**Peninsula Wood Turners Guild Inc.**

Operational Health and Safety Manual

First Compiled May 2013

Version Control

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**Review Period**

This Document will be reviewed and updated no later than November 2020

# Introduction

This manual was produced as a result of a need to establish a set of OH&S rules and guidelines for the activities undertaken in the Guild’s workshop. This manual will establish a minimum set of Operation and Safety Procedures for the Peninsula Woodturning Guild. It is an active document that needs to be maintained and reviewed on a regular basis.

These procedures will apply to all those who use the tools and machinery in the Guild’s workshop.

# Definition of Terms used in this Manual

To ensure there is no doubt or ambiguity in the wording of this document the following words are defined:

**MUST** – This word, or the terms ”**REQUIRED**” or “**SHALL**”, mean that the definition is an absolute requirement

**MUST NOT** – This phrase, or the phrase “**SHALL NOT**” mean that the definition is an absolute prohibition.

**SHOULD** – This word, or the adjective “**RECOMMENDED**” mean that there may exist valid reasons in particular circumstances to accept a particular action, but the full implications must be understood and carefully weighed before choosing a different course.

**SHOULD NOT** – This phrase, or the phrase “**NOT RECOMMENDED**” mean that there may exist valid reasons in particular circumstances when particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.

# Application

The Guild has been in operation for 30 years and has around 160 members with a wide range of woodturning skills. It would be very difficult to subjectively rate all members as to their individual level of competency. Each member, irrespective of their level of skill or experience, who wishes to use the Guild’s equipment will be required to be assessed against the data sheets in the manual. It will also be used to induct new members and to assess their skill level.

The manual will be used by Group Leaders to train each member of their teams. Depending on experience it may be that some individuals may be designated to operate certain machines “under supervision” until they gain sufficient experience to operate them alone.

Group leaders shall be authorised to **prohibit** any member from using or operating and machine or equipment if in the opinion of that Group leader the member is not working safely or not acting in accordance with these procedures.

The individual assessments will become the basis of a skills matrix that will show who is permitted to use the various machines in the workshop.

# Responsibility of Members

Every effort has been made to provide Guild members with a safe working environment and appropriate training in the safe use of the Guilds Workshop and Machinery. However the ultimate responsibility for safety remains with individual Members.

# Alcohol and Medications

Alcohol and prescription or other drugs may affect the ability to concentrate or cause drowsiness. If in the opinion of the Group Leader a member appears to be under the influence of alcohol or prescription or other drugs the member SHALL NOT be permitted to operate any machinery or equipment in the workshop.

# Personal Protective Equipment (PPE)

## Dust

An extractive dust filter system is installed in the workshop and has collection boots adjacent to the chuck of most lathes , bandsaw and over the grinders. It is important that this unit is switched on at the beginning of each workshop session.

Although not mandatory guild members are encouraged to seek advice and supply their own additional personal dust protection equipment as required. These can range from simple dust masks through to battery operated personal filter helmets.

## Eye Protection

Members must wear protective safety spectacles to guard against the chance of flying chips entering eyes, when operating any of the Guilds machines. This includes lathes, grinders, bandsaw and drill press. Also full face shields are recommended when turning work where there is the chance of larger flying wood chips causing damage. There are shields located on almost all the lathes in the workshop.

## Footwear

All members working in the Guild’s workshop must wear totally enclosed footwear. Thongs, sandals or backless or open toed shoes must not be worn while working in the workshop.

## Clothing

To avoid the risk of becoming entangled in machinery all clothing worn by members while operating machinery in the workshop must be in good repair and any loose clothing must be tucked in or secured.

## Hair

All long hair must be tied back or secured under some type of head wear.

# General Housekeeping and Safety Rules

With the number of members in the guild it is possible that there can be more than a dozen people using the workshop at the one time. To avoid the chance of accidents some basic Housekeeping and safety rules need to be adhered to.

* Wear suitable attire for the safe operation machinery or equipment
* Keep equipment and the surrounding areas clean, safe and tidy at all times
* Always seek instruction before using an unfamiliar piece of equipment
* Only use tools and machines for their intended purpose
* Report any damaged equipment to your Group leader and do not use unless authorised.
* where machine guards are provided they **must** be kept in place
* never distract the attention of another guild member when operating equipment
* always use the appropriate personal protective equipment
* report ALL hazards, unsafe conditions and work practices to your Group leader

At the completion of each session all chucks, centres and other tools must be properly cleaned and returned to their storage cupboards or shadow boards. All machines are to be cleaned down and the floor vacuumed. Vacuum cleaners should be returned to the dust extraction room.

# Behaviour in the Workshop

Members should have consideration for others and not to engage in behaviour that may cause themselves or others to lose concentration and cause an accident.

It is important not to suddenly interrupt someone using a machine but wait for a break in the work if you need to speak to them.

# Visitors to the Workshop

From time to time there will be visitors or non working members wishing to go into the workshop. It is important that before entering the workshop the Group Leader is made aware of the visitor. While in the workshop visitors must stay in the designated walkway running from the roller door to the side door. This walkway is marked with yellow lines. While in the walkway it is not necessary to wear PPE but if contact needs to be made with someone operating a machine the normal PPE rules will apply. The Group Leader will have the right to deny entry to anyone if he believes there is a risk of overcrowding or distraction to the group participants.

# Safe Operating Procedure

# Bench Grinder

The guild has two double ended bench grinders in the workshop. They are mainly intended to be used to sharpen turning chisels. One machine has a platform rest on each wheel, and the other has platform rest on the right hand wheel and a gouge sharpening fixture on the left hand wheel. Unlike a normal grinder it is not unusual for the tool rests to be moved a number of times during a turning session. As a result it is vital that the tool rest be checked for tightness and correct positioning prior to each sharpening operation.

## Potential Hazards and injuries

* Hot metal.
* Sparks.
* Wheels run on after switching off.
* Eye injuries

## Pre Operation Checks

* Locate and ensure you are familiar with all machine operation and controls
* Ensure all guards are fitted and functional. Do not operate if guards are missing or faulty
* Check workspaces and walkways to ensure no slip/trip hazards are present
* Ensure the wheels do not touch the work rest and that the gap between wheel and rest is no greater than 2 mm
* Check that the wheels are running true and are not glazed or loaded.
* Check for cracks in the wheel and report any you find
* Wear appropriate eye protection

## Operation

* Stand to the side of the wheel when starting up.
* Let the wheel reach maximum speed before starting to grind.
* Only one person may operate a machine at any one time
* Slowly move the chisel across the wheel in a uniform manner.
* The wheel should be dressed with a diamond tool if needed.
* Always ensure the tool to be sharpened is supported on the tool rest.

**Do Not**

* **Use faulty machine. Immediately raise any concerns with your Group leader.**
* **Hold work with gloves, cloth or pliers.**
* **Wear any loose clothing jewellery etc.**
* **Grind non-ferrous metals (e.g. brass, copper, aluminium etc.)**
* **Grind on side of wheel**
* **Leave the grinder running unattended.**
* **Force the work against.**
* **Try to stop the wheel with your hands or any other material**

# Safe Operating Procedure

# Bandsaw

The guild has a large bandsaw in the workshop.

##  Potential Hazards and injuries

* Entanglement
* Hand injuries

## Pre Operation Checks

* Locate and ensure you are familiar with all machine operation and controls
* Ensure all guards are fitted and functional.
* Do not operate if guards are missing or faulty or if the machine is not adjusted correctly.
* Check workspaces and walkways to ensure no slip/trip hazards are present
* Wear appropriate eye protection
* Ensure the dust extraction valve for the bandsaw is open.

## Operation

* Allow machine to reach full speed before commencing cutting
* Feed work at a steady and controlled rate, always be able to maintain balance
* For irregular shapes use the “V” blocks
* For large, heavy or awkward work get someone to help
* After completing your cuts use the brake to gently bring the blade to a complete stop
* Clean machine blade, blade guides and blade wheels after cutting green wood.
* After completing work shut the bandsaw dust extraction valve.

**Do Not**

* **Wear gloves or hold work with rag while operating the bandsaw**
* **Force the work let the saw do the cutting**
* **Push by hand work directly in line with blade use push sticks or scrap wood**
* **Leave the saw unattended while running**
* **Reach near blade to remove off cuts use push stick, if off cuts become jammed against blade stop saw to remove**
* **Use faulty machine. Immediately raise any concerns with your team leader.**

# Safe Operating Procedure

# Lathes

The guild workshop has a number of different brands of woodturning lathes. A lot of the functions of setting up and operating the lathes are similar however they differ in the detail of how some of the operations are performed. It is essential that members make themselves familiar with the lathe they are using – BEFORE they commence turning.

## Emergency Stop Buttons

Most of the lathes in the Guild’s workshop are fitted with emergency stop buttons. These can be used by the operator or otherguild memberif there is danger from a jam or other malfunction.

## Mounting Chucks

All lathes have a 30 x 3.5mm male right hand threaded spindle nose that chucks and faceplates are screwed onto.

## Removing Chucks and Faceplates

Some lathes have an inbuilt spindle lock that can be engaged to allow the chuck or faceplate to be unscrewed.

Some have a separate lever that is inserted into a hole in the head to engage a hole on the spindle to lock it and allow removal of chucks etc.

## Mounting Centres and Drill Chucks

All lathes have a number 2 female Morse taper in the headstock and tailstock to accept drive centres, live centres and Jacobs drill chucks or Morse tapered shank drill bits.

All lathes are equipped with a knock out bar to remove the headstock or tailstock centres.

## Tool rests

Tool rests are usually “T” shaped and are mounted on a “Banjo” which has a vertical hole equipped with a clamping screw to hold them in place. In turn the banjo is mounted to the bed of the lathe with a clamping lever.

##  Speed Change

All lathes have an On/Off switch. Depending on how speed control is achieved the following differences can be encountered.

The first two below will not start rotating until the speed control knob is turned clockwise.

* Some have electronic speed change via a knob and rotation direction switch.
* Some have a manual belt to change from high to low range, while they have electronic speed control within the selected range

The third style of lathe start immediately the on/off switched is pressed

* Some have manual speed change requiring a belt to be loosened and shifted from one pulley to another to change speed. These lathes will start rotating immediately the lathe is switched on.

## Head Swivel

Some lathes are able to swivel the headstock to allow outboard turning to be carried out. The process to achieve this requires an understanding of how the head is locked in the desired position and how the tool rest is positioned to allow turning to be undertaken.

## Potential Hazards and injuries

* Eye injuries
* Dust inhalation
* Hand injuries

## Pre Operation Checks

* Locate and ensure you are familiar with all machine operations and controls, in particular the emergency stop switch
* Check workspaces and walkways to ensure no slip/trip hazards are present
* If fitted check that speed control is a the minimum, or belt position gives the appropriate speed for the job
* After mounting your work, or adjusting the tool rest, always spin the work by hand one full revolution to check for clearance
* Have available personal protection equipment to use as appropriate

## Operation

* Keep your tools sharp
* Reposition the tool rest frequently to keep it close to the work
* Always keep the tool firmly on the tool rest
* Keep your balance and don’t overreach
* Always stand to the side when starting a lathe
* Wear eye protection, and a full face shield when turning irregular items
* Always keep your hands behind the plane of the front edge of the tool rest
* Always allow the lathe to come to a complete stop before adjusting the tool rest
* When sanding or polishing remove the tool rest
* Never wrap cloth around your hands when polishing.
* At the completion of each session remove chucks and centres clean and replace in equipment cupboard, ensure speed control is at the minimum speed

**Do Not**

* **Leave the chuck key in the chuck.**
* **Leave a spinning lathe unattended**
* **Force the chisel, let it cut**
* **Use faulty machine. Immediately raise any concerns with your team leader.**

# Safe Operating Procedure

# Drill Press

The guild has a floor mounted pedestal drill in the workshop.

##  Potential Hazards and injuries

* Entanglement
* Eye injuries

## Pre Operation Checks

* Locate and ensure you are familiar with all machine operation and controls
* Ensure all guards are fitted and functional. Do not operate if guards are missing or faulty
* Check workspaces and walkways to ensure no slip/trip hazards are present
* Wear appropriate eye protection
* Make sure table is locked after adjustment
* Ensure long hair or loose clothing is appropriately contained.

## Operation

* Ensure drill is secured in the drill chuck
* Small work should be held in a vice
* Ensure the chuck key is removed before starting the drill

**Do Not**

* **Wear gloves or hold work with rag while operating the drill press**
* **Force the drill, if it is not cutting properly check for correct sharpening**
* **Leave the drill running while unattended**
* **Use faulty machine. Immediately raise any concerns with your team leader.**

# Safe Operating Procedure

# General Equipment

This section covers all other equipment located in the Guild’s workshop. The guild supplies this equipment for all members to use. Please treat this equipment as if it was your own. Inappropriate or rough use of equipment will shorten its life.

##  Chucks

Chucks are a major item of wood turning equipment. Before using any of the chucks some simple checks should be made.

* Ensure the jaws move freely and that the chuck key is the correct size
* Check that any screw-on jaw extensions are secure
* Check the chuck for any burrs of other projecting chips. At high speed even a small burr can inflict serious damage to fingers
* Check Cole jaw chucks for damage to the holding blocks before use, make sure all blocks are securely attached
* Following use, clean chuck and return to cupboard or shadow board

## Centres

* Check centres for damage to points, driving spurs and that live centres move freely
* Check the Morse taper for damage, both male on the centre and female on the lathe headstock or tailstock.
* Centres must not be used as centre punches
* If it is necessary to tap the drive centre to set it in the job use only a WOODEN mallet

## Other tools and equipment

There is a wide variety of general tools available for use. It is important that they are only used for their intended purpose. If you are in any doubt consult your Group leader before using any tools. At the end of each session all tools must be cleaned and replaced in cupboards or shadow boards.

## Compressed Air

The Guild’s workshop has a compressed air supply. The compressor is located in the dust filter room and the outlet comes through the wall behind the pedestal drill.

Compressed air is a powerful source of energy and must be treated with caution.

The compressed air is used to clean chucks after use where normal cleaning methods would not remove the dust inside the chuck.

Some basic rules must be observed when using compressed air:

* Never use compressed air to clean your clothes, workbenches or floor surfaces.
* Never direct compressed air at your body or another person.

# Maintenance and Repair

The machines in the Guild’s workshop have a high weekly usage. This will inevitably lead to breakdowns or damage. It is important that any damage or malfunction should immediately be reported to your Group leader.

This procedure is important for the safety and wellbeing of all members and so that the time lost as a result of machine problems is kept to an absolute minimum. It will ensure that members are able to continue safely using the workshop with a minimum of disruption.

 The following procedure will be followed to remedy any damage as soon as possible.

* After being made aware of malfunction of any machine or other equipment the Group leader will determine if it can be remedied or needs more than minor repair
* If the Group leader decides that the machine cannot be safely brought back into service the equipment will be tagged with the appropriate “out of service” (OOS) tag. He/ she will also note the problem in the daily attendance diary.
* The Group leader should also contact the workshop manager as soon as possible
* Once attached the OOS tag cannot be removed by anyone, until the machine is properly repaired, and the workshop manager has signed it off.
* The workshop manager will also contact the Group leader, who reported the problem to advise that the problem has been properly resolved.

# Sample Skills Matrix

The following table will indicate the level of training of each Guild member. The table will indicate the level of training and access each member has achieved. **From 01/01/2015 NO Member will be allowed to use equipment without a documented assessment**

A-Full un-supervised use of this piece of equipment

B- Only to be used under supervision from a team leader or nominated deputy.

Blank- Cannot use this machine.

|  |  |
| --- | --- |
| Member | Equipment |
|  | Lathes | Bandsaw | Grinder | Drill Press |
| J Smith | A | A | A | A |
| B Brown | B | A |  | A |
| A Jones | A | A | A |  |
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A copy of this document shall be kept in the Secretary’s filing cabinet. The Group Leader needs to keep a copy for ongoing assessment purposes and shall be responsible for keeping the records relating to their workshop attendees up to date.

# Assessment Criteria

# Assessment Guide for Group Leaders

The following is a summary of the information contained in the Operation and Safety manual. It should be used in assessing the level of competence of members before they are able to operate the Guild’s equipment.

This assessment will only indicate that a person has a basic comprehension of the Operation and Safety requirements for each different machine.

The long term training on the processes and skills of turning, cutting, sharpening etc will continue to be carried out by the guild’s appointed Group Leaders or deputies.

Under each machine heading is a list of basic operations that members need to show an understanding of, and ability to implement, to achieve accreditation to use that particular machine.

In particular given that there are a number of different lathes in use at the guild it is important that new members familiarise themselves with the lathe they are using before starting to use it.

# Assessment sheetMembers Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Assessors Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assessors to tick the check boxes below to indicate each operation was understood.

On completion of each machine insert the appropriate level of competency achieved, from the list below, in the box at the end of the form.

A = Full “un-supervised” use of this piece of equipment.
B = Only to be used under supervision from a Group leader or nominated deputy.
Blank = Cannot use this machine.

## Personal Protective Equipment

Understand the need to use PPE when operating Guild equipment.

## Bench Grinder

Locate and ensure you are familiar with all machine operation and controls.

Ensure all guards are fitted and functional. Do not operate if guards are missing or faulty.

Check workspaces and walkways to ensure no slip/trip hazards are present.

Ensure the wheels do not touch the work rest and that the gap between wheel and rest is no greater than 2 mm.

Check that the wheels are running true and are not glazed or loaded.

Check for cracks in the wheel and report any you find.

What PPE should be used.

Demonstrate use of the Bench Grinder

## Lathe

Locate and ensure you are familiar with all machine operation and controls.

Check workspaces and walkways to ensure no slip/trip hazards are present.

If fitted check that speed control is at the minimum or belt position gives the appropriate speed for the job.

After mounting your work, or adjusting the tool rest, always spin the work by hand one full revolution to check for clearance.

Mount and Remove chuck or faceplate.

Mount and Remove head and tailstock centres.

Mount and lock tool rest.

Understand Speed control for each type of lathe.

Operate head swivel if fitted.

What PPE should be used

Demonstrate use of the Lathe

## Bandsaw

Locate and ensure you are familiar with all machine operation and controls.

Ensure all guards are fitted and functional. Do not operate if guards are missing or faulty.

Feed work at a steady and controlled rate, always be able to maintain balance.

For irregular shapes use the “V” blocks.

For large, heavy or awkward work get someone to help.

Locate and understand the use of the brake to gently bring the blade to a complete stop.

What PPE should be used

Demonstrate use of the Bandsaw

## Drill Press

Locate and ensure you are familiar with all machine operation and controls.

Ensure all guards are fitted and functional. Do not operate if guards are missing or faulty.

Check workspaces and walkways to ensure no slip/trip hazards are present.

What PPE should be used

Demonstrate use of the Drill Press

## Personal Protective EquipmentBench GrinderLatheBandsawDrill Press

## Members Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Assessors Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_