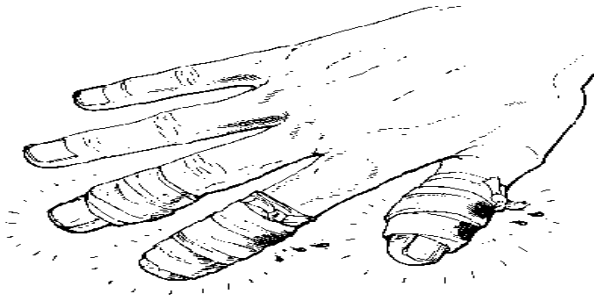
1. **WEAR SAFETY GLASSES!**
2. Turn on the *dust collector* and open the *blast gate* to the collector pipe.
3. **Do not** touch the disk when it is turning.
4. **Do not** sand pieces of wood that are too small to hold safely.
5. **Do not** try to sand off large amounts of stock, remove excess with a cutting tool *first.*
6. **Do not** apply too much pressure on stock when sanding or else it will burn.
7. *Replace* sandpaper when ripped or wrinkled from heavy usage.
8. Before replacing paper, ***be sure that power is disconnected.***
9. Turn machine **off** *when finished.*



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Disk Sander** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

WOODWORKING

INSTRUCTION AID SHEET

for

THE LATHE

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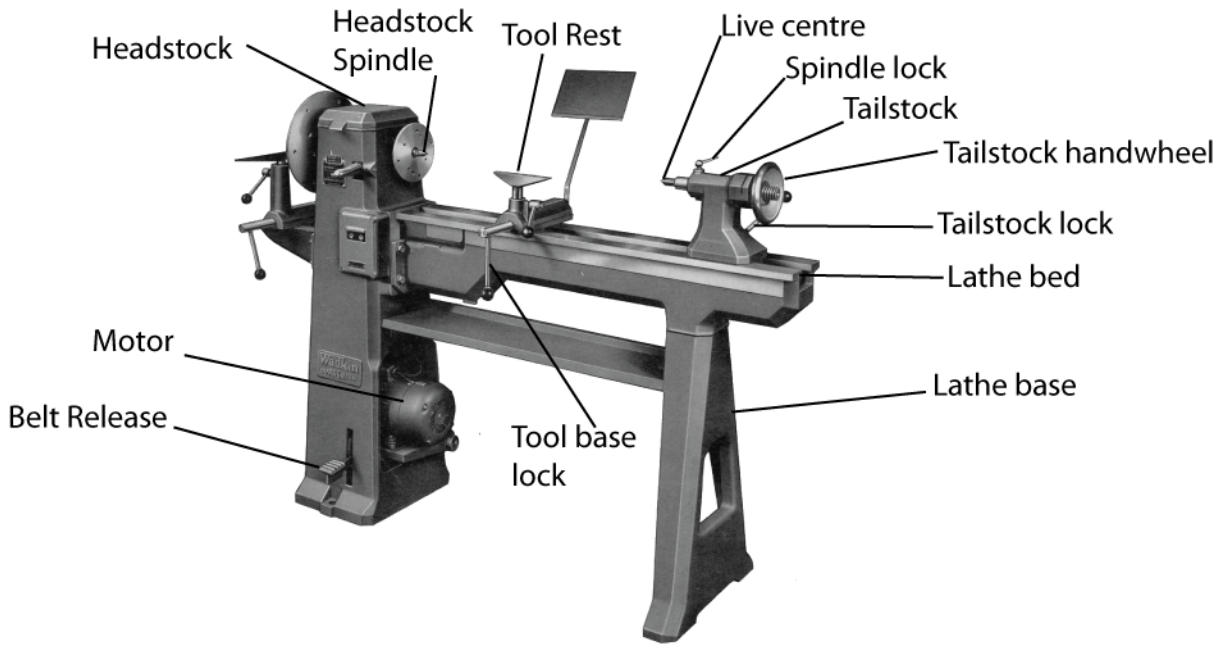

Description: The lathe is a machine tool which rotates the workpiece on its axis to perform operations such as cutting, sanding, and facing with turning tools that are applied to the workpiece to create an object which has symmetry about it's axis of rotation.

Operation: An adjustable horizontal metal rail (the tool rest) in front of the material workpiece is used by the operator to position for use with shaping tools, which are usually hand-held. After the shaping process, it is common use sandpaper against the still-spinning object to smooth the surface. The tool rest is usually removed during sanding as it may be unsafe to have in the way.

Things To Remember:

- ☞ Don't let the tool touch the wood until after it is on the rest
- ☞ Speed is critical and dependant on the size of your project work.

WOODWORKING

SAFETY CONTRACT
for

THE LATHE

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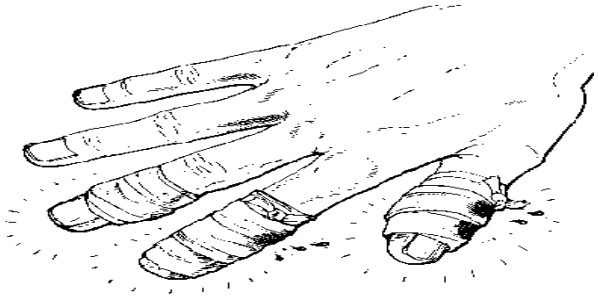
1. **WEAR SAFETY GLASSES!**
2. Long hair **must be enclosed** in a hair net or be tied up.
3. Don't let the turning tool touch the wood until **after it is on the rest**.
4. The only part of the tool that touches the work piece is that which is in contact with the tool rest.
5. Have good hold on turning tool and always cut down hill.
6. Spin work to **ensure clearance** with tool rest.
7. **Stop** the lathe to change tool rest positions.
8. **DO NOT** take too much material off at one time.
9. Stop and check when anything feels or sounds wrong.
10. Use **proper stance**. Make sure you're balanced.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Lathe** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____

WOODWORKING

INSTRUCTION AID SHEET

for

THE THICKNESS PLANER

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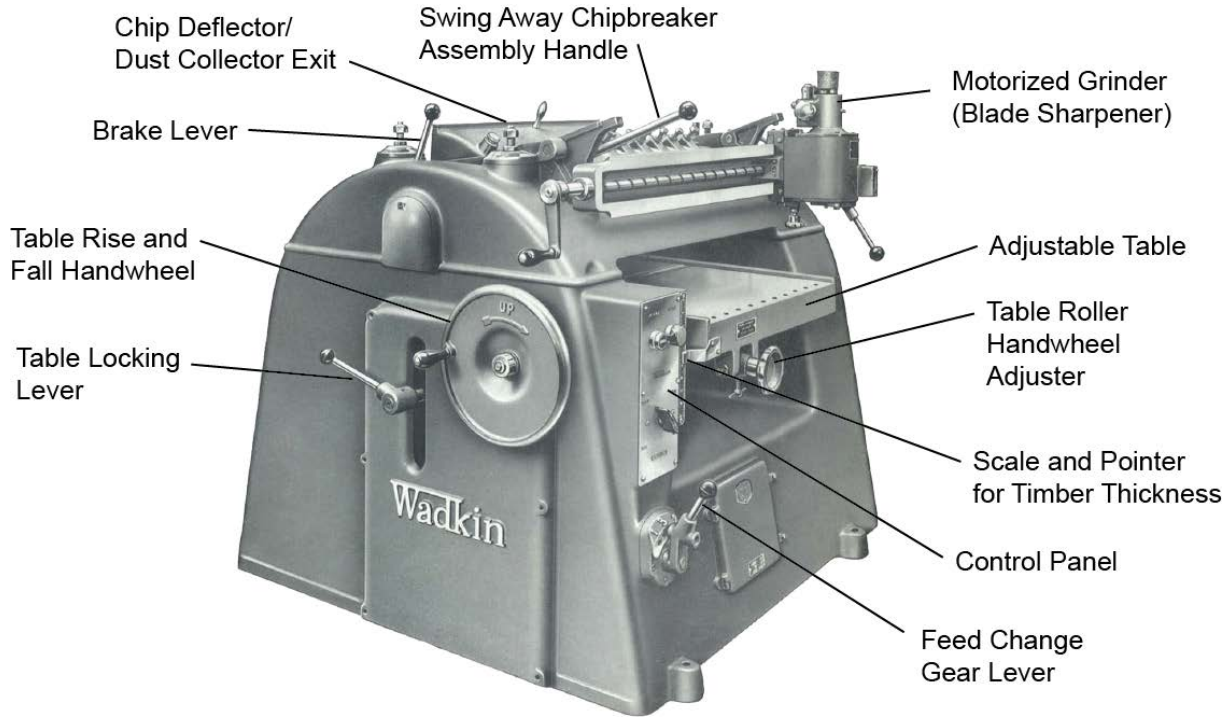

Description: The thickness planer is a machine with cutter head above feed table used to trim boards to a consistent parallel thickness throughout their length.

Operation:

1. Table is set to the thickest part of the board you will be triming.
2. Start the machine and wait till fully up to speed.
3. Place the wood on the infeed table side and feed into the in-feed roller.
4. Roller wheel will grip and pull board through with cutters removing wood material from top.
5. Once wood has passed through, adjust table rise height handwheel half a turn to take more off if needed and re-feed board.

Things to Remember:

- ☞ Place wood with flat finshed surface down (usually done by jointer) and bad side up.
- ☞ Support board on exit to prevent ‘snipe’ on the end of the board.
- ☞ Warped wood will not straighten out; use jointer to straighten out first.

WOODWORKING

SAFETY CONTRACT
for

THE THICKNESS PLANER

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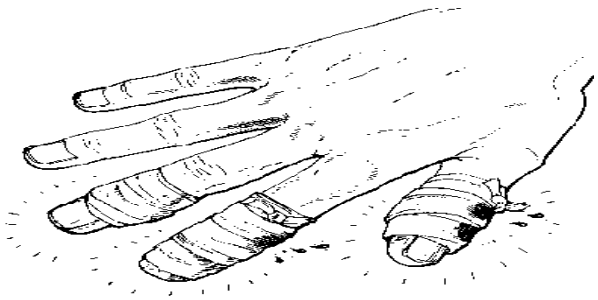
1. **WEAR SAFETY GLASSES!**
2. Consider hearing protection and ensure no loose clothing and long hair is tied back.
3. **Check the wood** before planning for foreign materials.
4. **Adjust depth** to the thickest part of your board for first run.
5. Set **depth of cut** before each pass, usually half-a-turn with the table rise handwheel for a limit of about 3 mm for softwood, and hardwood even less, about 1.5 mm.
6. When planning stock **10 mm or less, use a backer board** to support that stock.
7. **DO NOT** plane stock shorter than 300 mm.
8. Wood that is warped, cupped, twisted, or bowed will cause inconsistent contact with the cutter blades. Always **joint face flat first**.
9. Feed your stock through the same direction once it passes through machine cutters.
10. Remember the thickness **planer is self feeding**.



Look at your fingers;
Count them;
If you can ***see*** them and can ***still count*** to ***ten***, then you can appreciate the benefits of safety in the wood shop.

DATE OF LESSON _____

I was present for the instruction on the safe use of the **Jointer** and I understand its meaning and will operate that machine in the safe method described.

STUDENT'S SIGNATURE _____

TEACHER'S SIGNATURE _____