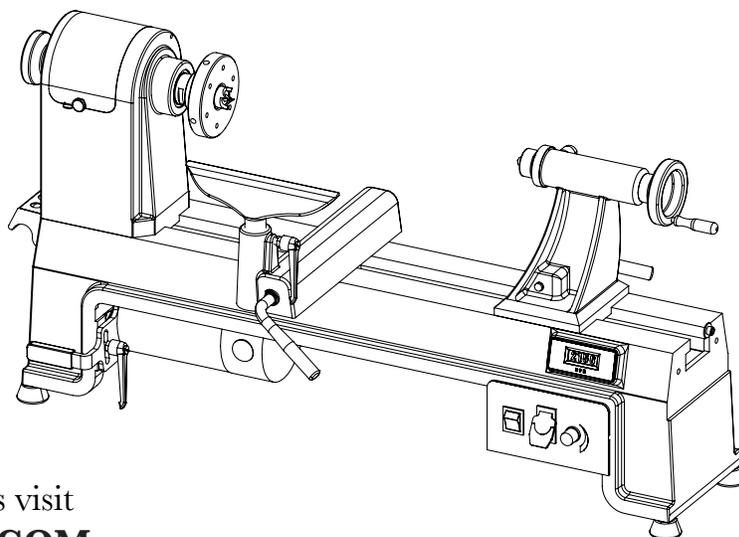




14" x 20" VARIABLE SPEED WOOD LATHE

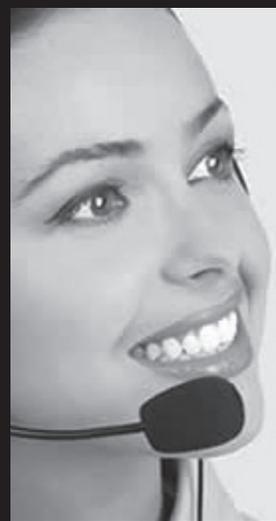


For replacement parts visit
WENPRODUCTS.COM

Model # 34034
bit.ly/wenvideo

IMPORTANT:

Your new tool has been engineered and manufactured to WEN's highest standards for dependability, ease of operation, and operator safety. When properly cared for, this product will supply you years of rugged, trouble-free performance. Pay close attention to the rules for safe operation, warnings, and cautions. If you use your tool properly and for its intended purpose, you will enjoy years of safe, reliable service.



NEED HELP? CONTACT US!

Have product questions? Need technical support?
Please feel free to contact us at:

 **800-232-1195** (M-F 8AM-5PM CST)

 techsupport@wenproducts.com

 **WENPRODUCTS.COM**

NOTICE: Please refer to wenproducts.com for the most up-to-date instruction manual.

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PRODUCT SPECIFICATIONS

Model Number:	34034
Motor:	120V, 60 Hz, 6A
Swing Over Bed:	14 in. (355 mm)
Distance Between Centers:	20 in. (510 mm)
Center Height:	7 in. (178 mm)
Spindle Speeds:	250-720, 600-1700, 1200-3550 RPM
Spindle Taper:	MT2
Spindle Thread:	1 in. x 8 TPI
Tailstock Taper:	MT2
Quill Travel:	2-3/4 in.
Tool Rest Length:	8 in.
Face Plate Diameter:	4 in. (102 mm)
Product Dimensions:	38 x 11.8 x 22.6 in.
Product Net Weight:	125.7 lbs

SAFETY INTRODUCTION

Thanks for purchasing the WEN Lathe. We know you are excited to put your tool to work, but first, please take a moment to read through the manual. This manual provides information regarding potential safety concerns, as well as helpful assembly and operating instructions. Safe operation of this tool requires that you read and understand this operator's manual and all labels affixed to the tool.



SAFETY ALERT SYMBOL: Indicates danger, warning, or caution. The safety symbols and the explanations with them deserve your careful attention and understanding. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury. However, please note that these instructions and warnings are not substitutes for proper accident prevention measures.

NOTE: The following safety information is not meant to cover all possible conditions and situations that may occur. WEN reserves the right to change this product and specifications at any time without prior notice.

Keep this manual available to all users during the entire life of the tool and review it frequently to maximize safety for both yourself and others.

GENERAL SAFETY RULES



WARNING! Read all safety warnings and instructions. Failure to follow all instructions may result in electric shock, fire and serious injury. The term “power tool” in the warnings refers to your mains-operated (corded) power tool. Save all warnings and instructions for future reference.

WORK AREA SAFETY

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
2. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
3. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
4. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
5. When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
6. If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

1. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
2. Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
4. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool

GENERAL SAFETY RULES

6. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
7. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

POWER TOOL USE AND CARE

1. Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
2. Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
5. Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
6. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

SERVICE

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

CALIFORNIA PROPOSITION 65 WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area with approved safety equipment such as dust masks specially designed to filter out microscopic particles.

SPECIFIC RULES FOR WOOD LATHES

1. This lathe is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a lathe, do not use it until proper training and knowledge have been acquired.
2. Always wear ANSI Z87.1-approved eye protection and a face shield/dust mask when using the lathe.
3. **DO NOT** wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in the spinning tool.
4. Select the right tool for your task at hand. Make sure all tools, chisels and accessories are sharp before using them. Do not use dull or damaged tools.
5. Select the appropriate speed for the task. Use slower speeds when starting on a workpiece. Allow the lathe to ramp up to the operating speed before engaging carving tools.
6. Check the workpiece carefully for splits, knots, nails, or other obstructions. These types of blemishes may cause a safety hazards during turning.
7. If gluing up a workpiece for turning, always use a high quality glue that meets the needs of the particular workpiece to prevent the workpiece from falling off during operation.
8. Rough cut the workpiece as close as possible to the finished shape before mounting it on the lathe.
9. Securely fasten the workpiece to the faceplate prior to faceplate turning. Use the appropriate size faceplate to properly support the workpiece. Do not let the screw fasteners interfere with the turning tool at the finished dimension of the workpiece.
10. When turning between centers, make sure the headstock and tailstock are tight and snug against the workpiece.
11. Never drive the workpiece into the spur center while the spur center is in the headstock. Set the drive center into the work piece with a soft mallet prior to installing it on the headstock.
12. Rotate the workpiece by hand to check clearance with the tool rest before turning the machine on.
13. Make sure the spindle lock is **DISENGAGED** before starting the lathe. Never start the lathe with the spindle lock in the locked position.
13. Never apply coolants, water, or other liquids to a spinning workpiece.
14. Never stop a rotating workpiece with your hand.
15. Turn off the machine before changing the spindle rotationg direction.
15. Turn off and unplug the machine before doing any cleaning or maintenance. Use a brush or compressed air to remove chips or debris. Never use your hands to remove excess material and debris.

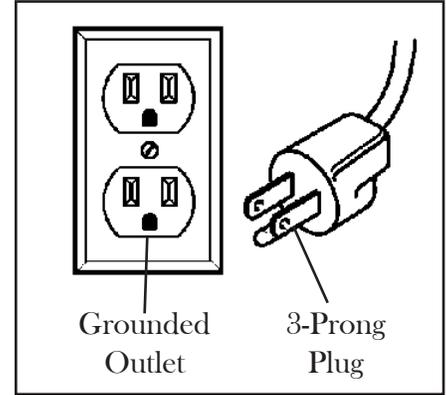
ELECTRICAL INFORMATION

GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides the path of least resistance for an electric current and reduces the risk of electric shock.

This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching outlet that is properly installed and grounded in accordance with **ALL** local codes and ordinances (Fig. A).

DO NOT MODIFY THE PLUG PROVIDED. If it will not fit the outlet, have the proper outlet installed by a licensed electrician.



IMPROPER CONNECTION of the equipment grounding conductor can result in electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.

IN ALL CASES, make certain the outlet in question is properly grounded. If you are not sure, have a licensed electrician check the outlet.

GUIDELINES FOR USING EXTENSION CORDS

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to be used according to cord length and nameplate ampere rating. When in doubt, use a heavier cord. The smaller the gauge number, the heavier the cord.

AMPERAGE	REQUIRED GAUGE FOR EXTENSION CORDS			
	25 ft.	50 ft.	100 ft.	150 ft.
6A	18 gauge	16 gauge	14 gauge	12 gauge

Make sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp/wet areas.

USE ONLY THREE-WIRE EXTENSION CORDS that have three-pronged plugs and outlets that accept the tool's plug as shown in Fig. A. Repair or replace a damaged or worn cord immediately.

Use a separate electrical circuit for your tools. This circuit must not be less than a #12 wire and should be protected with a 15 A time-delayed fuse. Before connecting the motor to the power line, make sure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.

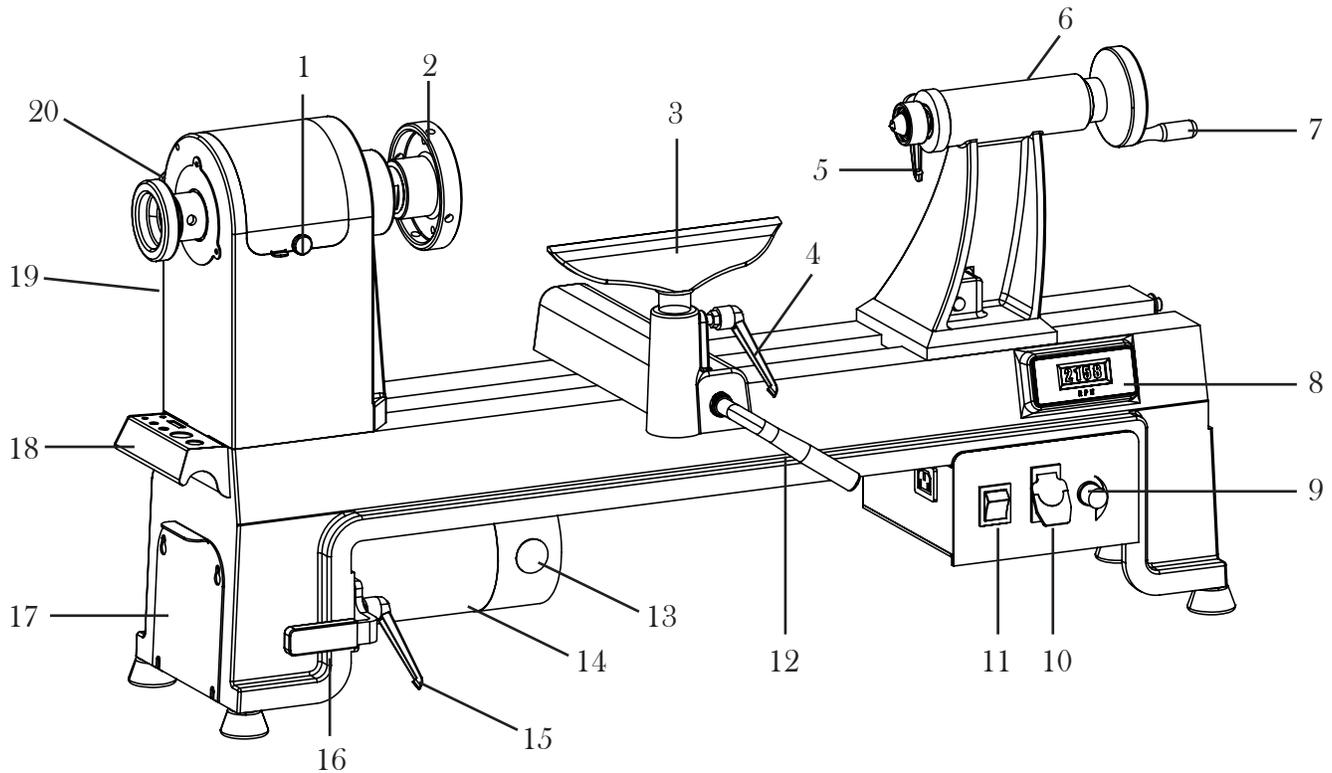


WARNING: This tool is for indoor use only. Do not expose to rain or use in damp locations.

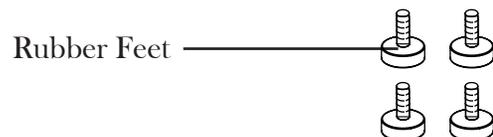
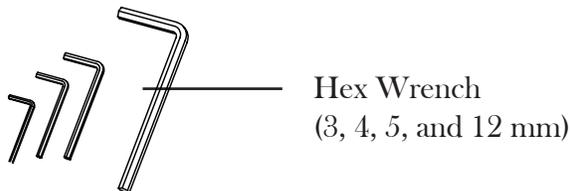
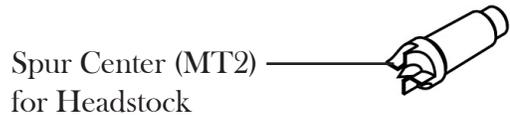
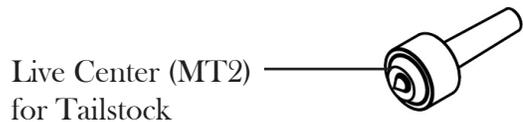
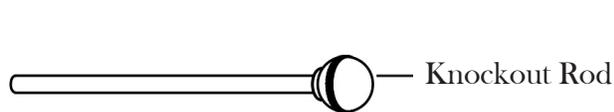
These safety instructions can't possibly warn of every scenario that may arise with this tool, so always make sure to stay alert and use common sense during operation.

KNOW YOUR WOOD LATHE

Carefully remove the tool and all contents from the packaging. Check all components and compare against the diagram below. If any part is damaged or missing, please contact our customer service at (800) 232-1195, M-F 8-5 CST or email us at techsupport@wenproducts.com.



- | | |
|-------------------------------------|---|
| 1. Belt Drive Access Panel Knob | 11. Forward/Reverse Switch |
| 2. Face Plate | 12. Tool Rest Locking Lever |
| 3. Tool Rest | 13. Carbon Brush Cap (one on each side) |
| 4. Tool Rest Locking Handle | 14. Motor |
| 5. Quill Locking Handle | 15. Motor Plate Locking Handle |
| 6. Tailstock | 16. Motor Plate Tensioning Handle |
| 7. Tailstock Handle | 17. Lower Belt Drive Plate |
| 8. Digital RPM Readout | 18. Accessory Holder |
| 9. Speed Adjustment Knob | 19. Headstock |
| 10. ON/OFF Switch (with Safety Key) | 20. Spindle Lock (Backside) |



ASSEMBLY & ADJUSTMENTS



WARNING: To prevent injury from accidental operation, make sure the tool is switched OFF and unplugged from the power source before assembling or making any adjustments.

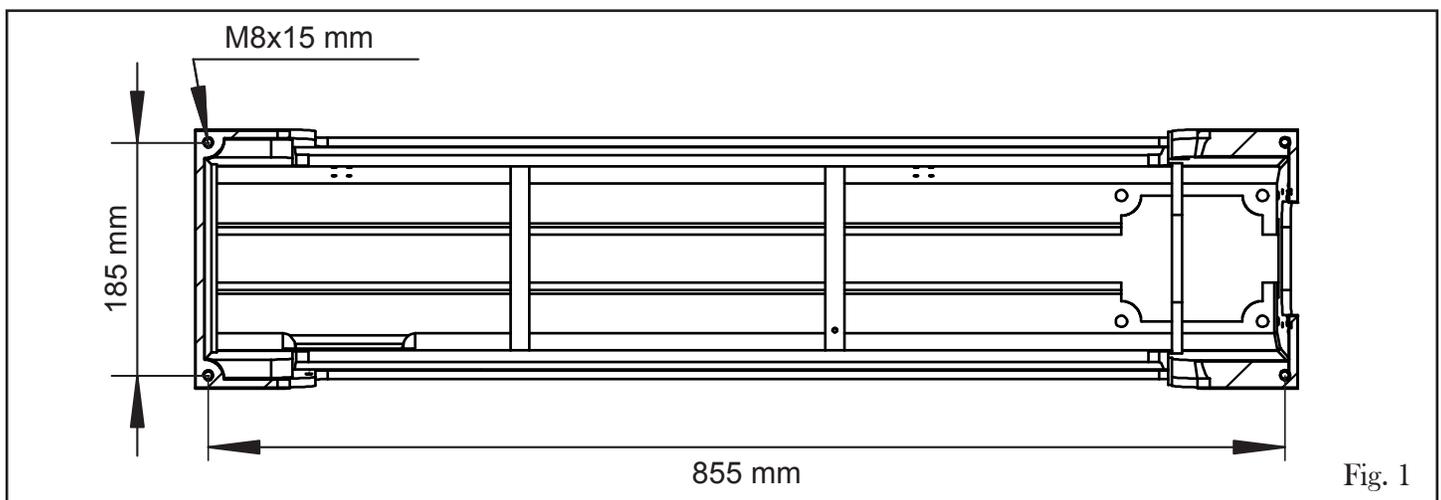
CLEANING THE MACHINE

Your tool comes protected with a layer of anti-rust coating. Wipe off the coating using an acetone-moistened cloth. **DO NOT** use cellulose-based solvents such as paint thinner or lacquer thinner, as these will damage the painted surfaces. Then, apply a light coat of good-quality paste wax onto surfaces to protect from rust and corrosion.

MOUNTING THE LATHE TO A BENCHTOP

For safe operation, securely mount the lathe onto a secure workbench to prevent movement during operation (mounting hardware is not included). Refer to the graph below (Fig. 1) for your lathe's base dimensions.

NOTE: If the machine is not being mounted onto a benchtop, install the 4 rubber feet into the mounting holes.



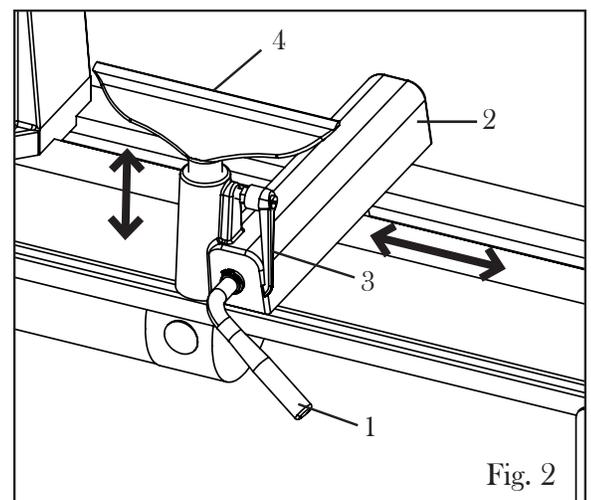
TOOL REST ADJUSTMENTS (FIG. 2)

You can adjust the position, height and angle of the tool rest assembly to suit your task at hand.

1. The tool rest locking lever (Fig. 2 - 1) locks the tool rest body (Fig. 2 - 2) in position. Loosen the lever to slide the tool rest body along the lathe bed. Tighten the lever firmly when the tool rest body is properly positioned.

NOTE: There is a nut on the underside of tool rest body that needs to be tightened periodically to enable the tool rest body locking lever to tighten properly.

2. The small tool rest locking handle (Fig. 2 - 3) locks the tool rest (Fig. 2 - 4) in place. Loosen the handle to position the tool rest at the specific angle or height. Tighten the handle firmly when the tool rest is properly positioned.



NOTE: Adjust the height of the tool rest to just below the center of the workpiece, so that the tool will cut at the center of the workpiece (see page 14).

ASSEMBLY & ADJUSTMENTS

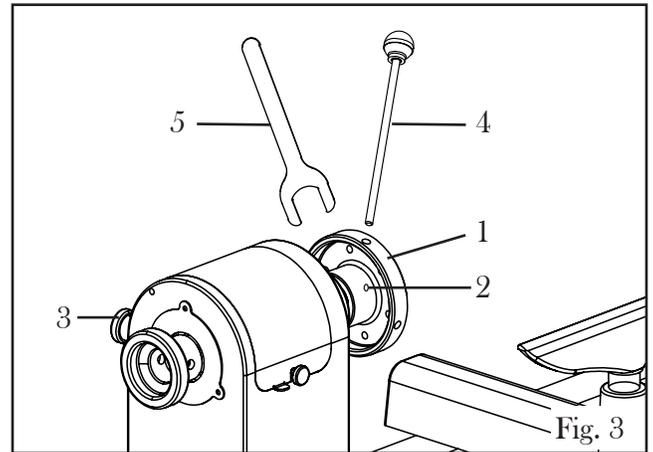
SETTING UP THE FACE PLATE (Fig. 3 & 4)

NOTE: When installing the face plate for turning bowls and plates, mount the workpiece onto the face plate prior to installing the face plate on the headstock (see page 18).

To install the face plate:

1. Thread the face plate (Fig. 3 - 1) onto the headstock spindle by turning it clockwise as far as it will go, and then tighten the two set screws with a hex wrench (Fig. 3 - 2).

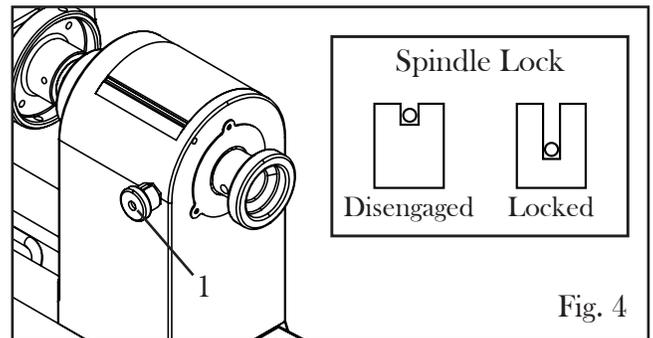
2. Lock the spindle lock (Fig. 3 - 3) by engaging the knob in the deep groove (Fig. 4). Insert the knockout rod (Fig. 3 - 4) into a hole on the side of the face plate and use the wrench (Fig. 3 - 5) to fully tighten the face plate.



To remove the face plate:

1. Loosen the two face plate set screws (Fig. 3 - 2).

2. Lock the spindle lock (Fig. 3 - 3) and insert the knock out rod (Fig. 3 - 4) into the face plate side hole. Use the wrench (Fig. 3 - 5) to unscrew the face plate by turning it towards the operator.



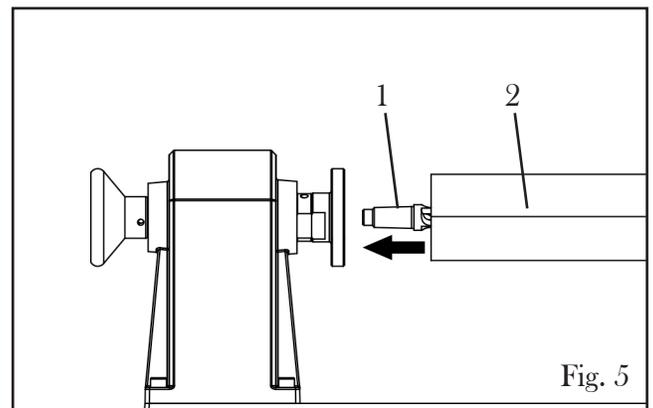
SETTING UP THE HEADSTOCK SPUR CENTER (Fig. 5 & 6)

Install the headstock spur center to turn workpiece between centers.

To install the spur center:

1. Make sure the mating surfaces of both the spur center and the headstock spindle are clean. You can use an acetone-moistened cloth to remove any other debris, oil, etc.

2. Drive the spur center (Fig. 5 - 1) into the workpiece (Fig. 5 - 2) using a rubber mallet or a piece of scrap wood (see page 14 for detailed instructions).



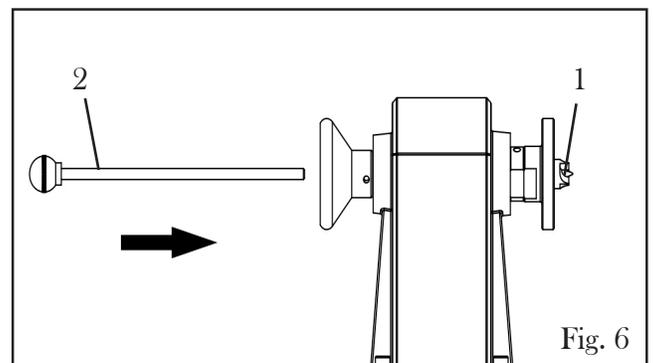
CAUTION: Never drive the workpiece into the spur center while the spur center is in the headstock.

3. Push the spur center through the face plate into the headstock spindle.

To remove the spur center:

1. Hold the spur center (Fig. 6 - 1) to prevent it from falling. Use a rag to protect your hand from the sharp edges.

2. Insert the knockout rod (Fig. 6 - 2) through the spindle hole to tap out the spur center.

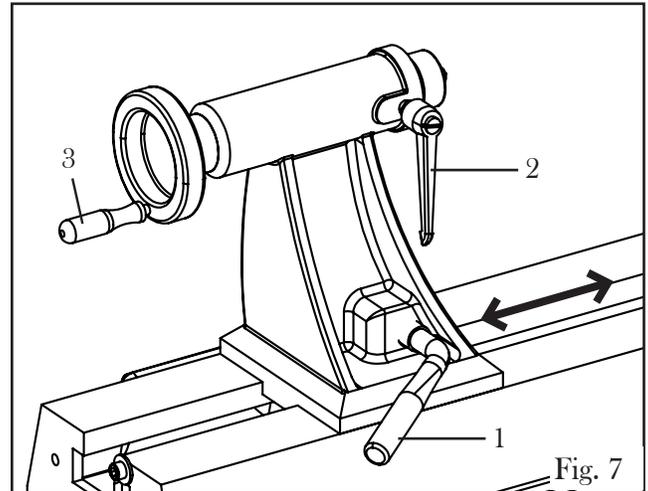


ASSEMBLY & ADJUSTMENTS

TAILSTOCK ADJUSTMENTS (Fig. 7)

Loosen the tailstock locking lever (Fig. 7 - 1) and slide the tailstock along the lathe bed into the desired position. Retighten the locking lever.

Loosen the quill locking handle (Fig. 7 - 2) just enough to unlock the tailstock quill. Turn the handwheel (Fig. 7 - 3) clockwise to advance the quill and counterclockwise to retract the quill. Retighten the quill locking handle.



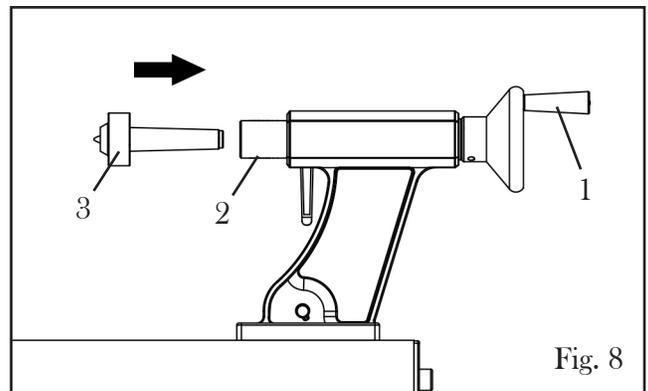
SETTING UP THE TAILSTOCK LIVE CENTER (Fig. 8 & 9)

To install the live center:

1. Rotate the tailstock handwheel (Fig. 8 - 1) clockwise a few times to advance the quill (Fig. 8 - 2) forward.

2. Make sure the mating surfaces are clean. Push the live center (Fig. 8 - 3) into the quill.

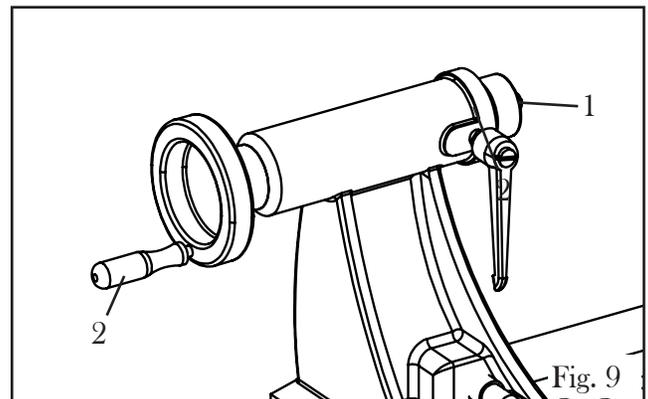
NOTE: If the tailstock quill gets fully retracted when the live center is mounted, it will dismount the live center. This is normal. Remount the live center by extending the tailstock quill approximately 0.5 inch and pushing the live center in place.



To remove the live center:

1. Hold the live center (Fig. 9 - 1) to prevent it from falling. Use a rag to protect your hand from the sharp edges.

2. Rotate the handwheel (Fig. 9 - 2) counterclockwise to retract the quill until the live center is released from the quill.

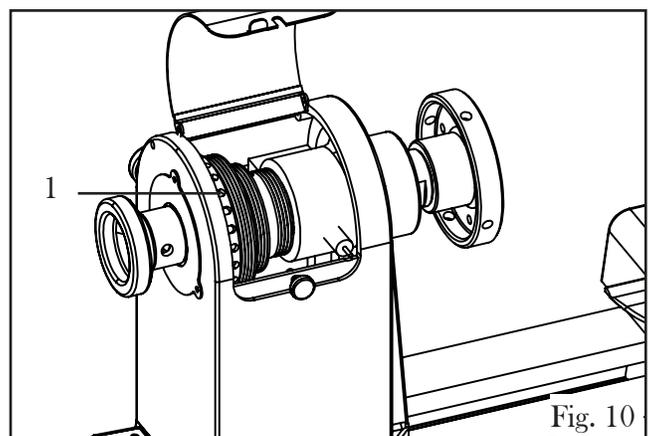


INDEXING/SPINDLE LOCK (Fig. 4 & 10)

Indexing is used to create evenly spaced features around the circumference of the workpiece while keeping the spindle locked. There are 24 index positions (Fig. 10 - 1) in the spindle pulley, each 15° apart, to help you rotate the workpiece evenly for accurately spaced features.

Place the spindle lock in the locked position (Fig. 4) to help maintain the certain index point.

CAUTION: Make sure to **DISENGAGE** the spindle lock before starting the lathe again. Never start the lathe with the index pin engaged in the spindle pulley.



ASSEMBLY & ADJUSTMENTS

ADJUSTING THE SPEED (Fig. 11 - 14)

Your variable speed lathe has three speed ranges: Low 250-720 RPM, Medium 600-1700 RPM, and High 1200-3550 RPM. Always start at slower speeds for rough cuts and larger workpieces. Use faster speeds for refined cuts and detailed work.

Set the suitable speed range for your operation by adjusting the belt position. Change the speed within a speed range using the speed adjustment knob. The speed will be displayed on the digital RPM readout (Fig. 15 - 1) on the front panel.

1. When changing speed ranges, always make sure to turn off and disconnect the lathe to prevent accidental injuries.
2. Loosen the belt access panel knob (Fig. 11 - 1) on the top front of the headstock and open the belt drive access panel.
3. Loosen (but do not remove) the four screws holding the lower belt drive plate (Fig. 12 - 1) onto the left side of the headstock. Lift and remove the lower belt drive plate.
4. Loosen the motor tensioning locking handle (Fig. 13 - 1).

NOTE: The screw at the center of the locking handle can be loosened to rotate the locking handle to an optimal position.

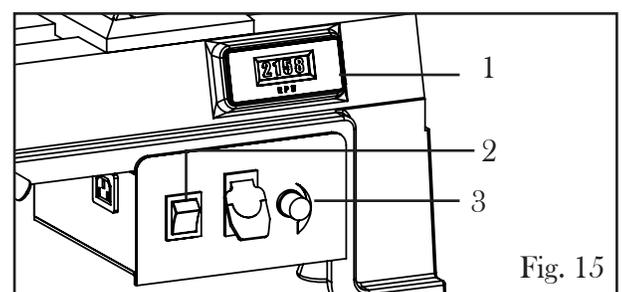
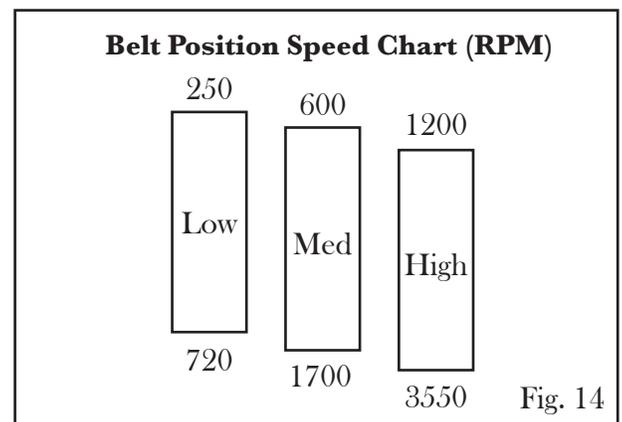
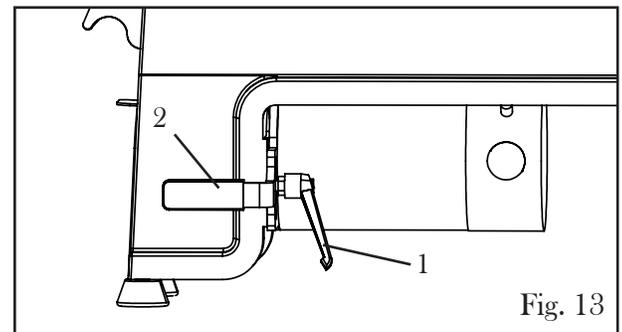
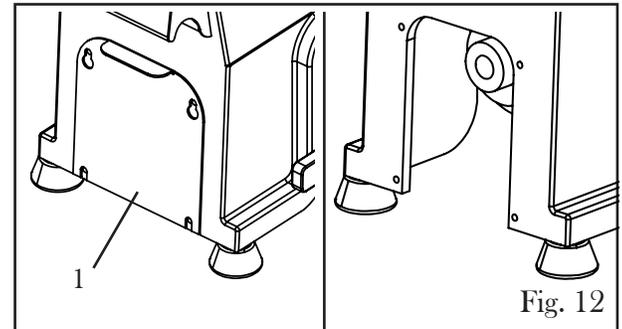
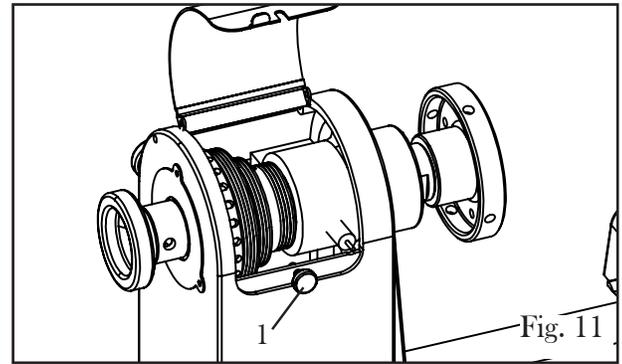
5. Pull upwards on the tensioning handle (Fig. 13 - 2) to relieve tension on the belt. It may help to wedge a piece of wood or other support under the tensioning handle to keep it in place while you adjust the belt position.

6. Adjust the belt's position on both the upper and lower drive pulleys to the desired speed range setting according to Fig. 14. Make sure the belt is vertically aligned on the upper and lower pulleys.

7. Lower the tensioning handle (Fig. 13 - 2) back to its original position, allowing the weight of the motor to place the belt under tension. Tighten the locking handle (Fig. 13 - 1).

8. Replace the lower belt drive plate (Fig. 12 - 1) and tighten the screws. Lower the upper belt drive access panel (Fig. 11) and tighten the belt drive access panel knob.

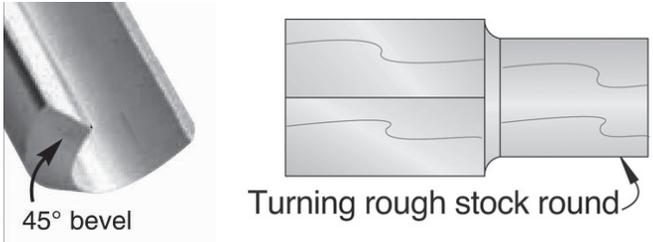
9. Use the speed adjustment knob (Fig. 15 - 3) on the front panel to set the speed within your selected speed range. Use the forward/reverse switch (Fig. 15 - 2) to set the rotational direction. **DO NOT** change the direction when the tool is running.



OPERATION

TURNING TOOLS

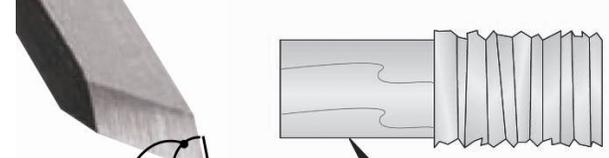
If possible, select only quality high-speed steel turning tools. High-speed steel tools hold an edge and last longer than ordinary carbon steel. As one becomes proficient in turning, a variety of specialty tools for specific applications can be acquired. The following tools provide the basics for most woodturning projects.



45° bevel

Turning rough stock round

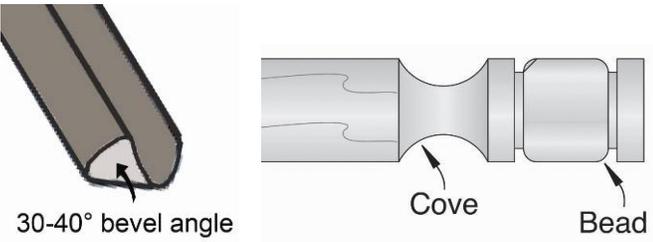
1. Roughing gouge - use this tool to shape square or out-of-round spindle-turning stock into a cylinder. This can also be used for creating shallow coves.



Skew angle is approximately 70°.

Planing and smoothing

2. Skew chisel - the skew evens out high and low spots to shape the cylinders. Vary the angle at which the tip meets the workpiece to change the aggressiveness of the cut. This can also be used for cutting beads and V-grooves.

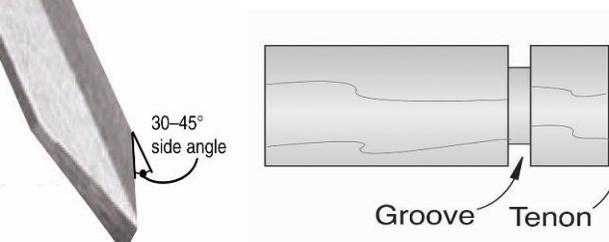


30-40° bevel angle

Cove

Bead

3. Spindle gouge - the spindle gouge cuts coves, beads and free-form contours. It can also be used for producing shallow hollows on faceplate turnings.

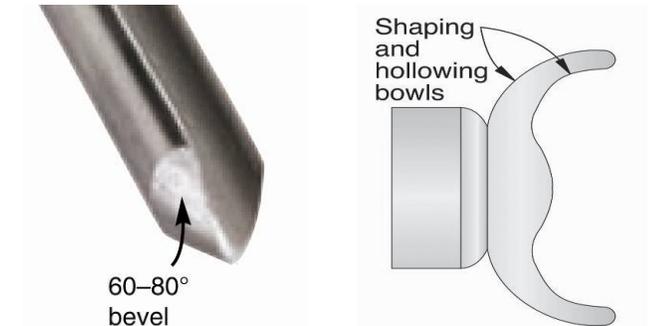


30-45° side angle

Groove

Tenon

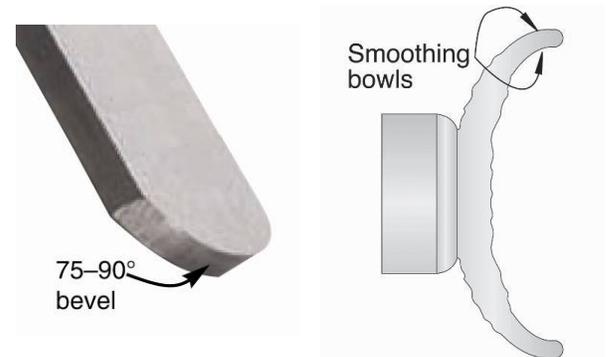
4. Parting tool - use the parting tool to form grooves and tenons and to remove stock. It can also be used for rolling small beads.



60-80° bevel

Shaping and hollowing bowls

5. Bowl gouge - the bowl gouge cuts external and internal profiles on faceplate-mounted stock, such as bowls and platters. It can also be used for creating ultra smooth cuts on bowls and spindles by using it as a shearing scraper.



75-90° bevel

Smoothing bowls

6. Round nose scraper - use this scraper for non-aggressive shaping of spindles and bowls and to smooth out surfaces without removing too much stock.



WARNING: Select the right tool for your task at hand. Make sure all tools, chisels and accessories are sharp before using them. DO NOT use dull or damaged tools.

OPERATION - SPINDLE TURNING



WARNING: To prevent serious injury, make sure all the warnings and instructions have been read and understood before operating this tool.

MOUNTING THE WORKPIECE BETWEEN SPINDLES (Fig. 16 & 17)

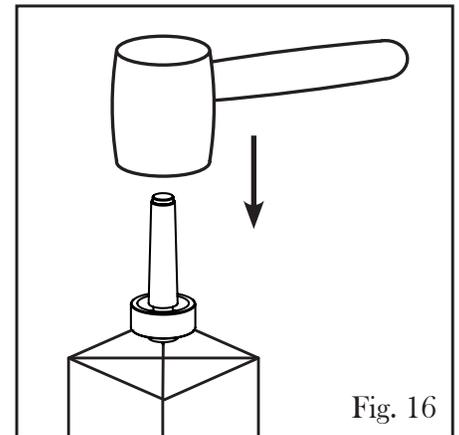
Spindle turning takes place between the centers of the lathe, with the workpiece being held between the spur center in the headstock and the live center in the tailstock. The wood stock for spindle turning should be straight grained and free of cracks, knots, nails and other defects. Prepare the stock so that the end faces are approximately square shaped and vertical to the sides.

1. Using a combination square, locate and mark the center on both ends of the workpiece. Accuracy is not critical if you're turning full rounds, but it is extremely important if square sections are to remain on the workpiece.

2. Put a dimple in the stock with a punch awl or nail (or use a spring-loaded automatic center punch).

NOTE: For extremely hard woods, you may need to cut kerfs into the ends of the stock using a band saw for it to be mounted onto the spur center and the live center.

3. Drive the spur center about .1 inches (3 mm) into the workpiece using a wood mallet or dead blow hammer (Fig. 16). Be careful not to split the workpiece. Do not use a steel face hammer and **NEVER** drive the workpiece onto the spur center while it is mounted on the spindle of the lathe.



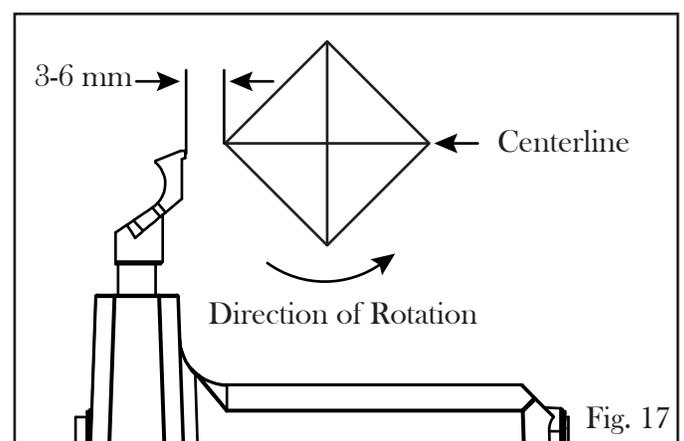
4. Clean the tapered end of the spur center and the inside of the headstock spindle. Insert the tapered end of the spur center (with the attached workpiece) into the headstock spindle.

5. Support the workpiece while loosening the tailstock locking lever and bringing the tailstock into position. Tighten the tailstock locking lever to lock the tailstock to the bed.

6. Advance the tailstock quill with the hand wheel in order to seat the live center into the workpiece. Use enough pressure to secure the workpiece between the centers so that it won't fly off, but do not use excessive pressure. Excessive pressure runs the risk of overheating the center bearings and damaging both the workpiece and the lathe. Tighten the quill locking handle.

7. Adjust the position of the tool rest to be parallel to the workpiece. The tool rest height should be just below the centerline and approximately .1 to .2 inches (3 mm to 6 mm) from the corners of the workpiece to be turned. Secure the tool rest by tightening the tool rest locking handle and locking lever (Fig. 17).

8. Before switching ON the lathe, rotate the workpiece by hand to check for proper seating and clearance.



OPERATION - SPINDLE TURNING

The following operation instructions serves as a beginning point for some common lathe operations. Practice on scrap material to become familiarized with the operation process and make the necessary adjustments before working on your workpiece.

ROUGHING OUT CUT

Roughing out is the first step of the lathe operation, which uses the large roughing gouge tool to smooth out sharp corners to make the workpiece cylindrical. When roughing out a workpiece, run the lathe at low speed and always cut downhill, from the large diameter side of the workpiece to the small diameter side.

1. Make sure the lathe turned off and disconnected. The first cut will start about 2 inches from the tailstock end of the workpiece. Adjust the tool rest to the suitable position and set the lathe to a slow speed.

2. Plug in and turn on the lathe. Wait for the motor to reach full speed. Place the roughing gouge on the tool rest about 2 inches from the tailstock end of the workpiece. Slowly and gently raise the tool handle until the cutting edge comes into contact with the workpiece.

NOTE: Make sure that the tool is being held well on the work, with the bevel or grind tangent to the revolving surface of the workpiece. This position will generate a clean shearing cut. Do not push the tool straight into the work.

3. To make the first pass, rolling the flute of the tool (the hollowed-out portion) towards the end of the tailstock.

4. Make the second pass, starting at about 2 or 3 inches to the left of the first cut. Again, advance the tool towards the tailstock, and merge with the previous cut.

5. As your cuts get close to the headstock live center end of the workpiece, roll the gouge in the opposite direction to carry the final cut off the live center end of the workpiece.

NOTE: Always work towards the end of the workpiece; **NEVER** start a cut at the end.

6. Make long sweeping cuts in a continuous motion to turn the workpiece to a cylinder. Keep as much of the bevel of the tool in contact with the workpiece as possible to ensure control and avoid catches. The roughing cut is continued until the work approaches about 1/8 inch to the required cylinder diameter.

7. Once the workpiece is roughed down to a cylinder, smooth it with a large skew chisel tool. The turning speed can be increased. Keep the skew handle perpendicular to the spindle and use only the center third of the cutting edge for a long smoothing cut (touching one of the points of the skew to the spinning workpiece may cause a catch and ruin the workpiece).

8. See pages 16 and 17 for adding details and finishing the workpiece.

NOTE: Constantly remember to move the tool rest inward towards the workpiece to keep a safe distance between the tool and your workpiece.

OPERATION - SPINDLE TURNING

CREATING BEADS

Making a parting cut for the desired depth and location of your bead.

1. Place the parting tool on the tool rest and move the tool forward to make the full bevel of the tool come into contact with the workpiece. Gently raise the handle to make cuts of the appropriate depth. Repeat for the other side of the bead.
2. Using a small skew or spindle gouge, start in the center between the two cuts and cut down each side to form the bead. Roll the tool in the direction of the cut.

CREATING COVES

Using a spindle gouge to create a cove.

1. With the flute of the tool at 90 degrees to the workpiece, touch the point of the tool to the workpiece and roll in towards the bottom of the cove. Stop at the bottom, as attempting to go up the opposite side may cause the tool to catch.
2. Move the tool over the desired width of the cove. With the flute facing the opposite direction, repeat the step for the other side of the cove. Stop at the bottom of the cut.

CREATING V-GROOVES

Using the point of the skew to create a V-groove in the workpiece.

1. Lightly mark the center of the V with the top of the skew. Move the point of the skew to the right half of the desired width of your cut.
2. With the bevel parallel to the right side of the cut, raise the handle and push the tool in to the desired depth. Repeat from the left side.

NOTE: The two cuts should meet at the bottom and leave a clean V-groove. Additional cuts may be taken to add to either the depth or the width of the cut.

PARTING OFF

Adjust the lathe to a slower speed for parting through a workpiece.

1. Place a parting tool on the tool rest and raise the handle until it starts to cut. Continue cutting towards the center of the workpiece.
2. Loosely hold on to the piece in one hand as it separates from the waste wood.

OPERATION - SPINDLE TURNING

SANDING THE WORKPIECE

Adjust the lathe to a slower speed for sanding and finishing. High speed can build friction while sanding and cause burns in some woods. The cleaner the cuts, the less sanding will be required. So try to make the cuts as refined as you can before moving to the sanding process.

1. Use sandpaper finer than 120 grit, as coarse sandpaper may scratch the workpiece. Fold the sandpaper into a pad will allow easier and safer sanding. Do not wrap the sandpaper around your fingers or the workpiece.
2. Apply light pressure to the workpiece during sanding. Use power-sanding techniques to avoid concentric sanding marks around your finished piece.
3. Progress through finer grits of sandpaper until the desired surface is achieved. Finish sanding with 220 grit sandpaper.

FINISHING THE WORKPIECE

1. Turn off the lathe. The workpiece can be left on the lathe when applying finish.
2. Remove the sanding dust with tack cloth or compressed air.
3. Apply the finish using a brush or paper towel. Let the finish stand for several minutes and remove any excess finish before restarting the lathe.
4. Start the lathe at the lowest speed, as high speed may cause the fresh coat to splash. Allow the finish to dry and sand the workpiece with 320 to 400 grit sandpaper.
5. Apply a second coat of finish and buff the workpiece.

OPERATION - BOWL TURNING

MOUNTING THE WORKPIECE ONTO THE FACE PLATE

When turning bowls or plates with a large diameter, mounting it to the face plate to gives the maximum amount of support. While face plates are the most reliable method for holding a larger block of wood for turning, a lathe chucks can also be used. A chuck is handy when working on more than one piece at a time, allowing your to open the chuck and change workpieces instead of having to remove the mounting screws.

1. Select a stock that is at least .2 inches (5 mm) larger than each dimension of the finished workpiece.
2. Remove any bark from the top of the wood stock (that will be later attached onto a face plate or in a chuck).
3. True one of the surfaces of the workpiece for mounting against the face plate. Using the face plate as a template, mark the location of the mounting holes on the workpiece and drill pilot holes of the appropriate size.

If the mounting screws on the face plate will interfere with the workpiece, a waste block can be used. Shape the waste block so that it is of the same diameter as the face plate. Flatten the mating surfaces of the waste block and the workpiece. Use a high quality glue suitable for the particular workpiece to prevent the workpiece from falling off during operation. Glue the waste block to the workpiece securely. If you plan to use a chuck, turn the waste block into a tenon of the appropriate length and diameter to fit your chuck.

TO SHAPE THE INSIDE OF A BOWL OR PLATE

Turn off the lathe and move the tailstock out of the way. Mount the workpiece onto the face plate and install the face plate on to the headstock (see page 10). Adjust the tool rest in front of the workpiece to be just below the centerline and at the right angle to the lathe's turning axis. Rotate the workpiece by hand to check for proper seating and clearance.

Begin shaping by lightly shearing across the top of the bowl from rim to center. Place a bowl gouge tool on the tool rest at the center of the workpiece with the flute facing the top of the bowl. The tool handle should be level and pointed toward the four o'clock position.

Control the cutting edge of the gouge with the left hand, while swinging the tool handle around towards your body with the right hand. The flute should start out facing the top of the workpiece, rotating it upwards as it moves deeper into the bowl to maintain a clean and even curve. As the tool goes deeper into the bowl, progressively work outwards towards the rim of the bowl. It may be necessary to turn the tool rest into the piece as you get deeper into the bowl.

NOTE: Try to make one light continuous movement from the rim to the bottom of the bowl to ensure a clean, sweeping curve through the piece. Should there be a few small ridges left, a light cut with a large domed scraper can even out the surface.

Develop the preferred wall thickness at the rim and maintain it as you work deeper into the bowl (once the piece is thin toward the bottom, you cannot make it thinner at the rim). When the interior is finished, move the tool rest back to the exterior to re-define the bottom of the bowl. Work the tight area around the face plate or the chuck with a bowl gouge. Begin the separation with a parting tool, but do not cut all the way through.

MAINTENANCE



WARNING: Disconnect the machine from the power source before making any maintenance or adjustments. Failure to do so may result in serious injury.

GENERAL MAINTENANCE

1. Keep your machine clean. Wood contains moisture, meaning that sawdust and wood chips can cause rust if not removed. At the end of each work day, vacuum sawdust and clean the machine with a dry cloth or brush.
2. Periodically check that all nuts and bolts are tight.
3. Routinely check the condition of the power supply cords and replace them if they are broken, worn or if internal wires are showing.
4. If you do not intend to use the machine for a long time, clean it and store it in a dry place.

DRIVE BELT

The drive belt should last for many years depending on usage, but it needs to be inspected regularly for cracks, cuts and general wear. If damage is found, replace the belt before operation.

BEARINGS

All bearings are sealed for life and do not require any maintenance. If a bearing becomes faulty, replace it.

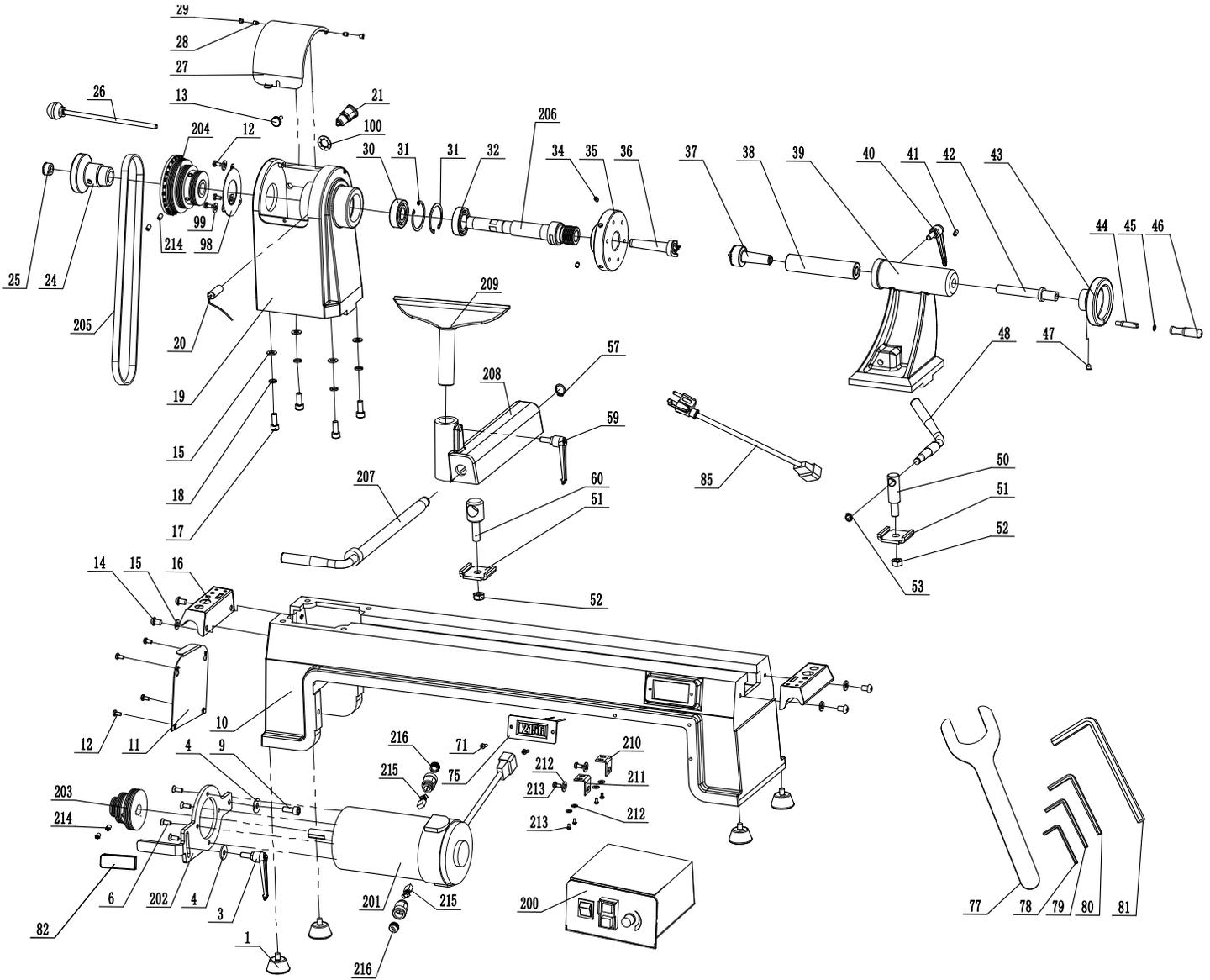
RUST

The lathe is made from steel and cast iron. All non-painted surfaces will rust if not protected. It is recommended that they are protected by applying a light coat of good-quality paste wax to the surfaces to guard against rust and corrosion.

PRODUCT DISPOSAL

Used power tools contain recyclable materials and should not be disposed with household waste. Please take this product to your local recycling facility for responsible disposal and to minimize its environmental impact.

EXPLODED VIEW & PARTS LIST



EXPLODED VIEW & PARTS LIST

No.	Part No.	Description	Qty
1	34034-001	Foot	4
3	34034-003	Belt Tension Lock Lever, M8X20	1
4	34034-004	Washer	2
6	34034-006	Head Cap Screw, M6X16	4
9	34034-009	Cap Screw, M8X16	1
10	34034-010	Bed	1
11	34034-011	Lower Belt Door	1
12	34034-012	Phillip Head Screw, M5X10	7
13	34034-013	Screw, M5X14	1
14	34034-014	Head Screw, M8X12	4
15	34034-015	Washer	8
16	34034-016	Handle With Tool Rack	2
17	34034-017	Cap Screw	4
18	34034-018	Spring Washer	4
19	34034-019	Headstock Body	1
20	34034-020	Spindle Speed Sensor, M8X20	1
21	34034-021	Spindle Lock Assembly	1
24	34034-024	Headstock Handwheel	1
25	34034-025	Locking Nut, M20*1.5X12	1
26	34034-026	Knockout Rod Assembly	1
27	34034-027	Upper Belt Door	1
28	34034-028	Cap Screw, M5X10	2
29	34034-029	Set Screw, M5X6	2
30	34034-030	Bearing, 6204	1
31	34034-031	Ring	2
32	34034-032	Bearing, 6005	1
34	34034-034	Cap Screw, M6X8	2
35	34034-035	Face Plate	1
36	34034-036	Spur Center	1
37	34034-037	Live Center	1
38	34034-038	Quill	1
39	34034-039	Tailstock	1
40	34034-040	Quill Lock Lever	1
41	34034-041	Pin	1
42	34034-042	Leadscrew	1
43	34034-043	Tailstock Wheel	1
44	34034-044	Handwheel Axle	1
45	34034-045	Washer	1

No.	Part No.	Description	Qty
46	34034-046	Handwheel Handle	1
47	34034-047	Set Screw	1
48	34034-048	Tailstock Lock Lever	1
50	34034-050	Tailstock Clamp Bolt	1
51	34034-051	Tailstock Clamp	2
52	34034-052	Lock Nut, M12	2
53	34034-053	C-Ring	1
57	34034-057	C-Ring	2
59	34034-059	Lock Lever	1
60	34034-060	Tool Rest Clamp Bolt	1
71	34034-071	Phillip Head Screw, M4X8	2
75	34034-075	RPM Digital Readout	1
77	34034-077	Wrench	1
78	34034-078	Hex Wrench 3mm	1
79	34034-079	Hex Wrench 4mm	1
80	34034-080	Hex Wrench 5mm	1
81	34034-081	Hex Wrench 12mm	1
82	34034-082	Handle Sleeve	1
85	34034-085	Power Plug	1
98	34034-098	Headstock Cover	1
99	34034-099	Washer	3
100	34034-100	Washer	1
200	34034-200	Electrical Box Assembly	1
201	34034-201	Motor	1
202	34034-202	Motor Plate	1
203	34034-203	Motor Pulley	1
204	34034-204	Spindle Pulley	1
205	34034-205	Belt	1
206	34034-206	Spindle	1
207	34034-207	Tool Rest Base Lock Lever	1
208	34034-208	Tool Rest Base	1
209	34034-209	Tool Rest	1
210	34034-210	Electrical Box Bracket 2	1
211	34034-211	Electrical Box Bracket 1	1
212	34034-212	Washer	6
213	34034-213	Screw, M5X10	6
214	34034-214	Screw, M8X10	4
215	34034-215	Carbon Brush	2
216	34034-216	Carbon Brush Cap	2

TROUBLESHOOTING



WARNING: Stop using the tool immediately if any of the following problems occur. Repairs and replacements should only be performed by authorized personnel. If you have any questions, please contact our customer service at (800) 232-1195, M-F 8-5 CST or email us at techsupport@wenproducts.com.

PROBLEM	CAUSE	SOLUTION
Motor will not start	Power cord damaged or not properly plugged in.	Check the power cord, extension cord, power plug and the power outlet. Do not use the tool if any cord is damaged.
	Defective power switch.	Stop using the tool and contact customer service at (800) 232-1195, M-F 8-5 CST for assistance.
	Defective motor or other internal damage.	Stop using the tool and contact customer service at (800) 232-1195, M-F 8-5 CST for assistance.
	Motor carbon brushes are worn	Have the carbon brushes checked and replaced by an experienced technician.
Motor or spindle stalls	Excessive cut	Reduce the depth of the cut
	Worn, damaged, or improperly adjusted drive belt	Adjust or replace the drive belt (Part No. 34034-205).
	Worn spindle bearing	Replace the spindle bearing.
Excessive vibration.	Workpiece is warped, out of round, has major flaw, or was improperly prepared for turning.	Correct the problem by planing or sawing workpiece, or discard it entirely and restart.
	Worn spindle bearing.	Replace the spindle bearings.
	Worn drive belt.	Replace the drive belt (Part No. 34034-205).
	Lathe is on an uneven surface.	Mount the lathe on a stable, flat surface.
Tools tend to grab or dig in.	Dull tools.	Use sharp tools.
	Tool rest position too low.	Reposition the tool rest height.
	Tool rest position too far from work piece.	Reposition the tool rest closer to the work-piece.
	Improper tool being used.	Use correct tool for operation.
Tailstock moves when locked and pressure is applied.	Lock nut (34034-052) needs adjusting.	Tighten cam lock nut.
	Lathe bed and tailstock mating surfaces are greasy or oily.	Remove the tailstock and clean the surfaces with a cleaner. Apply a light coat of oil to the lathe bed surface.

NOTE: Repairs and replacements should only be performed by an authorized technician. Parts and accessories that wear down over the course of normal use are not covered by the two-year warranty.

LIMITED TWO YEAR WARRANTY

WEN Products is committed to build tools that are dependable for years. Our warranties are consistent with this commitment and our dedication to quality.

LIMITED WARRANTY OF WEN CONSUMER POWER TOOLS PRODUCTS FOR HOME USE

GREAT LAKES TECHNOLOGIES, LLC (“Seller”) warrants to the original purchaser only, that all WEN consumer power tools will be free from defects in material or workmanship for a period of two (2) years from date of purchase. Ninety days for all WEN products, if the tool is used for professional use.

SELLER’S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or misrepaired by persons other than Seller or Authorized Service Center. To make a claim under this Limited Warranty, you must make sure to keep a copy of your proof of purchase that clearly defines the Date of Purchase (month and year) and the Place of Purchase. Place of purchase must be a direct vendor of Great Lakes Technologies, LLC. Third party vendors such as garage sales, pawn shops, resale shops, or any other secondhand merchant void the warranty included with this product. Contact techsupport@wenproducts.com or 1-800-232-1195 to make arrangements for repairs and transportation.

When returning a product for warranty service, the shipping charges must be prepaid by the purchaser. The product must be shipped in its original container (or an equivalent), properly packed to withstand the hazards of shipment. The product must be fully insured with a copy of the warranty card and/or the proof of purchase enclosed. There must also be a description of the problem in order to help our repairs department diagnose and fix the issue. Repairs will be made and the product will be returned and shipped back to the purchaser at no charge.

THIS LIMITED WARRANTY DOES NOT APPLY TO ACCESSORY ITEMS THAT WEAR OUT FROM REGULAR USAGE OVER TIME INCLUDING BELTS, BRUSHES, BLADES, ETC.

ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO ONE (1) YEAR FROM DATE OF PURCHASE. SOME STATES IN THE U.S., SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE IN THE U.S., PROVINCE TO PROVINCE IN CANADA AND FROM COUNTRY TO COUNTRY.

THIS LIMITED WARRANTY APPLIES ONLY TO PORTABLE ELECTRIC TOOLS, BENCH POWER TOOLS, OUTDOOR POWER EQUIPMENT AND PNEUMATIC TOOLS SOLD WITHIN THE UNITED STATES OF AMERICA, CANADA AND THE COMMONWEALTH OF PUERTO RICO. FOR WARRANTY COVERAGE WITHIN OTHER COUNTRIES, CONTACT THE WEN CUSTOMER SUPPORT LINE.

**THANKS FOR
REMEMBERING**

