

Chicago Woodturners

Lathe Safety

By: Phil Brooks
February 10, 2009

Warning

- Woodturning is great fun, but it can be dangerous if done improperly.
- Safe and effective use of the wood lathe requires you accept the responsibility to learn the correct use and operation of this equipment.
- This presentation addresses the often overlooked topic in woodturning: Safety

Safe Use of Lathe Categories

- Eye Protection
- Lung & Skin Protection
- Hearing Protection
- General Body Protection

Eye Protection

- Wear One of The Following:
 - *Face Shield*
 - *Safety Goggles (To OSHA Standards)*
 - *Safety Glasses (To OSHA Standards)*

OSHA = Occupational Safety & Health Administration

Examples of Eye Protection



Lung & Skin Protection

- Use One of The Following When Turning:
 - *Dust Mask (To OSHA Standards)*
 - *Dust Helmet (To OSHA Standards)*
 - *Dust Collection System*
- *When Applying a Finish or Using CA:*
 - *Wear Nitrile or Latex Gloves*
 - *Do in Well Ventilated Room...Or*
 - *Wear Cartridge Mask (To OSHA Standards)*

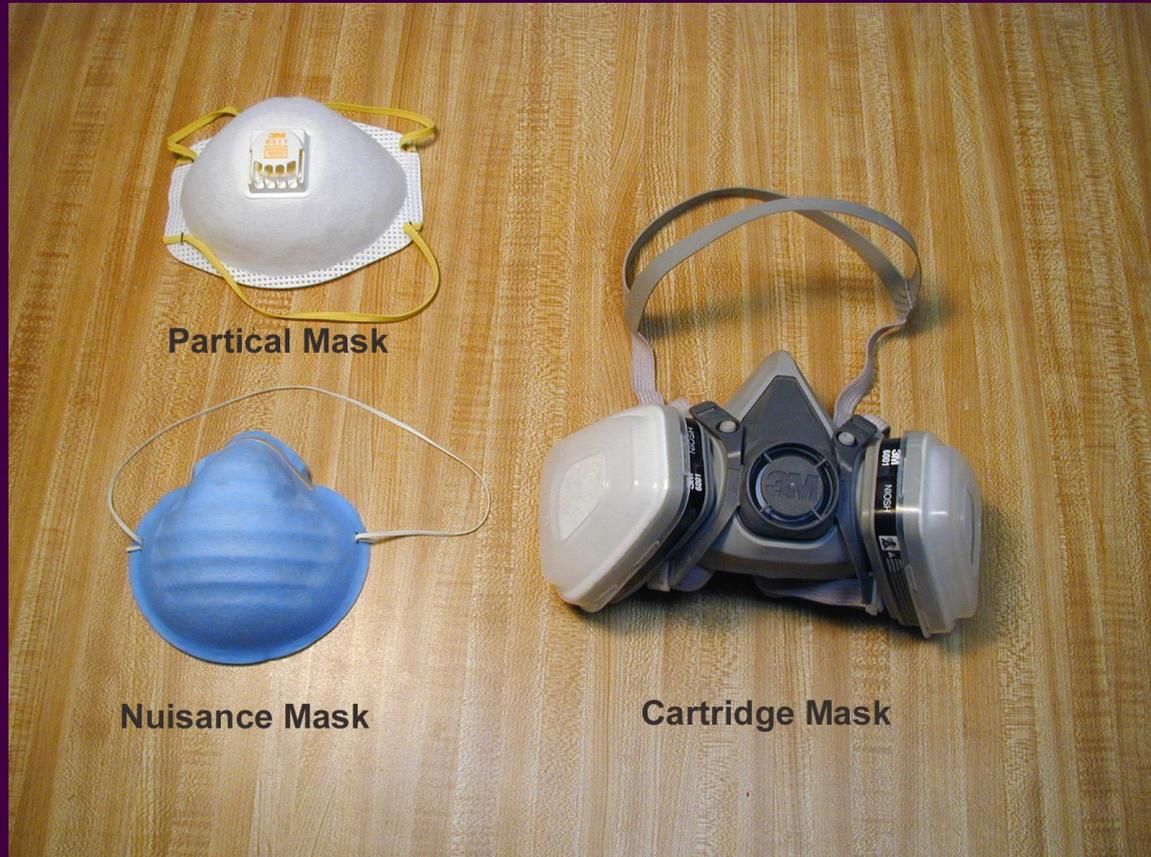
OSHA = Occupational Safety & Health Administration

HAZARDS OF COMMON WOODS

Type of Wood	Source of Irritation	Type of Reaction	What It Effects	How Potent It Is (1=low, 4=high)
Beech	leaves, bark and dust	sensitizer	eyes, skin, and respiratory	2
Birch	wood and dust	sensitizer	respiratory	2
Cocobolo	wood and dust	irritant and sensitizer	eyes, skin, and respiratory	3
Ebony	wood and dust	irritant and sensitizer	eyes and skin	2
Iroko	wood and dust	irritant and sensitizer	eyes, skin, and respiratory	3
Purpleheart	wood and dust	nausea	nausea	2
Rosewoods	wood and dust	irritant and sensitizer	respiratory, eyes, and skin	4
Satinwood	wood and dust	irritant	respiratory, eyes, and skin	3
Teak	dust	sensitizer	eyes, skin, and respiratory	2
Walnut, black	wood and dust	sensitizer	eyes and skin	2
Wenge	wood and dust	sensitizer	respiratory, eyes, and skin	2
Western red cedar	leaves, bark and dust	sensitizer	respiratory	3
Yew	dust	irritant	eyes and skin	2

Source: "Controlling Dust In The Woodshop", Rick Peters

Examples of Lung Protection



Hearing Protection

- Wear One of The Following:
 - *Ear Plugs (To OSHA Standards)*
 - *Headset (To OSHA Standards)*
- *Effectiveness Defined by Decibel Rating*
- *Move Noisy Equipment to Another Area (Best Solution)*

OSHA = Occupational Safety & Health Administration

Examples of Hearing Protection



Ear Plugs

Headsets

Body Protection Categories

- Before Turning on Lathe
- Starting The Lathe
- While Running The Lathe
- Safe Use of Tools & Accessories
- General Safety

Before Starting Lathe

- *Read & Understand all Tool Instructions Before Using*
- *No Loose Clothing, Gloves, Hair or Jewelry*
- *Wear Eye, Lung & Hearing Protection*
- *Remove Any Loose Bark From Work*
- *Make Sure All Tightening Handles Are Tight*
- *Keep Toolrest as Close to Work Piece as Possible*
- *Rotate Work by Hand 360 Degrees Before Turning on Lathe*
- *Before Running Lathe In Reverse, Securely Tighten Chuck or Faceplate, Using a Setscrew if Necessary*

Starting The Lathe

- *Keep The Tailstock Engaged Whenever Possible For Added Safety*
- *Always Stand to the Side When Turning On The Lathe*
- *If Electronic Variable Speed, Start Lathe at Lowest Speed. Increase as Needed*
- *Back Off Speed If Vibration Starts*

While Running The Lathe

- *Never Start Cutting Before Tool is Firmly On Toolrest*
- *Don't Move Tool Rest While Lathe is Running*
- *Remove or Move Tool Rest Before Sanding*
- *Only Use **Paper** Towels While Lathe is Running*
- *Listen For Telltale Sounds When Turning*
- *Reset Lathe to Lowest Speed When Finished*
- *Use Tools Properly*

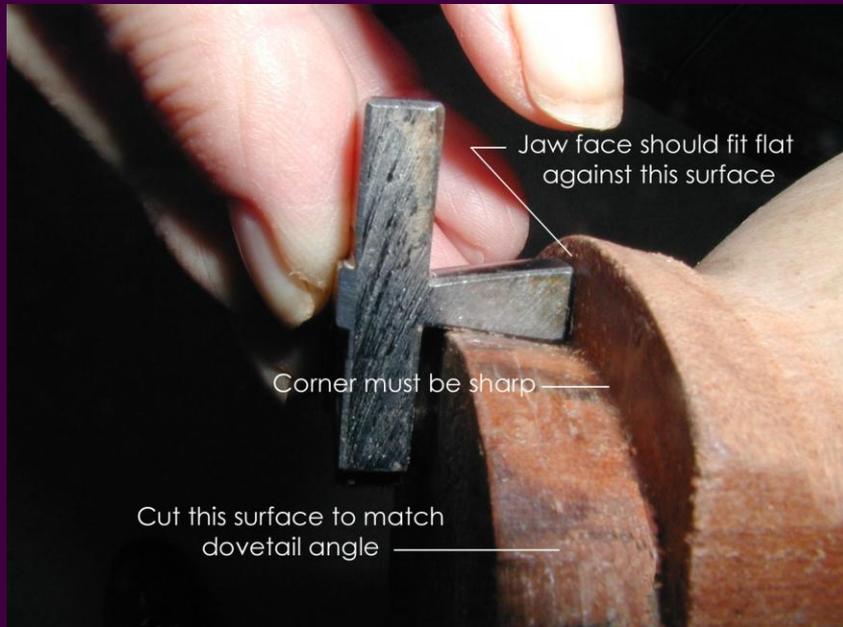
Woodturning Safety

- Know How to Safely Hold the Workpiece
 - Safety Rules For Using a Scroll Chuck
 - Safety Rules For Using a Glue Block
 - Use Tailstock Whenever Possible
- Know Which Tool to Use
 - Example:
Never Use a Roughing Gouge on Face Grain
- Know How to Safely Use That Tool
 - Safety Rules For Using a Scraper
 - Safety Rules For Using a Gouge

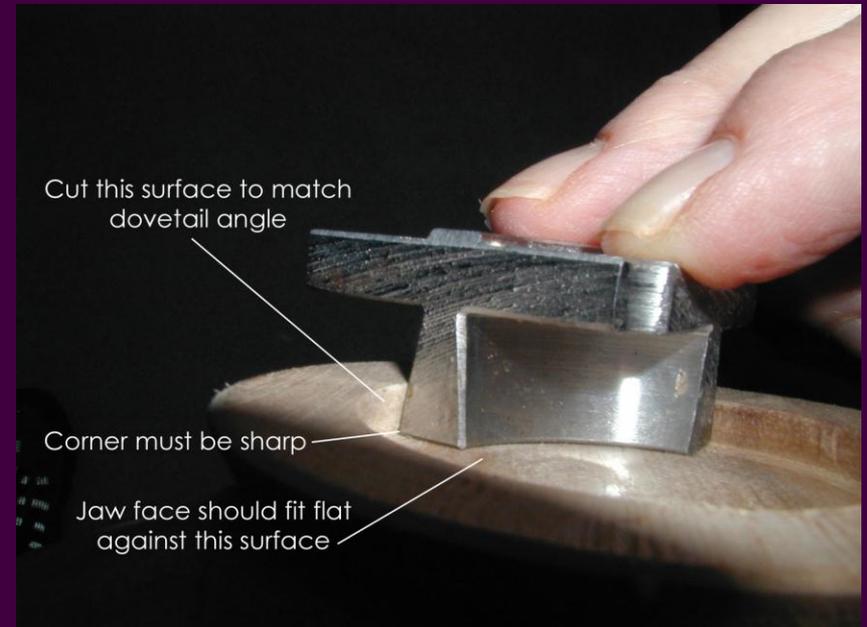
Safety Rules For Scroll Chuck

- **Get a Good Fit By Cutting:**
 - Holding Surface to Match Dovetail Angle
 - Surface to Fit Flat Against Jaws Face
 - Clear Corner of Wood Surfaces
 - Holding Surface Diameter to Just Over Minimum
- **Safely Mount Chuck to Lathe By:**
 - Cleaning Chuck Rear Face & Matting Surfaces
 - Snap Close Final 1/4 Turn
 - Use Set Screw If Turning in Reverse
- **Never Leave Key or Wrenches in Chuck**

Get a Good Fit With Scroll Chucks



Externally

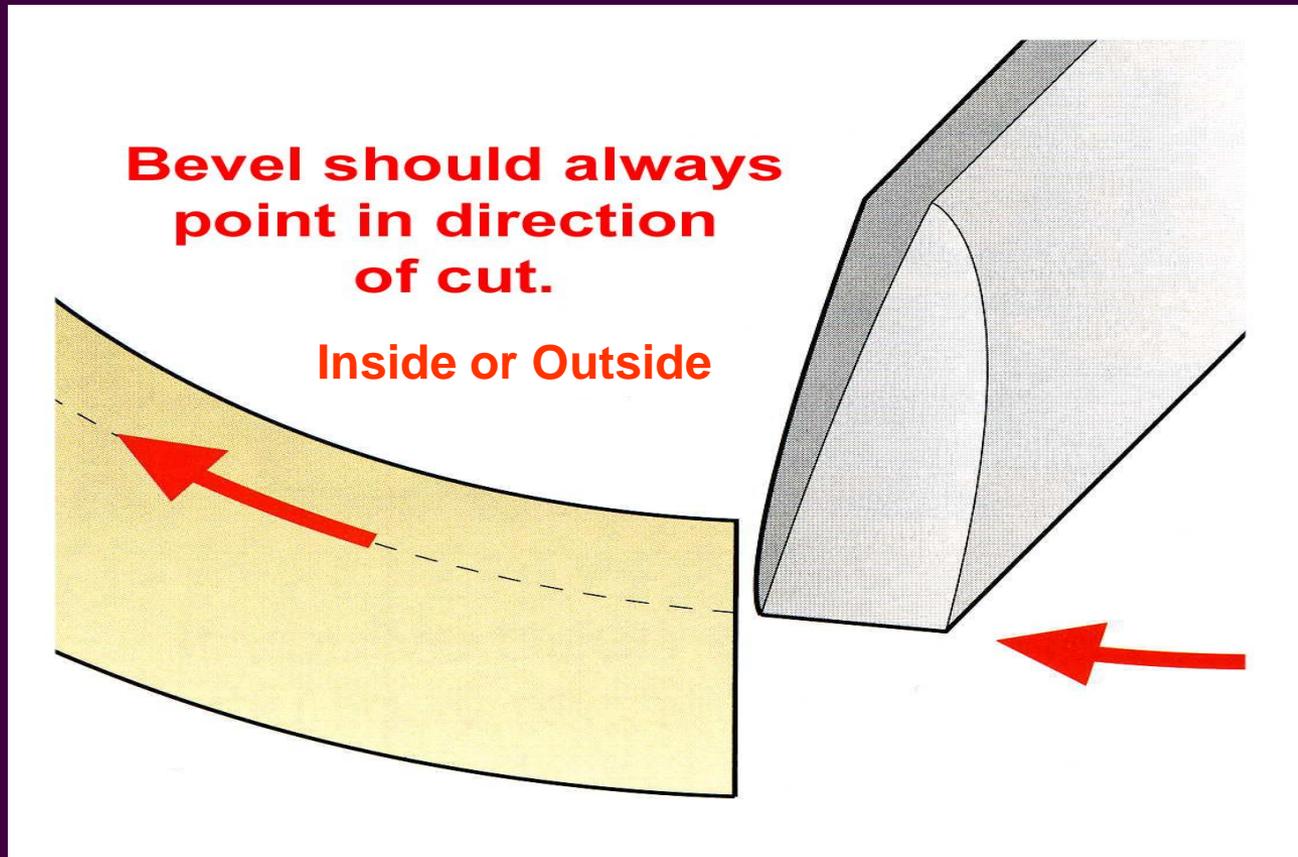


Internally

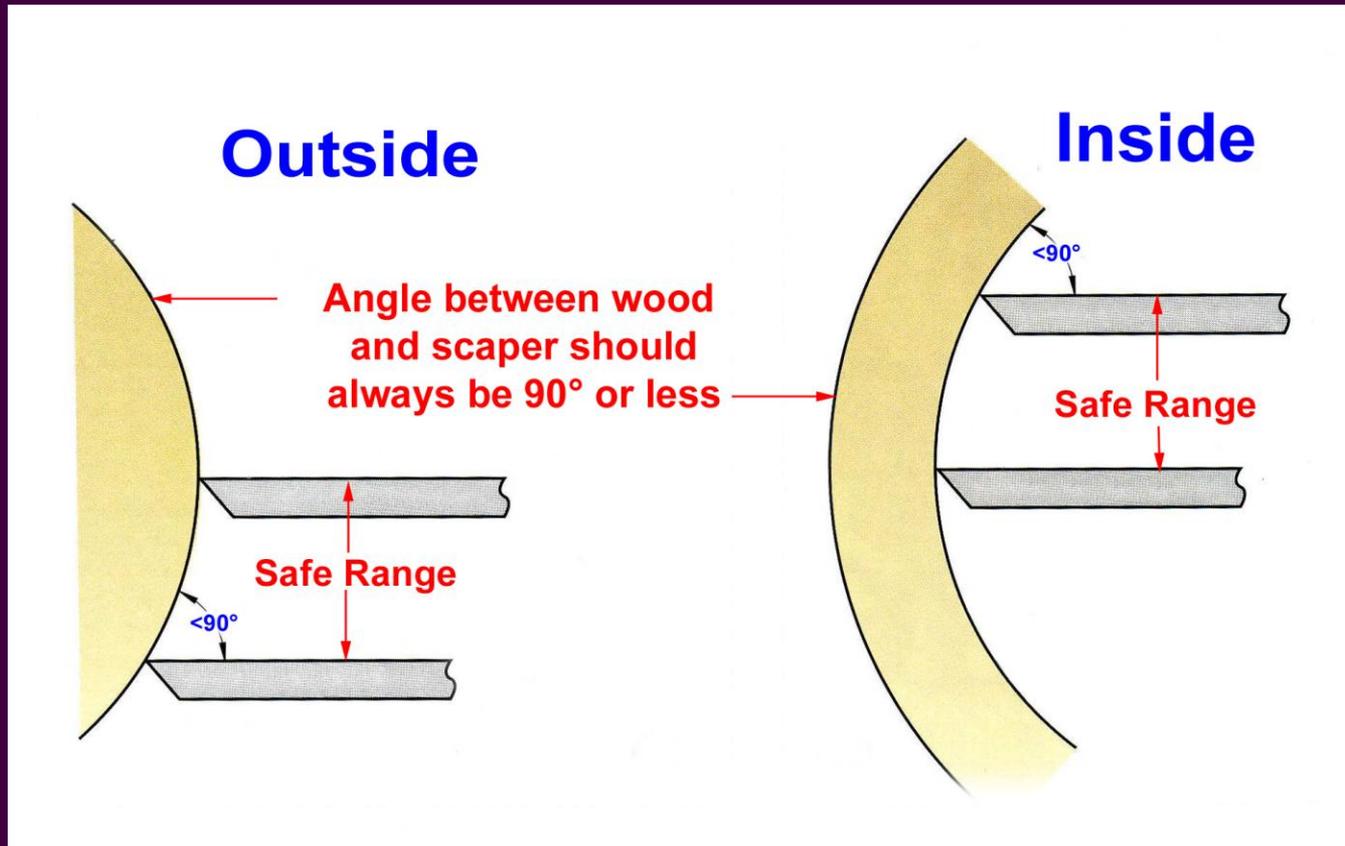
Safety Rules For Using a Glue Block

- Purpose of Glue Block: Hold Work Piece on Lathe, While Using All of Premium Wood.
- Secure Glue Block to Face Plate or Hold in Scroll Chuck
- Flatten Mating Surfaces of Glue Block and Work Piece
- Use Thick CA Glue on One Surface & Accelerator on The Other; Let Cure 15 Minutes
- Don't Cut on Joint When Separating Work Piece

Gouge Entry Angle



Safe Use of Scraper



General Safety

- *Keep Tools Sharp; Forcing Dull Tools Cause Accidents*
- *Hold a Jacob's Chuck When Withdrawing the Bit From the Work*
- *Provide Abundant Lighting*
- *Don't Operate Equipment While Tired or Under The Influence*
- *Keep Floor Clean & Maintain Proper Balance At All Times*
- *Use Common Sense; If It Appears To Be Unsafe, It Probably Is*

Summary

- Woodturning is great fun, but it can be dangerous if done improperly.
- Safe and effective use of the wood lathe requires you accept the responsibility to learn the correct use and operation of this equipment.
- Pay attention, observe the rules & have fun. It's a great hobby!