UMASS AMHERST	Environmental Health and Safety	Page 1				
Subject: Shop Safety (Ma	achinery) Policy					
Number: 202						
Effective Date: March 2, 2						
Issuing Authority: Jeffrey Hescock Executive Director of Environmental Health and Safety and Emergency Management						
Amends or Rescinds: U	pdate and Revised					

# 1.0 Purpose and Applicability

- 1.1 This policy has been developed in in collaboration with UMass departments and schools, as well as shop supervisors from academic and non-academic areas for the purpose of reducing the risk of injury or death to faculty, students and staff who work in a University owned shop. The requirements presented in this policy meet or exceed the requirements of federal, state and local authorities, as well as consensus and industry standards adopted by other schools and universities in the United States.
- 1.2 The Shop Safety Policy is applicable to any location on campus that contains hazardous machinery used for the purpose of fabricating materials, testing or conducting research including, but is not limited to machine shops, carpentry shops, art studios, scene shops, testing facilities, laboratories, etc. The method for determining the hazard level for a machine will be based on the severity of the injury it is capable of causing. The severity of injury for each type of machinery is based on Yale University's *Machine Risk Assessment* which can be found in **Appendix A**.

### 2.0 Definitions

<u>Shop</u> - any designated area where hazardous tools and machinery are used for fabricating, testing or conducting research including, but not limited to machine shops, carpentry shops, art studios, scene shops, maker spaces, testing facilities and laboratories.

## 3.0 Roles and Responsibilities

## 3.1 University Schools and Departments

Schools and departments are responsible for ensuring the safety of faculty, students and staff who use their shops. In addition, each school and department will be responsible for:

- Enlisting a qualified shop supervisor to manage the shop;
- Supporting shop supervisors on all issues regarding safety;
- Ensure that shop machinery and other equipment meets the minimum standard for safety;
- Coordinating the opening and decommissioning of their shops with Environmental Health and Safety (EH&S).

## 3.2 Shop Supervisors

Shop Supervisors are responsible for all aspects of safety in their shop and for implementing and enforcing this policy. In addition, shop supervisors will be responsible for:

- Providing training to students and faculty, and providing training records to EH&S;
- Ensuring that professional staff attend EH&S required training;

- Ensuring machinery and equipment are maintained in good working condition;
- Authorizing personnel to use their shop;
- Developing and enforcing shop safety rules;
- Attending Shop Safety Committee meetings;
- Reporting incidents and injuries to EH&S.

## 3.3 Shop Users

Shop Users include students, faculty and staff who intend to use a University owned shop. Shop Users are responsible for their own safety and for complying with the requirements of this policy. In addition, Shop Users will be responsible for:

- Completing training as prescribed by the Shop Supervisor and/or EH&S;
- Working in a safe manner;
- Working in accordance with the Shop Safety Rules;
- Following the direction of the Shop Supervisor at all times;
- Reporting damaged machinery and equipment to the Shop Supervisor.

## 3.4 Environmental Health and Safety (EH&S)

EH&S will be responsible for maintaining and updating this policy. In addition, EH&S will be responsible for:

- Assisting Shop Supervisors, departments and schools with the implementation of this policy;
- Providing technical expertise, as it relates to safety in the shop;
- Conducting annual safety inspections for all University owned shops and providing recommendations for deficiencies;
- Maintaining training records for EH&S provided training and Shop Supervisor training upon request;
- Coordinating and facilitating Shop Safety Committee meetings;
- Providing training to professional staff;
- Investigating accidents and injuries.

#### 4.0 Procedure

### 4.1 Shop Safety Controls

The following safety controls are intended to reduce the risk of injury or death when working with hazardous machinery:

- Qualified Shop Supervisors
- Training
- Authorization
- Standard Operating Procedures
- Shop Safety Rules
- Condition of Machinery
- Access
- Shop Supervision (Student Use Shops)

## 4.1.1 Qualified Shop Supervisors

Each shop will employ a Shop Supervisor who will be responsible for all aspects of safety for the shop. In order to be deemed "Qualified," the Shop Supervisor must have a good working knowledge of each piece of hazardous machinery in the shop. The individual must also be capable of training others on the safe and proper use of the machinery.

## 4.1.2 Training

Training requirements and user access to the shop will vary based on user and department. For the purpose of this policy, the training has been broken down by the type of user.

Regardless of the type of user, training must be documented. EH&S will manage training records for all professional staff and other University employees. EH&S is available to assist shop supervisors with managing training records for student/faculty training.

**Shop Supervisors** are required to complete "Right to Know" and "Hazardous Waste Management" on an annual basis. Shop Supervisors are responsible for developing documented training materials and maintaining attendance sheets. EH&S will be available to import attendance records into their training database.

**Faculty/Students:** Shop Supervisors are responsible for training faculty and students who wish to use their shop. Each shop user must complete hands-on training for each piece of machinery he/she will be authorized to use. Trainees must also review the requirements of this policy and the Shop Safety Rules developed by the Shop Supervisor.

At a minimum, training must include the following topics:

- Review of the UMass Shop Safety Policy
- Review of Shop Safety Rules
- Tool Specific Training (hands-on)
  - Hazards and limitations
  - Guard placement and adjustments
  - Cleaning and maintenance
  - Machinery use demonstration
- Personal Protective Equipment requirements
- Any other topics the Shop Supervisor feels should be covered

To help a generic Student/Faculty Training Management Form is available in Appendix D.

**Professional Staff** includes trades groups and other employees who work in a shop as part of their job duties. EH&S will be responsible for providing health and safety-related training. Supervisors will be responsible for ensuring his/her employees attend training. Training will be dependent on the level of professional experience, but, at a minimum, will include:

- Hand and Portable Power Tools
- Machine Guarding
- Right to Know
- Hazardous Waste
- Personal Protective Equipment

#### 4.1.3 Authorization

Authorizing access to the shop for students, faculty and staff will be left up to the discretion of the Shop Supervisor. Authorization will be contingent upon several factors including training, experience and behavior. The shop supervisor also has the authority to revoke authorization to anyone who fails to meet the requirements of their shop safety rules and this policy or demonstrates behavior that could impact their safety and/or the safety of other shop users.

The Shop Supervisor will maintain a list of authorized users either in writing or electronically.

### 4.1.4 Standard Operating Procedures

Each piece of equipment must have a "Standard Operating Procedure" (SOP) posted on it or next to it. The SOP will provide safe operating information specific to the machinery. Newer machines will typically come with SOP's installed by the manufacturer and are usually titled "WARNING" or "CAUTION." Generic SOP's for common types of machinery are available through EH&S or can be developed by the Shop Supervisor.

#### 4.1.5 Shop Safety Rules

Each shop is responsible for having its own shop safety rules. These rules must be posted in an area of the shop that is visible to shop users. At a minimum, shop safety rules can include:

- Restricted Access To Shop
- Hours of Operation
- No Food/Drink
- Clothing/Shoes
- Personal Protective Equipment
- Hair Tied Back
- One Person Per Machine
- Sleeves Rolled Past Elbows
- Cleaning and Housekeeping
- Do Not Leave Tools Unattended
- First Aid Kit Location

A generic "UMass Shop Safety Poster" is available in Appendix B.

### 4.1.6 Condition of Machinery

Machinery and other equipment must be in good working condition and meet the minimum safety requirements for guarding required by the Occupational Safety and Health Administration and the manufacturer. If a piece of machinery does not meet these requirements, it will be tagged out of service until it can be repaired or replaced. Examples of proper guarding for common shop machinery can be found in **Appendix C**, Shop Equipment Self-Assessment Guide.

#### 4.1.7 Access

Every shop must develop a method for controlling the access of unauthorized personnel into their shop. Acceptable methods for controlled access includes:

• Lock and Key: Keys should only be issued to the Shop Supervisor, Shop Monitors and Building Maintenance personnel.

- Card Key: Card key access can be given to anyone who has been authorized by the shop supervisor. Card key systems should be programmed to account for the shop's hours of operation (i.e., shop user cards will not work after a set time when the shop is closed).
- Power Isolation: Power can be locked for the entire shop or at each piece of equipment. Please note that isolating the power at a circuit breaker is not an acceptable method for locking out power and should not be done. A separate disconnect switch or control system may be used.

The type of access control used will be left up to the discretion of the department and/or Shop Supervisor. Signage deterring unauthorized individuals from entering the shop will also be installed. At a minimum, the language on the sign will read:

## **NOTICE: Machine Shop, Authorized Personnel Only**

## 4.1.8 Shop Supervision (Student Use Shops)

Students may not work with hazardous machinery alone. The Shop Supervisor will determine what level of supervision is necessary to ensure student safety. The following are examples of how supervision can be implemented:

- Buddy System: When students will be working in the shop with low hazard machinery only.
- Trained Monitors: The Shop Supervisor may choose to identify certain students (excluding undergrads) to remain in the shop when he/she is not there. In these situations, the Shop Supervisor may provide additional training for the monitors and/or restrict the use of certain high hazard pieces of machinery.
- Full Supervision: The shop is only open when the Shop Supervisor is present to supervise users.

Ultimately, it is the responsibility of the Shop Supervisor to determine what level of supervision is required for his/her shop.

## 5.0 Key References

- 5.1 Yale University's "Machine Risk Assessment" developed by Yale University.
- 5.2 Occupational Safety and Health Administration (OSHA) "Guide for Protecting Workers from Woodworking Hazards" Small Business Safety Management Series, US Department of Labor, OSHA 3157 1999
- 5.3 Occupational Safety and Health Administration (OSHA) CFR 1910.212 "*Machinery and Machine Guarding*" Requirements for all machine
- 5.4 Stronghold Safety Engineering. "*Machine Self-Assessment*" checklist https://www.strongholdsafety.com/

<b>Device Class</b>	1	2	3	4	5
Power	Low power hand / small bench tools (2 - 4 amp @ 120 VAC, < 9V cordless)	Medium power tools (¼ to ½ hp) (< 10 amp @ 120 VAC, 14-18V cordless); specialized enclosed NC- computer tools	Powerful portable and small benchtop tools (> ½ hp) (10-15 amps @ 120 V AC, 24V-36V portable, pneumatics, hydraulics)	Light industrial tools (typically benchtop, < ½ hp, pneumatics, hydraulics)	Large industrial tools (manual and NC-controlled) (some of these tools may be off- limits to any student use) Highest hazard tools in bold
Common Examples	<ul> <li>Dremel tool</li> <li>Cordless drills under 18V</li> <li>Palm sanders</li> <li>Soldering irons and guns</li> <li>Heat guns</li> <li>Hot melt glue guns</li> <li>Sewing machines</li> <li>3d printers</li> </ul>	<ul> <li>Jig saw</li> <li>3/8" hand drill</li> <li>Corded devices &lt; 1/3 hp</li> <li>18V-24V cordless drill</li> <li>Laser cutters / engravers</li> <li>Thermal foam cutters</li> </ul>	<ul> <li>Circular saw</li> <li>Belt sander</li> <li>Framing nailer</li> <li>½ hp geared drill</li> <li>Reciprocating saw</li> <li>&gt; 18V cordless tools</li> <li>Chop / miter saws</li> <li>Routers</li> <li>Mini-lathe</li> <li>Angle grinders</li> <li>Printing presses</li> </ul>	Small bandsaw Small drill press Small/benchtop milling machines Small/benchtop lathes Belt/disc sander Horizontal saw Scroll saw Planer, jointer Bench grinder SawStop-style tablesaw	<ul> <li>Full sized milling machine</li> <li>Full sized metal lathe</li> <li>Table saw (non-SawStop)</li> <li>Radial arm saw</li> <li>Large drill press</li> <li>Large band saw</li> <li>Surface grinder</li> <li>Large jointer/planer</li> <li>Shaper/moulder</li> <li>Power shear</li> </ul>
Shop Access Control	By permission of Shop Supervisor and/or Monitor	By permission of Shop Supervisor and/or Monitor	All student shops – ID Card	All student shops – ID Card	All student shops – ID Card
Tool Use Restrictions and Oversight	Performed in shops or designated approved locations, i.e. theater	Undergrads - buddy system	<ul> <li>Undergrads – monitored</li> <li>Grads – buddy system</li> </ul>	<ul> <li>Undergrads – monitored <sup>i</sup></li> <li>Grads – buddy system</li> </ul>	<ul> <li>Undergrads – only under professional supervision ii after extensive training</li> <li>Grads – buddy system</li> <li>Emergency self-alert devices for low occupancy shops / times</li> </ul>

<sup>&</sup>quot;Monitors" are experienced graduate students or higher with full authority over shop use and control who have been recommended by the Shop Supervisor and completed required safety training.

<sup>&</sup>quot;Supervisors" are staff or faculty with professional-level training and experience in applicable tool set-up, use, and maintenance

<b>Device Class</b>	1	2	3	4	5
User Training	Introduction to shop safety and individual tools by shop supervisor / manager     Directions in manual or on wall postings     Required to read operator manual	<ul> <li>Introduction to shop safety and individual tools by shop supervisor / manager</li> <li>Signed agreement regarding code of conduct and list of tools approved for use</li> </ul>	<ul> <li>Basic shop safety orientation by shop supervisor / manager</li> <li>Individual tool instruction</li> <li>Demonstrate proficiency by performing certain operations to specified accuracy</li> <li>Signed agreement regarding code of conduct and list of tools approved for use</li> </ul>	Basic shop safety orientation by shop supervisor / manager     Individual tool instruction Hands-on use training and experience     Demonstrate proficiency by performing certain operations to specified accuracy     Signed agreement regarding code of conduct and list of tools approved for use	Basic shop safety orientation by shop supervisor / manager     Individual tool instruction Extended hands-on use training and experience     Demonstrate proficiency by performing certain operations to specified accuracy     Signed agreement regarding code of conduct and list of tools approved for use
Power	Low power hand / small bench tools (2 - 4 amp @ 120 VAC, < 9V cordless)	Medium power tools (¼ to ½ hp) (< 10 amp @ 120 VAC, 14-18V cordless); specialized enclosed NC- computer tools	Powerful portable and small benchtop tools (> ½ hp) (10-15 amps @ 120 V AC, 24V-36V portable, pneumatics, hydraulics)	Light industrial tools (typically benchtop, < ½ hp, pneumatics, hydraulics)	Large industrial tools (manual and NC-controlled) (some of these tools may be off- limits to any student use) Highest hazard tools in bold
Monitor / Supervisor Training	Tool experience	• Tool experience	<ul> <li>Tool experience</li> <li>Yale EHS shop safety training class for monitors and supervisors</li> <li>First aid / CPR</li> </ul>	<ul> <li>Extensive tool experience-documented</li> <li>Yale EHS shop safety training class for monitors and supervisors</li> <li>First aid / CPR</li> </ul>	<ul> <li>Professional-level         experience-documented</li> <li>Yale EHS shop safety         training class for monitors         and supervisors</li> <li>First aid / CPR</li> </ul>
Tool Access Controls	Locked cabinet (Tool key / code lockout for 3d printers)	Locked cabinet (Tool key / code lockout for laser or thermal foam cutters)	Locked cabinet	Tool power lockout (for tiered access shops)	Tool power lockout (for tiered access shops)
Remote Monitoring (Future Enhancement)	As desired	As desired	(Cameras in shop)	(Cameras in shop)	(Cameras in shop)

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			RST

### **MACHINE SHOP SAFETY RULES**

JI <b>VI</b> AMHE			SHOP NA	ME		
		HOURS O	F OPERATION:			
Sun	Mon	TUE	WED	THR	FRI	SAT

#### ACCESS TO THE SHOP DURING NON-HOURS OF OPERATIONS IS STRICTLY PROHIBITED

- Tools and Machines may only be used by **AUTHORIZED PERSONNEL**
- Only work with tools and machines that you have been authorized to use
- Do not use equipment if you are using any medication or under the influence of drugs, alcohol, etc.
- **NEVER** work in the shop alone
- No loose clothing including ties, necklaces, floppy sleeves, jewelry, etc.
- Long hair **MUST** be tied back
- Safety glasses **MUST** be warn at all times
- Wear non-slippery, thick, leather work shoes, preferably rubber-soled
- Open-toed footwear is not permitted in the shop
- Safety guards MUST be in place at all times, ensure guides and fences are tight
- Report damaged safety guards, machines and tools to the Shop Supervisor
- Report unsafe issues to the Shop Supervisor
- Keep you work area clean, do not place tools and materials on the machine table
- Put tools away when you are done using them
- **NEVER** leave tools unattended
- Only one person may work on a machine at a time
- Keep blades covered as much as possible
- **NEVER** push a cutter towards any part of your body
- **NEVER** make heavy cuts with planers, jointers, and routers
- Plywood and particleboard must **NOT** be worked with the jointer or planer
- Do not work small pieces on power machinery use hand tools
- Always secure the work piece with clamps or a vise
- **NEVER** remove metal chips, turnings, or shavings with your hands
- **NEVER** use compressed air without a safety nozzle to clean machines or clothing
- No running or horseplay
- No eating in the shop area
- Always follow the Shop Supervisor's directions
- Report ALL injuries (even small ones) to the Shop Supervisor or Facility Manager
- The First Aid Kit is located
- The Eyewash Station/Flush is located

Shop Supervisor	Phone
Facility Manager	Phone

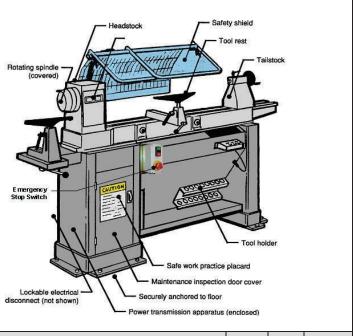
Provided below are Self-Assessment Guides for the following Shop Equipment:

- Pedestal / Bench Grinder Survey
- Wood Lathe Survey
- Jointer Survey
- Metal Lathe Survey
- Vertical Mill Survey
- Wood Planer Survey
- Vertical Belt Sander Survey
- Vertical Spindle Sander Survey
- Belt / Disc Sander Survey
- Vertical Band Saw Survey
- Horizontal Band Saw Survey
- Abrasive Chop Saw Survey
- Panel Saw Survey
- Radial Arm Saw Survey
- Scroll Saw Survey
- Table Saw Survey
- Hydraulic Press

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redestal / Belltil G	irinder Survey				
Machine Owner	Worksite	Adjustable tongue guard (adjusted within 1/4 in)  Spindle-end and		actice placetional	
Surveyor's Name	Date of Survey	nut covers  Dust collection		- Abrasive property and ring	whe
Supervisor's Name	Room Name or No.	(both sides)		Point o	
Machine Manufacture	r	Adjustable		Coolant to (optional)	
Model #	Serial No.	work rest (adjusted within 1/8 in)		Emergency Stop Switch	/ h
Supply Voltage	No. of Supply Phases (Circle One) 1 or 3	Lockable electrical disconnect		Securely a to floor	anch
Horsepower	Full Load Amps				
			Yes	No	N,
1 10 400	wa wa wali i washa aha aha aha a a a iwah iwa w	act and chatter resistant?			
1. Is the work light p	properly protected against imp	act and shatter resistants			
	ds clean and in working order?	act and snatter resistants			
2. Are the eye shield 3. Are tool rests adj					
Are the eye shield     Are tool rests adj     tongue guards 1	ds clean and in working order? usted no more than 1/8" from	the wheel and			
2. Are the eye shield 3. Are tool rests adj tongue guards 1 4. Are the electrical	ds clean and in working order? usted no more than 1/8" from L/4" from wheel?	the wheel and			
<ol> <li>Are the eye shield</li> <li>Are tool rests adjusted tongue guards</li> <li>Are the electrical</li> <li>Can the machine</li> <li>Does it have a system</li> </ol>	ds clean and in working order? usted no more than 1/8" from L/4" from wheel? system wires, and plug ends a	the wheel and cceptable? ower source? ic restart			
<ol> <li>Are the eye shield</li> <li>Are tool rests adjusted tongue guards</li> <li>Are the electrical</li> <li>Can the machine</li> <li>Does it have a sysafter power out</li> </ol>	ds clean and in working order? usted no more than 1/8" from L/4" from wheel? system wires, and plug ends a be securely isolated from its po stem that will prevent automat	the wheel and cceptable? ower source? ic restart	s the		
<ul> <li>2. Are the eye shield</li> <li>3. Are tool rests adjutongue guards 1</li> <li>4. Are the electrical</li> <li>5. Can the machine</li> <li>6. Does it have a sysafter power out</li> <li>7. Does the machine motor?</li> </ul>	ds clean and in working order? usted no more than 1/8" from L/4" from wheel? system wires, and plug ends a be securely isolated from its po stem that will prevent automat age? (Power outage protection	the wheel and cceptable? ower source? ic restart n) om shaped E-stop that control	s the		
<ul> <li>2. Are the eye shield</li> <li>3. Are tool rests adjusted tongue guards 1</li> <li>4. Are the electrical</li> <li>5. Can the machine</li> <li>6. Does it have a systafter power out</li> <li>7. Does the machine motor?</li> <li>8. Does machine ha</li> </ul>	ds clean and in working order? usted no more than 1/8" from L/4" from wheel? system wires, and plug ends a be securely isolated from its po stem that will prevent automat age? (Power outage protection e have a latching, red, mushroo	the wheel and cceptable? ower source? ic restart n) om shaped E-stop that control	s the		
<ol> <li>Are the eye shield</li> <li>Are tool rests adjusted tongue guards 1</li> <li>Are the electrical</li> <li>Can the machine</li> <li>Does it have a systafter power out</li> <li>Does the machine motor?</li> <li>Does machine ha</li> <li>Is the coasting time</li> </ol>	ds clean and in working order? usted no more than 1/8" from 1/4" from wheel? system wires, and plug ends as be securely isolated from its postem that will prevent automatage? (Power outage protections have a latching, red, mushroove a proper dust collection system.	the wheel and cceptable? ower source? ic restart n) om shaped E-stop that control tem?			

Wood Lathe Survey	
Machine Owner	Worksite
Surveyor's Name	Date of Survey
Supervisor's Name	Room Name or No.
Machine Manufacturer	
Model #	Serial No.
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>
Horsepower	Full Load Amps



	Yes	No	N/A
1. Does the machine have a safety shield that extends the entire length of the bed?			
2. Is the power transmission system guarded correctly?			
3. Is the left end of the spindle properly guarded?			
4. Does it have a system that will prevent automatic restart after power outage? (Power outage protection)			
5. Does the machine have a latching, red, mushroom shaped E-stop that controls the motor?			
6. Are the electrical system, wires, and plug ends acceptable?			
7. Is the work light (if installed) properly protected against impact and shatter resistant?			
8. Is the machine secured to prevent moving or tipping?			
9. Does the machine have a high-friction coating at the operator's position on the floor?			

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after power outage? (Power outage protection)

Jointer Survey		- Safe work prac	tice placard		
Machine Owner	Worksite	Lockable electrical Point of op	eration guard f operation under guard — Material g		
Surveyor's Name	Date of Survey		Material g	dide lence	
Supervisor's Name	Room Name or No.				
Machine Manufacturer	•			ON/OFF Cor	
Model #	Serial No.			Emergency S Switch	тор
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>	Dust collection system installed  Power transmission (normally enclosed)	/ surfa	n-skid work ce is nmended a	
Horsepower	Full Load Amps	Base securely anchored to floor -		ator's posit	
Horsepower	ruii Loau Airips				
Horsepower	ruii Loau Aiiips		Yes	No	N/A
	peration (pork chop) guard fun	oction correctly?	Yes	No	N/A
1. Does the point of o		· · · · · · · · · · · · · · · · · · ·	Yes	No	N/A
Does the point of o     Is the power transn	peration (pork chop) guard fun	ly?	Yes	No	N/A
1. Does the point of o 2. Is the power transn 3. Does the jointer har	peration (pork chop) guard fun nission system guarded correct	ly? dles?	Yes	No	N/A
<ol> <li>Does the point of o</li> <li>Is the power transn</li> <li>Does the jointer ha</li> <li>Is the rear part of the</li> </ol>	peration (pork chop) guard fun nission system guarded correct ve all OEM knobs, rods, or hand	ly? dles? :ly?	Yes	No	N/A
<ol> <li>Does the point of o</li> <li>Is the power transn</li> <li>Does the jointer ha</li> <li>Is the rear part of th</li> <li>Are the electrical sy</li> </ol>	peration (pork chop) guard fun nission system guarded correct ve all OEM knobs, rods, or hand he cutter head guarded correct	ly? dles? :ly? :eptable?	Yes	No	N/A
<ol> <li>Does the point of o</li> <li>Is the power transn</li> <li>Does the jointer had</li> <li>Is the rear part of the</li> <li>Are the electrical sy</li> <li>Is the work light (if resistant?</li> </ol>	peration (pork chop) guard fun nission system guarded correct ve all OEM knobs, rods, or hand he cutter head guarded correct ystem, wires, and plug ends acc	dles? ely? eeptable? gainst impact and shatter	Yes	No	N/A
<ol> <li>Does the point of o</li> <li>Is the power transn</li> <li>Does the jointer ha</li> <li>Is the rear part of th</li> <li>Are the electrical sy</li> <li>Is the work light (if resistant?</li> <li>Can the machine be</li> </ol>	peration (pork chop) guard funnission system guarded corrective all OEM knobs, rods, or hand he cutter head guarded correctivistem, wires, and plug ends accommodately properly protected agree securely isolated from its pownave a latching, red, mushroom	dles? cly? ceptable? gainst impact and shatter ver source?	Yes	No	N/A
<ol> <li>Does the point of o</li> <li>Is the power transn</li> <li>Does the jointer ha</li> <li>Is the rear part of th</li> <li>Are the electrical sy</li> <li>Is the work light (if resistant?</li> <li>Can the machine be</li> <li>Does the machine had controls the motor</li> </ol>	peration (pork chop) guard funnission system guarded corrective all OEM knobs, rods, or hand he cutter head guarded correctivistem, wires, and plug ends accommodately properly protected agree securely isolated from its pownave a latching, red, mushroom	dles? cly? ceptable? gainst impact and shatter ver source? n shaped E-stop that	Yes	No	N/A
<ol> <li>Does the point of o</li> <li>Is the power transn</li> <li>Does the jointer hat</li> <li>Is the rear part of the</li> <li>Are the electrical sy</li> <li>Is the work light (if resistant?</li> <li>Can the machine be</li> <li>Does the machine had controls the motor</li> <li>Is the machine security</li> </ol>	peration (pork chop) guard funnission system guarded corrective all OEM knobs, rods, or hand he cutter head guarded correctivitiem, wires, and plug ends accommodately properly protected agree securely isolated from its power a latching, red, mushroomer?	dles? cly? ceptable? gainst impact and shatter ver source? n shaped E-stop that ng?	Yes	No	N/A

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Metal Lathe Survey					
Machine Owner	Worksite	Safe work — practice placard — Chuck shield — Chuck shield — Chuck shield — Point of	operation		
Surveyor's Name	Date of Survey		plant shield	— Tailstock	
Supervisor's Name	Room Name or No.			61	
Machine Manufacturer		7			
Model #	Serial No.	Real Property of the Property	#	<b>a</b>	
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>	Emergency Stop Switch Lead screw		- Carriage fe controls	eed
Horsepower	Full Load Amps	Maintenance inspection door cover  Lockable electrical disconnect			
			Yes	No	N/A
1. Does the machine had operation?	ave a chip/coolant shield tha	t travels with the point of			
2. Does the machine ha	ave a chuck shield?				
3. Does the machine ha	ave a lead screw guard & war	rning sign?			
4. Does the machine ha	ave a spring loaded chuck ke	y and chuck wrench for every chuck?			
5. Are the electrical sys	stem, wires, and plug ends co	ompliant?			
· ·	m that will prevent automation (Power outage protection)	crestart			
7. Does the machine has spindle motor?	ave a latching, red, mushroor	n shaped E-stop that controls the			
8. Is the power transm	ission system properly guard	ed?			
9. Can the machine be	securely isolated from its po	wer source?			
10. Does the machine	have a high-friction coating a	t the operator's position on the floor?			
11. Is the machine secu	ured to prevent moving or tip	pping?			

Notes				

after power outage? (Power outage protection)

Vertical Mill Surve	Y		wer transmission closed)	1	
Machine Owner	Worksite	Forward/Reverse Control	Safe wo practice		
Surveyor's Name	Date of Survey	Rotating chuck	Point of op	eration	
Supervisor's Name	Room Name or No.		Swing-mounted and coolant ship		
Machine Manufacture	er	cover	<b>_</b>		
Model #	Serial No.		Emerge Stop Sv	ency witch	
Supply Voltage	No. of Supply Phases (Circle One) 1 or 3	Adjustment handles  Securely anchored to floor	Lockabl electrics disconn	al ect	
Horsepower	Full Load Amps	A non-skid working surface is recommended at the operator's position	(not sho	wn)	
			Yes	No	N/A
					IN/
1. Is the power trans	smission system properly guar	ded?			IN/
1. Is the power trans 2. Is the draw bar pr		ded?			IN/
2. Is the draw bar pr	operly covered?	controls the spindle <b>and</b> the table			IN/
2. Is the draw bar pr 3. Is a red, mushrood drives?	operly covered?				
<ul><li>2. Is the draw bar pr</li><li>3. Is a red, mushrood drives?</li><li>4. Does the machine</li></ul>	operly covered? m shaped E-Stop installed that	controls the spindle <b>and</b> the table			
<ul><li>2. Is the draw bar pr</li><li>3. Is a red, mushrood drives?</li><li>4. Does the machine</li><li>5. Are the electrical</li></ul>	roperly covered? m shaped E-Stop installed that e have a chip/coolant shield?	controls the spindle <b>and</b> the table compliant?			
<ul><li>2. Is the draw bar pr</li><li>3. Is a red, mushrood drives?</li><li>4. Does the machine</li><li>5. Are the electrical</li><li>6. Is the work light (in resistant?</li></ul>	m shaped E-Stop installed that have a chip/coolant shield? system, wires, and plug ends c	controls the spindle <b>and</b> the table compliant? against impact and shatter			
<ol> <li>Is the draw bar pr</li> <li>Is a red, mushrood drives?</li> <li>Does the machine</li> <li>Are the electrical</li> <li>Is the work light (in resistant?</li> <li>Can the machine</li> </ol>	roperly covered?  m shaped E-Stop installed that have a chip/coolant shield? system, wires, and plug ends c if installed) properly protected	controls the spindle <b>and</b> the table compliant? against impact and shatter ower source?			
<ul> <li>2. Is the draw bar pr</li> <li>3. Is a red, mushrood drives?</li> <li>4. Does the machine</li> <li>5. Are the electrical</li> <li>6. Is the work light (in resistant?</li> <li>7. Can the machine</li> <li>8. Is the machine see</li> </ul>	roperly covered?  m shaped E-Stop installed that have a chip/coolant shield? system, wires, and plug ends of if installed) properly protected be securely isolated from its po	controls the spindle <b>and</b> the table compliant? against impact and shatter ower source?			

Notes			
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Wood Planer Surv	ey				
Machine Owner	Worksite	branch	blection syster piping	n	
Surveyor's Name	Date of Survey		ust illection		
Supervisor's Name	Room Name or No.	Point of operation	ood		
Machine Manufacture	er		Power transi (normally end		
Model #	Serial No.				
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>	Emergency Stop Switch	Lockable electrical disconnection	<b>a</b>	
Horsepower	Full Load Amps	Table height adjustment handwheel	Securel anchore to floor		
	'		Yes	No	N/A
1. Is the power trans	smission system properly guard	led?			
2. Does the machine	have a point of operation guar	rd (both front and rear)?			
3. Is the coasting tin	ne after shutdown compliant?				
4. Are the electrical	system, wires, and plug ends co	ompliant?			
	, , ==, = 1 = 0 = = = = =		_		
5. Does the machine motor?	, , , , , , , ,	m shaped E- stop that controls the			
motor? 6. Does it have a sys	, , , , , , , ,	· · ·			
motor? 6. Does it have a sys after power outag	tem that will prevent automatice? (Power outage protection)	· · ·			

Vertical Belt Sander	Survey				
Machine Owner	Worksite	Belt and pulley housing  Drive motor	A A	djustable elt Guard	
Surveyor's Name	Date of Survey			int of eration	
Supervisor's Name	Room Name or No.	Emergency		Lockable electrical disconnect	
Machine Manufacturer		Stop Switch			
Model #	Serial No.		sy	st collection	i
Supply Voltage	No. of Supply Phases (Circle		(ni	ot shown)	- 12
	One) <b>1 or 3</b>	A non-skid working surface is			
Horsepower	Full Load Amps	recommended at the operator's position	12	Securely anchored to	floor
			Yes	No	N/A
1. Is the unused portion	n of the belt guarded above t	he worktable?			
2. Is the unused portion	n of the belt guarded below t	he worktable?			
3. Are the electrical sys	stem, wires, and plug ends acc	ceptable?			
•	n that will prevent automatic	restart			
	(Power outage protection)				
	securely isolated from its pov				
6. Does the machine had motor?	ave a latching, red, mushroom	n shaped E-stop that controls the			
7. Is the machine secur	ed to prevent moving or tippi	ing?			
8. Does the machine ha	ave a high-friction coating at t	he operator's position on the floor?			

<b>Vertical Spindle Sar</b>	nder Survey	Upper Spindle Guard		
Machine Owner	Worksite	Point of operation Filler plate		
Surveyor's Name	Date of Survey	Safe w	Lower spind shield ork e placard	de
Supervisor's Name	Room Name or No.		ole electric nect (not s	
Machine Manufacturer		Emergency Stop Switch Foot operating Extra to	nstalled,	ed with
Model #	Serial No.	pedal (enclosed)  only on voti E rregard as control.	Stop switc	his
Supply Voltage	No. of Supply Phases (Circle One) 1 or 3			
Horsepower	Full Load Amps			
Machine Frame Type	Maximum Spindle Diameter			
Pedestal Bench Cabinet	3" or 6"	A non-skid working surface is recommended at the operator's position  Securely an	chored to	floor
		Yes	No	N/
1. Does the machine spindle?	have a spindle guard that cove	ers the unused upper part of the		
2. Does the machine	have a lower spindle guard in f	front?		
3. Does the machine	have a lower spindle guard in r	rear?		
4. Is the power transr	mission system properly guard	ed?		
5. Are the electrical s	ystem, wires, and plug ends ac	cceptable?		
6. Can the machine b	e securely isolated from its po	wer source?		
7. Does the machine	have a latching, red, mushroor	m shaped E- stop that controls the		
motor?				
	em that will prevent automation	c restart		
8. Does it have a syste after power outage	? (Power outage protection)			
8. Does it have a syste after power outage 9. Does the floor have	? (Power outage protection) e a high-friction coating at the	operator's position		
8. Does it have a syste after power outage 9. Does the floor have	? (Power outage protection)	operator's position		
<ul><li>8. Does it have a syster after power outage</li><li>9. Does the floor have</li><li>10. What type of upp</li></ul>	? (Power outage protection) e a high-friction coating at the	operator's position s machine?		
<ul><li>8. Does it have a syster after power outage</li><li>9. Does the floor have</li><li>10. What type of upp</li><li>A- Floor Mounted - for</li></ul>	? (Power outage protection) e a high-friction coating at the er spindle guard is best for this	operator's position s machine? t are secured to floor.		

Notes

**C** - Table Mounted - for pedestal or cabinet type machines

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Belt / Disc Sander Su	rvey				
Machine Owner	Worksite	Guard housing			
Sum to you's Name	Data of Survey	製物			
Surveyor's Name	Date of Survey		Poir	nt of operati	ion
Supervisor's Name	Room Name or No.	Angle worktable (adjusted to within 1/8 in)	(adju	table sted to 1/8 in) — Dust co	llection
Machine Manufacturer		Point of operation	aı	system n/off switch nd lockable	1
Model #	Serial No.	Emergency Stop Switch Safe work practice placard	1	ectrical disc	connec
Supply Voltage	No. of Supply Phases (Circle			op Switch	
	One) <b>1 or 3</b>				
Horsepower	Full Load Amps				
		A non-skid working surface is recommended at the operator's position	Securely an to floor	chored	
	<u> </u>		Yes	No	N/A
1. Does the machine ha	ave an upper disc guard?				
2. Does the machine no	eed a lower disc guard?				
3. Does the machine ha	ave an upper belt guard?				
4. Does the machine ha	ave a lower belt guard?				
5. Is the power transmi	ssion system properly guarde	ed?			
6. Does the machine ha motor?	ave a latching, red, mushroon	n shaped E-stop that controls the			
	n that will prevent automatic ower outage protection)	restart			
8. Are the electrical sys	tem, wires and plug ends cor	mpliant?			
9. Is the machine secur	ed to prevent moving or tipp	ing?			
10. Does the machine h	nave a high-friction coating at	t both operators' positions on the			

Notes			

Notes

Vertical Band Saw	Survey		pper wheel g	guard	
Machine Owner	Worksite				
Surveyor's Name	Date of Survey	Safe work practice placard		Tension adjustment knob Guarded w	
Supervisor's Name	Room Name or No.	Guard housing for unused portion of blade  Blade welder	<b>%</b>	Light Blade and b	
Machine Manufacturer		On/off control Emergency		oint of opera	
Model #	Serial No.	Stop Switch  Lockable electrical disconnect (not shown)	of of	nused portio blade guard nder table	led
Supply Voltage	No. of Supply Phases (Circle One) 1 or 3	Power transmission motor (not shown)  Securely	s	Table and control Oust collection ystem hstalled	thack
Horsepower	Full Load Amps	anchored to floor  Lower wheel guard  A non-skid working surface is recommended at the operations of the commended at the com	tor's positio	on	
		Note: Ensure that the proper blade is used for the material being pr Never exceed the rated speed of the saw blade. Avoid mixing	rocessed. g incompatible d	lusts.	
			Yes	No	N/A
1. Are the wheel doo	r locks and latches functional?				
2. Does the machine	·				
	ion of the blade guarded above			-	_
	ion of the blade guarded below	v the work table?			1
	ible insert in good condition?				
	system, wires and plug ends acc	·			+
motor?	have a latching, red, mushroor	n shaped E-stop that controls the			
· · · · · · · · · · · · · · · · · · ·	em that will prevent automation? (Power outage protection)	crestart			
9. Is the coasting time	e after shutdown acceptable?				
10. Does the machine	e have a high-friction coating a	t the operator's position on the floor?			
11. Is the machine se	cured to prevent moving or tip	pping?			
12. Are the bandsaw	wheels fully enclosed?				

8. Can the machine be securely isolated from power?

10. Is the machine secured to prevent moving or tipping?

<b>Horizontal Band S</b>	aw Survey		365		
Machine Owner	Worksite	Blade guard adjust knob —	afe work practic acard	θ	
		Cutting guide — Blade guard —	─ Drive motor		
Surveyor's Name	Date of Survey		covers (i	guarded)	
Supervisor's Name	Room Name or No.				
Machine Manufacture	er				
Model #	Serial No.		3		
Supply Voltage	No. of Supply Phases (Circle				
	One) <b>1 or 3</b>	Point of operation —			
Horsepower	Full Load Amps		se securely chored to floor		
			Yes	No	N/A
1. Are the bandsaw	wheels that carry the blade full	y enclosed?			
2. Is the power trans	smission system that drives the	blade guarded correctly?			
3. Is the unused por	tion of the blade guarded ahead	d of the upper blade guides?			
4. Is the unused por	tion of the blade guarded beyor	nd the lower blade guides?			
	tem that will prevent automation? (Power outage protection)	crestart			
6. Are the electrical	system, wires and plug ends co	mpliant?			
7. Does the saw hav motor?	e a latching, red, mushroom sha	aped E-stop that controls the			

notes			

9. Does the machine have a high-friction coating at the operator's position on the floor?

<b>Abrasive Chop Sav</b>	v Survey	-			
Machine Owner	Worksite	Drive motor	Operating handle		
Surveyor's Name	Date of Survey	Belt and pulley guard (fully enclosed)	Wheel guard		
Supervisor's Name	Room Name or No.	Dust collection system (not shown)			
Machine Manufacture	r	Lockable electrical disconnect	Point of operation  Workpiece holding device		
Model #	Serial No.		Emergency Stop Switch		
Supply Voltage	No. of Supply Phases (Circle One) 1 or 3	Non-slip Walking			
Horsepower	Full Load Amps	Surface	afe work practice		
			acard		
		Securely anchored pl		No	N/
1. Is the unused port	tion of the blade guarded?	Securely anchored pl	acard	No	N/
· · · · · · · · · · · · · · · · · · ·	tion of the blade guarded? functioning correctly?	Securely anchored pl	acard	No	N/
2. Is the blade guard		Securely anchored pl	acard	No	N/
<ul><li>2. Is the blade guard</li><li>3. Does the saw retu</li></ul>	functioning correctly?	Securely anchored to floor pl	acard	No	N/
<ol> <li>Is the blade guard</li> <li>Does the saw retu</li> <li>If not trigger opera</li> <li>Does it have a syst</li> </ol>	functioning correctly?	securely anchored to floor pl	acard	No	N/
<ol> <li>Is the blade guard</li> <li>Does the saw retu</li> <li>If not trigger opera</li> <li>Does it have a syst after power outage</li> </ol>	functioning correctly?  Irn to its starting position correct ated, does the machine have are tem that will prevent automatic	ctly? n emergency stop switch? c restart	acard	No	N/
<ol> <li>Is the blade guard</li> <li>Does the saw retu</li> <li>If not trigger opera</li> <li>Does it have a syst after power outage</li> <li>Can the machine k</li> </ol>	functioning correctly?  Irn to its starting position corrected, does the machine have are tem that will prevent automation? (Power outage protection)	securely anchored place of the floor place of the f	acard	No	N/
<ol> <li>Is the blade guard</li> <li>Does the saw retu</li> <li>If not trigger opers</li> <li>Does it have a syst after power outage</li> <li>Can the machine k</li> <li>Are the electrical s</li> </ol>	functioning correctly?  Irn to its starting position corrected ated, does the machine have are tem that will prevent automation (Power outage protection) to be securely isolated from its position.	securely anchored placetly?  n emergency stop switch? c restart  wer source?  mpliant?	acard	No	N/

Notes		

8. Is the machine secured to prevent moving or tipping?

Panel Saw Surv	еу				
Machine Owner	Worksite				
Surveyor's Name	Date of Survey				
Supervisor's Name	Room Name or No.		1		I
Machine Manufact	urer				
Model #	Serial No.		H		
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>	60 0	H		
Horsepower	Full Load Amps		0		
			Yes	No	N
1. Does the mach	ine have a trough guard?				
2. Does the saw r	eturn to its starting position a	utomatically?			
3. If the "lock on"	button is present, does the sa	aw have an E-Stop?			
	button is present, does it hav wer outage? (Power outage pi	ve a system that will prevent automatic rotection)			
·	cal system, wires and plug end	·			
	ne be securely isolated from it	•			
	•	•	+	+	+
7. Does the mach	ine need high friction coating	at the operator's position?			

Notes			

Radial Arm Sav	v Survey	Pullback device Lockable (if installed) electrical discont			Safe
Machine Owner	Worksite	(not shown)	iect		work practice placard
		Upper blade guard	The state of the s		- On/off switch  Emergency Stop Switch
Surveyor's Name	Date of Survey	Safety placard "DO NOT RIP OR PLOUGH FROM THIS END"			Ventilation port
Supervisor's Name	Room Name or No.				
Machine Manufac	turer				
Model #	Serial No.			\	
Supply Voltage	No. of Supply Phases	Self-adjusting :	/ /		Kickback
	(Circle One) 1 or 3	A non-skid working surface	\ '	Securally anchored	
Horsepower	Full Load Amps	is recommended at the operator's position	Point	t of operation	
			Yes	No	N/A
1. Does the carri	age travel easily in both directions?				
2. Does the saw	return gently to its starting position wher	n released?			
3. Is the hood gu	ard in good working condition?				
4. Is the hood gu	ard easily adjustable?				
5. Is the hood gu	ard properly labled "Danger: Do Not Rip	or Plough From This End"			
6. Does the macl	nine have a lower blade guard on both sid	des of the blade?			
7. If used for ripp	ping lumber, does the machine have an a	nti-kickback device?			
8. Does the mack controls the me	nine have a latching, red, mushroom shapotor?	ped E-stop that			
9. Does any part operator?	of the blade travel over the edge of the t	able toward the			
	a system that will prevent automatic rest routage protection)	tart after power			
11. Are the elect	rical system, wires and plug ends accepta	able?			
12. Can the mac	hine be securely isolated from its power s	source?			
13. Does the ma	chine have a high friction coating at the c	pperator's position?			
14. Is the machin	ne secured to prevent moving or tipping?				

Notes			

Scroll Saw Survey		Adjustable chip shield			
Machine Owner	Worksite	that covers the unused portion of blade			
Surveyor's Name	Date of Survey	Lockable electrical disconnect		justable de guide	
Supervisor's Name	Room Name or No.	Power transmission	Po	int of opera	tion
Machine Manufacture	r	apparatus (fully enclosed)	Er	On/off contro mergency op Switch	ols
Model #	Serial No.		w	afe ork practice acard	
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>	Securely anchored to floor		acard	
Horsepower	Full Load Amps				
			Yes	No	N/A
1. Are the power tra	nsmission components guarded?				
2. Does machine hav	ve OEM finger guards?				
3. Is the machine's to	able insert in good condition?				
4. Does machine hav	ve a chip shield?				
5. Does the machine	have a lower blade guard?				
6. Does the machine motor?	have a latching, red, mushroom sha	aped E-stop that controls the			
7. Are the electrical	system, wires and plug ends accepta	ble?			
8. Can the machine l	be securely isolated from its power s	source?			
9. Is the machine sec	cured to prevent moving or tipping?				
· ·	stem that will prevent automatic re ower outage protection)	start after			

Notes			

Table Saw Survey	/	Spreader —			-
Machine Owner	Worksite	Anti-kickback dogs  Blade guard  Rip fence			
Surveyor's Name	Date of Survey	Angle cutting guide	7		
Supervisor's Name	Room Name or No.				
Machine Manufactur	rer	Sur Tool	Dust colle system (not show		
Model #	Serial No.	Lockable electrical disconnect	(	.,	
Supply Voltage	No. of Supply Phases (Circle One) 1 or 3	Blade height adjustment wheel On/Off and Emergency Stop Controls Safe work practice placard  Blade apple adjustment wheel			
Horsepower	Full Load Amps	Blade angle adjustment wheel — transmission apparatu	ıs		
			Yes	No	N/A
1. Does the machin	ne have an anti-kickb	pack/splitter?			
2. Does the machin	ne have a blade guar	d that maintains contact with the stock?			
3. Is the machine's	table insert in good	condition?			
4. Is the power tran	nsmission system gu	arded correctly?			
5. Are the electrica	l system, wires, and	plug ends compliant?			
6. Does the machin	ne have all OEM knol	bs, rods and handles?			
7. Does the machin motor?	ne have a latching, re	ed, mushroom shaped E-stop that controls the			
8. Does it have a sy	stem that will nreve	ent automatic restart after power outage?			
(Power outage p	•				
(Power outage p	•	acceptable?			
(Power outage positions)  9. Is the coasting ti	orotection) me of the machine a	acceptable? on coating at the operator's position?			
(Power outage p 9. Is the coasting ti 10. Does the mach	protection) me of the machine a ine have a high fricti	-			

13. Is the machine secured to prevent moving or tipping?14. Are there any noticeable leaks in the hydraulic system?

Hydraulic Press		js. 9-2 (1) (2)			
Machine Owner	Work Site	**************************************			
Surveyor's Name	Date of Survey	-14.			
Supervisor's Name	Room Name or No.				
Machine Manufacturer					
Model #	Serial No.				
Supply Voltage	No. of Supply Phases (Circle One) <b>1 or 3</b>				
Horsepower	Full Load Amps				
			Yes	No	N/A
1. Does the machine ha	ve a method of protecting the	operator from ejected components?			
2. Does the machine ha of the point of operatio		operator from crush hazards on all sides			
		switch covered to protect from			
unintentional operation		·			
4. Is the frame and bed	rated for the tonnage of the h	ydraulic pressing cylinder?			
5. Are all hydraulic hose	es and fittings properly rated for	r the application?			
6. Does the machine ha	ve all OEM knobs, rods, or han	dles?			
7. Are the electrical syst	tem, wires, and plug ends acce	ptable?			
8. Does it have a system	n that will prevent automatic re	estart after power outage? (Power			
outage protection)					
9. Does the machine ha	ve a compliant start/stop push	button controls and a latching, red,			
<u> </u>	ergency stop pushbutton for th	·			
	securely isolated from its pow				
	perly protected against impac				<u> </u>
12. Does the machine h	ave a high-friction coating at the	ne operator's position on the floor?			

Notes		



Student Name_	
Date	

## **Shop Safety Training Form**

Shop Name	Shop Supervisor	
Hours of Operation	Phone	
	Email	

<u>Shop dress requirements</u>: To ensure your safety eye protection must be worn at ALL times when you are in the shop. No loose clothing including ties, necklaces, floppy sleeves, jewelry, etc. Long hair must be tied up in a bun. Shoes must be close toed. Pants must be worn (no shorts) and long sleeves must be roll up past the elbows.

#### **Shop Rules**

- 1. Think through the entire job before starting. Ask the Shop Supervisor if you are ever unsure for any reason
- 2. Tools and Machines may only be used by <u>AUTHORIZED PERSONNEL</u>; if you see unauthorized individuals in the shop, report it to the shop supervisor immediately.
- 3. Only work with tools and machines that you have been authorized to use. If there is a particular tool you would like to use, ask the shop supervisor.
- 4. Do not use equipment if you are tired, using any medication or under the influence of drugs, alcohol, etc.
- 5. **NEVER** work in the shop alone. The shop may only be used during normal shop hours and under direct supervision.
- 6. Safety guards MUST be in place at all times, ensure guides and fences are tight.
- 7. Whenever possible secure you work with a clamp, strap or other means as directed by the Supervisor. NEVER hold the work down with your hand.
- 8. **NEVER** make adjustments or modifications to the equipment unless authorized by the Supervisor. This includes moving or removing safety guards, changing belts or blades or applying lubricant.
- 9. Report damaged safety guards, machines and tools to the Shop Supervisor. Warn other in the shop that the machine is damaged and should not be used.
- 10. Keep you work areas clean; do not place tools and materials on the machine table. Chips and debris must be swept up after you are done.
- 11. Use compressed air (not your hands) to clean chips and debris located near blades, bits and other areas where you could be injured by using your hands. Air PSI must **NEVER** exceed 30 PSI
- 12. Put tools away when you are done using them; wrap up electrical cords.
- 13. Only one person may work on a machine at a time.
- 14. Keep blades covered as much as possible.
- NEVER leave a machine unattended or leave materials in the machine. Remember to REMOVE THE CHUCK KEY before starting your work.
- 16. Heavy sanding or painting must be done in well ventilated area.
- 17. **NEVER** push a cutter towards any part of your body
- 18. **NEVER** make heavy cuts with planers, jointers, and routers
- 19. Plywood and particleboard must **NOT** be worked with the jointer or planer
- 20. Do not work small pieces on power machinery use hand tools.
- 21. **NEVER** remove metal chips, turnings, or shavings with your hands.
- 22. **NEVER** use compressed air without a safety nozzle to clean machines or clothing.
- 23. No running or horseplay
- 24. No eating or drinking in the shop area
- 25. Report ALL injuries (even small ones) to the Shop Supervisor or Facility Manager
- 26. The First Aid Kit is located\_\_\_\_\_\_
- 27. The Eyewash Station/Flush is located

I have read and understand the rules and procedures outlined in this document:

Signature\_\_\_\_\_ Date:\_\_\_\_\_

Side 1 of 2

# **Shop Safety Training – Hands on Instruction**

Safety   Provided   Provided		SOP &	Hands On	Supervisor	Date
Abrasive Cut-Off Saw	Equipment	- I			
Band Saw - Vertical	Ahrasiye Cut-Off Saw				
Band Saw - Vertical  Belt Sander  Belt Sander  Bench Grinder  Bench Grinder  Chop/Miter Saw  CNC Enclosed  CNC Open  Disc Sander  Horizontal Mill  Jig Saw  Jointer  Lathe  Coxy-Acetylene Torch  Panel Saw  Planer  Press  Radial Arm Saws  Router  Scroll Saw  Shear  Skill Saw  Shear  Skill Saw  Robotic Equipment  Vertical Mill  Water Cutter  Welder – Arc  Welder – Tig  Welden – Tig  Welden – Tig  Welding – Plasma					
Belt Sander  Belt/Disc Sander  Bench Grinder  Break  Chop/Miter Saw  CNC Enclosed  CNC Open  Disc Sander  Dirill Press  Horizontal Mill  Jig Saw  Jointer  Lathe  Oxy-Acetylene Torch  Panel Saw  Planer  Planer  Press  Radial Arm Saws  Router  Scroll Saw  Shear  Robotic Equipment  Vertical Mill  Water Cutter  Welder – Arc  Welder – Tig  Welding – Plasma					
Belt/Disc Sander  Bench Grinder  Break  Chop/Miter Saw  CNC Enclosed  CNC Open  Disc Sander  Drill Press  Horizontal Mill  Jig Saw  Jointer  Lathe  Coxy-Acetylene Torch  Panel Saw  Planer  Press  Radial Arm Saws  Router  Scroll Saw  Schear  Skill Saw  Table Saw  Robotic Equipment  Wert cutter  Welder – Arc  Welder – Arc  Welder – Tig  Welding – Plasma					
Bench Grinder					
Chop/Miter Saw					
Chop/Miter Saw			-		
CNC Enclosed					
CNC Open         Image: Control of the process of					
Disc Sander					
Drill Press					
Horizontal Mill					
Jig Saw  Jointer  Lathe  Oxy-Acetylene Torch  Panel Saw  Planer  Press  Radial Arm Saws  Router  Scroll Saw  Shear  Skill Saw  Table Saw  Robotic Equipment  Vertical Mill  Water Cutter  Welder – Arc  Welder – Arc  Welding – Plasma					
Dinter					
Lathe					
Doxy-Acetylene Torch					
Panel Saw					
Planer					
Press					
Radial Arm Saws	Planer				
Router					
Scroll Saw	Radial Arm Saws				
Shear	Router				
Skill Saw	Scroll Saw				
Table Saw Robotic Equipment Vertical Mill Water Cutter Welder – Arc Welder-Mig Welder – Tig Welding – Plasma	Shear				
Robotic Equipment	Skill Saw				
Vertical Mill	Table Saw				
Water Cutter	Robotic Equipment				
Welder – Arc	Vertical Mill				
Welder-Mig Welder – Tig Welding – Plasma  Welding – Plasma	Water Cutter				
Welder – Tig  Welding – Plasma  U  U  U  U  U  U  U  U  U  U  U  U  U	Welder – Arc				
Welding – Plasma	Welder-Mig				
	Welder – Tig				
Other	Welding – Plasma				
	Other				

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