SHARPENING

WOODTURNING GOUGES

A Practical Guide to Edge Geometry, Grinding Techniques & Finishing

Spindle Gouges · Bowl Gouges · Roughing Gouges

WHY SHARPENING MATTERS

Control & Safety

A sharp gouge cuts cleanly with light pressure — reducing catches, vibration, and fatigue. Dull tools require force, increasing the risk of dangerous dig-ins.

Surface Quality

Sharp edges slice wood fibers rather than tearing them. You'll spend far less time sanding — or none at all — off finely turned, sharp-tool surfaces.

Tool Longevity

Frequent, light honing removes less steel than infrequent heavy grinding. Keeping tools sharp extends their usable life significantly.

TYPES OF TURNING GOUGES

Roughing Gouge

BEVEL ANGLE

45-55° bevel, squared nose

BEST FOR

Remove bark & rough shape

GRIND STYLE

Simple flat grind on rest

Spindle Gouge

BEVEL ANGLE

30–40° bevel, fingernail grind

BEST FOR

Details, coves, beads on spindles

GRIND STYLE

Ellsworth or traditional fingernail

Bowl Gouge

BEVEL ANGLE

45–55° bevel, swept-back flute

BEST FOR

Bowls, hollow forms, inside curves

GRIND STYLE

Swept-back wings, various profiles

BEVEL ANGLE QUICK REFERENCE

GOUGE TYPE	BEVEL ANGLE	GRIND PROFILE	NOTES
Roughing Gouge	45-55°	Straight / Square	Never use on facework — can catch & shatter
Spindle Gouge	30–40°	Fingernail / Traditional	Longer bevel = smoother cut; great for detail
Bowl Gouge	45–55°	Swept-back Wings	Steeper angle = more durable edge for hardwoods
Detail / Skew	25–30°	Flat / Micro-bevel	Keep very sharp; re-hone often at the lathe
Parting Tool	~45°	Flat / Symmetrical	Equal bevels on both sides for straight entry

GRINDING EQUIPMENT

Slow-Speed Grinder

The Gold Standard

8" wheel at 1,750 RPM. Low heat generation prevents drawing the temper from high-speed steel. Essential for beginners and recommended for all turners.

High-Speed Grinder

Use With Caution

3,450 RPM — generates far more heat. Requires frequent light passes and water quenching. Can burn the steel if you're not careful.

CBN Wheels

Cubic Boron Nitride

Stay flat forever — no dressing required. Cut cooler and faster than aluminum oxide. Higher upfront cost but a lifetime investment for serious turners.

Aluminum Oxide Wheels

Budget Friendly

Standard white or pink wheels work well when dressed flat. Must be trued regularly. 60–80 grit for shaping, 120 grit for refining.

⚑ PRO TIP: Dress your wheel flat before every sharpening session. A crowned or glazed wheel produces an uneven bevel and poor edge geometry.

SHARPENING JIGS & SYSTEMS

FREEHAND GRINDING

- ✓ No equipment cost beyond the grinder
- ✓ Develops tactile skill over time
- ✓ Faster once mastered
- ✗ Requires consistent hand pressure & angle
- ✗ Results vary early in learning curve
- ✗ Best for experienced turners

JIG SYSTEMS (e.g. Wolverine)

- ✓ Repeatable, consistent bevel angles
- ✓ Ideal for bowl gouge swept-back grinds
- ✓ Great for beginners & intermediate turners
- ✗ Requires initial setup & calibration
- ✗ Additional cost ($50–$150+)
- ✗ Slower per tool than skilled freehand

STEP-BY-STEP SHARPENING PROCESS

1

Inspect the Edge

Hold the tool up to light at ~45°. A shiny flat on the edge indicates dullness. Check for chips, uneven bevels, or a rolled edge that needs grinding.

2

Set Bevel Angle

Use a jig or set your tool rest to the correct angle for the gouge type. Check with a protractor or angle gauge until consistent.

3

Grind the Bevel

Use light, sweeping passes — never hold still. For bowl gouges, rotate the flute as you swing the wings. Keep passes short (2–3 sec max).

4

Check Your Progress

Use a Sharpie on the bevel — grind until the marker is removed evenly across the full width. This confirms you're grinding the whole bevel.

5

Hone the Edge

Use a diamond card or leather strop to remove the wire burr and refine the edge. A few light strokes are all that's needed after grinding.

COMMON MISTAKES TO AVOID

✗ Burning the Steel

Fix: Use lighter pressure and shorter passes. Quench in water between passes. Switch to a slow-speed grinder or CBN wheel.

✗ Changing the Bevel Angle

Fix: Grinding at different angles over time creates a multi-faceted bevel. Use a jig or set your rest consistently every session.

✗ Only Sharpening When Dull

Fix: Sharpen little and often. Touch up at the grinder every 20–30 minutes of turning to remove the minimum steel and maintain geometry.

✗ Grinding Too Aggressively

Fix: You only need to remove the wire burr and refresh the edge. Heavy grinding wastes steel and changes the tool profile over time.

HONING & STROPPING

After grinding, honing removes the wire burr and polishes the edge to razor sharpness. A well-stropped gouge produces a mirror-like finish straight off the tool.

Diamond Honing Card

400–600 grit

- Lay flat on bevel surface
- 2–3 light strokes per side
- Use to remove burr on flute interior
- Works on all gouge types

Leather Strop

with honing compound

- Apply green or white compound to strop
- Draw bevel across strop (away from edge)
- Strop flute interior with wrapped leather
- Finish with 5–6 clean strokes on bare leather

Slip Stones

Arkansas / ceramic

- Use shaped slip for the flute inside curve
- Light strokes from heel to tip
- Follow with leather strop to polish
- Best for removing persistent burrs

KEY TAKEAWAYS

Sharpen often, sharpen correctly — your tools (and your turnings) will thank you.

01 Sharp tools are safer, produce better surfaces, and are less fatiguing to use.

02 Match your bevel angle to the gouge type — roughing, spindle, and bowl gouges each need different geometry.

03 A slow-speed grinder with a CBN wheel is the best long-term investment for your sharpening station.

04 Use jigs (like the Wolverine system) for consistent repeatable results, especially for swept-back bowl gouge grinds.

05 Sharpen frequently with light passes — don't wait until the edge is completely dull.

06 Always finish with a strop or honing card to remove the wire burr and maximize sharpness.