WOOD CIRCULAR SAW BENCH

Equipment identification:

Completed by:

Date:

MACHINE ACTION TOOL

The purpose of this technical sheet is to provide information on the main risk factors associated with wood circular saw bench and to propose different ways to control them.

SAWING STATION

Saw station components

- 1 Blade
- 2 Work table
- 3 Rip fence
- 4 Cross-cut guide / mitter gauge
- 5 Height adjustment handle
- 6 Angle adjustment handle
- 7 Dust collection duct

Safety features

- A Self-adjusting blade guard
- **B** Riving knife
- c Anti-kickback fingers
- D Emergency stop button
- E Push stick or block



Different type of push stick or block



Note: The space between the blade and the riving knife should be equal or greater than 3 mm, but not exceeding 8 mm.



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Safety guard mounted on the riving knife



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HOW TO USE THIS DOCUMENT?

In the manner of an audit:

- Systematically review potential risk factors and identify those that are present.
- For each of the risk factors identified, examine the preventive measures proposed to retain those that seem appropriate.

For training purposes:

- Target the instructions within the set of prevention measures.
- Provide the necessary means to comply with the instructions.
- Transmit instructions to workers and ensure their implementation.

CAUTION

This document focuses only on mechanical and electrical risk factors. However, there may be other risk factors when using this machine including those of a chemical, biological, or ergonomic nature.

DESCRIPTION

Wood circular saw benches are used for slitting, crosscutting and grooving. They can be stationary (fixed) or portable. They allow cross and longitudinal cuts in a single pass. They can also be used to make angular cuts, grooves and joints.

INJURIES



The most frequent injuries with this machine are amputation, cut, fractures, electrification and burns.

RISK FACTORS

#	MECHANICAL	PRESENT? (Yes/No)
1	Access to the moving blade near the point of operation	
2	Access to moving parts (unused part of the blade under the table, belts, pulley etc.)	
3	Accidental starting of the saw during blade change, maintenance, or repair	
4	Sudden upswing/projection of a cut piece (kickback)	
5	Contact with cutting edges of a saw blade when not in use	
6	Wood dust or chips projection	
7	Projection of various elements (foreign objects, workpiece, saw parts, etc)	
8	Falling object	
9	Falling, slipping	
#	ELECTRIC	

10 Contact with elements usually or accidentally energized



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ACCESS TO THE MOVING BLADE NEAR THE POINT OF OPERATION

PREVENTIVE MEASURES	Applied 🖌	Not applicable	n/a	NOTES (responsible / schedule / priority)
TECHNICAL MEASURES				
 Install a self-adjusting guard over the exposed portion of the blade. The be of sturdy construction and easily adjustable according to the he guard should be adjustable without the use of a tool be large enough to enclose the blade as much as possible during t be designed to move easily when approaching the workpiece be kept adjusted as close as possible to the surface of the workpie be installed directly on the riving knife or mounted separately on t Also, the self-adjusting guard should be able to cover the exposed teeth diameter and for the lowest and highest position of the blade. When the riving knife, it might be necessary to change the position of the riving knife 	guard must: ight of the wor he cutting oper ce he table of the of the saw for guard is instal ife to fit the bla	kpiece. The ation saw. all blade's led on the ade properly.		
Provide different types of push stick or block for each bench saw. They m	nust be availabl	e at all times.		
If the stop time is more than 10 seconds, a brake should be Installed (me The brake must stop the blade movement as quickly as possible.	echanical, elect	rical).		
Install an easily accessible and clearly identified emergency stop button. the saw. The emergency stop must also activate the brake if the machine	This must cut on this must cut on the second s	off the power to ith one.		
INSTRUCTIONS FOR THE USER				
Set the height of the blade so that it is not more than 3 mm above the top of	of the workpiece			
Keep hands as far as possible from the blade. Use a push stick or a push narrow pieces of wood and for pushing stock past the blade.	block for small	or		
Never try to clean a running blade: stop the saw, remove the blade and remove the resin.	use a suitable s	craper to		
Never remove loose splinters, chips or jammed pieces of wood when the To rectify faults or remove jammed pieces of wood, always switch off the	e saw blade is r e machine first.	unning.		
Do not remove cut-off pieces near the blade or touch the blade guard w	hile the blade is	s running.		
Wear close-fitting clothing. Do not wear jewelry.				
Never wear gloves during operation.				
Never leave the saw running unattended.				

2 ACCESS TO MOVING PARTS

(UNUSED PART OF THE BLADE UNDER THE TABLE, BELTS, PULLEY, ETC.)

PREVENTIVE MEASURES	Applied 🖌	Not applicable <u>n/a</u>	NOTES (responsible/schedule/priority)
TECHNICAL MEASURES			
Install fixed or movable interlocked guard on the portion of the blade be operators from possible contact when reaching under the table.	low the table t	o protect	
Install fixed or movable interlocked guard on the power transmission ap sprockets, etc.).	paratus (belts,	pulleys, chains,	

Remarks

3 ACCIDENTAL STARTING OF THE SAW DURING BLADE CHANGE, MAINTENANCE, OR REPAIR

PREVENTIVE MEASURES Applied 🖌 Not applicable 🗔 NOTES (responsible/schedule/priority) **TECHNICAL MEASURES** Install one or more movable interlocked guards to make the moving parts inaccessible. \square The interlocked device: must stop the movement of the saw AND . • must override the start command when the guard is open AND • must not cause the saw to restart when the guard is closed AND • must not be easily by-passed. **INSTRUCTIONS FOR THE USER** Apply the lockout procedure specific to the equipment during maintenance or repair: isolate energy sources • dissipate residual energy (wait for the equipment to stop completely) • • lock out the isolation devices make sure that no start-up is possible. • Note: When changing the blade, the machine must be locked down if the guard is not equipped with an interlocked device.

4 SUDDEN UPSWING/PROJECTION OF A CUT PIECE (KICKBACK)

PREVENTIVE MEASURES	Applied 🗹	Not applicable	n/a	NOTES (responsible / schedule / priority)
TECHNICAL MEASURES				
 Install a steel riving knife. The riving knife must: be securely mounted have a smooth surface have a chamfered leading edge be curved to the shape of the blade and designed so that a closely as practicable the contours of the saw blade being be thicker than the body of the saw blade, but slightly thin be rigid and set accurately in line with the saw. 	the inner edge f used Iner than the wi	ollows as dth of cut		
Install a rip fence to support the workpiece during ripping opera the fence does not restrict the movement of the blade guard.	tions. Make sur	e the height of		
Install anti-kickback fingers with teeth to prevent the material to operator.	o be pulled back	k toward the		
If there is a second operator at the outfeed end to remove cut p extended so the distance between the saw blade spindle and th least 1200 mm. The second operator should always remain at th and should not reach forward towards the saw.	ieces, the table e rear edge of t ie outfeed end c	should be he table is at of the extension		
INSTRUCTIONS FOR THE USER				
Adjust the saw guard and the riving knife properly for each job l knife must be adapted to the proper diameter and thickness of t adjusted to a maximum of 2 mm lower than the blade. The rivin close to the saw blade. The space between the saw blade and th greater than 8 mm (see image on first page).	being carried ou the blade and sl g knife should b ne riving knife sl	ut. The riving hould be he installed houldn't be		
Use a rip fence or a cross-cut guide to give adequate workpiece	support during	cutting.		
Use a spacer between the fence and the saw blade when there is guard to operate properly. Some guides can be installed in differ on the workpiece to be cut (see picture on the first page).	is insufficient sp rent configuratio	bace for the ons depending		
Mark on the machine the diameter of the biggest and the smalle safely used. There must be a matching riving knife installed.	est saw blade th	nat can be		
Ensure that the workpiece is sufficiently supported throughout t blade. Large workpieces should be supported using extension ta the infeed and outfeed ends.	he cut to avoid bles or roller su	pinching of the pports at both		
Always use clean, sharp, and properly set blades. Never make curright type of blade for the cut being made.	its with dull bla	des. Use the		
Always push the workpiece in the opposite direction of the blad	e rotation.			

5 CONTACT WITH THE CUTTING EDGES OF SAW BLADE WHEN NOT IN USE

PREVENTIVE MEASURES	Applied 🗹	Not applicable n/a	NOTES (responsible/schedule/priority)
INSTRUCTIONS FOR THE USER			
Handle the blade and parts with cut-resistant gloves. Do not weat	ar gloves while	sawing.	
Put back the saw guard cover over the blade when machine not	in operation.		

6 WOOD DUST OR CHIPS PROJECTION

PREVENTIVE MEASURES	Applied 🖌	Not applicable	n/a	NOTES (responsible / schedule / priority)
TECHNICAL MEASURES				
Install an effective local exhaust ventilation both above and belo dust.	ow the table to	control wood		
INSTRUCTIONS FOR THE USER				
Use an industrial vacuum cleaner to clean the machine rather th	nan compressed	air gun.		
Remove the dust with a brush. Never blow with your mouth tow	vards the dust t	o remove them.		
Wear CSA approved safety glasses with side shields.				
Wear tight-fitting long-sleeved clothing.				
Wear respiratory protective equipment when necessary.				

7 PROJECTION OF VARIOUS ELEMENTS (FOREIGN OBJECTS, WORKPIECE, SAW PARTS, ETC)

PREVENTIVE MEASURES	Applied 🖌	Not applicable	n/a	NOTES (responsible / schedule / priority)
INSTRUCTIONS FOR THE USER				
When working with wood that has been processed before, wate as nails or screws etc.	h out for foreig:	n bodies such		
Round workpieces must be fixed on the cross-cut guide in order The choice of the blade must be appropriate according to the w teeth should be touching the part during the cut.	to prevent the orkpiece. In gen	m from turning. ieral, 2 to 4		
Mark saw blades with their maximum rotational speed and do n	not exceed.			
Check the blade carefully for cracks or damage before operation blade immediately.	1. Replace crack	ed or damaged		
Replace guards before making trial cuts after tool setting or adj	ustment.			
Before using a new saw blade on an actual work piece, let it run vibration or wobbling that could indicate poor installation or a	າ for a while. Wa poorly balanced	atch for blade.		
Stop the saw in case of unusual noise.				
Wear CSA approved safety glasses with side shields.				

8 FALLING OBJECT

PREVENTIVE MEASURES	Applied 🖌	Not applicable n/a	NOTES (responsible/schedule/priority)
TECHNICAL MEASURES			
Anchor the saw frame securely to the floor.			
INSTRUCTIONS FOR THE USER			
Make sure there are no objects on the table that could potential	ly fall.		
Wear CSA approved safety shoes with steel toe caps.			

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PREVENTIVE MEASURES	Applied 🗹	Not applicable	n/a	NOTES (responsible / schedule / priority)
TECHNICAL MEASURES				
Repair and clean the floor: uneven surface, holes, slippery floor, presence	e of wood dust	, chips, etc.		
INSTRUCTIONS FOR THE USER				
Keep the area around the saw clear of slip and trip hazards.				

10 CONTACT WITH ELEMENTS USUALLY OR ACCIDENTALLY ENERGIZED

PREVENTIVE MEASURES	Applied 🗹	Not applicable n/a	NOTES (responsible / schedule / priority)
TECHNICAL MEASURES			
Install an electrical power circuit breaker or outlet near the saw and identify	'it.		
INSTRUCTIONS FOR THE USER			
 Apply the lockout procedure specific to the equipment during maintenance isolate energy sources dissipate residual energy (wait for the equipment to stop complete lock out the isolation devices make sure that no start-up is possible. 	or repair: ely)		
Check the insulation of the power cables and the grounding of the elect	trical circuit of	the saw.	

Remarks

NEED ASSISTANCE?

Do not hesitate to consult your MultiPrevention consultants if you have any questions about this sheet or about occupational health and safety.

REFERENCES –

The proposed preventive measures come in part from the Regulation respecting occupational health and safety (RROHS, r.19), the Quebec Act respecting occupational health and safety (AQHS, S-2.1), the Canadian Center for Occupational Health and Safety as well as the standard EN ISO 19085-5 Woodworking machines – Safety – Part 5: Dimension saws.

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