RYOBI®

WL-140

400W WOOD LATHE

RYOBI POWER EQUIPMENT

WARRANTY

Subject to the warranty conditions below, this RYOBI tool, (hereinafter called "the product"), is warranted by Ryobi (hereinafter called "the Company") to be free from defects in material or workmanship for a period of 24 months from the date of original purchase covering both parts and labour. Under the terms of this warranty, the repair or replacement of any part shall be the opinion of the Company or its authorised agent. Should service become necessary during the warranty period, the owner should contact the authorised Ryobi Retailer from whom the product was purchased, or the nearest Company branch office. In order to obtain warranty service, the owner must include the Sales Docket and Warranty Certificate to confirm date of purchase. This Product is sold by the dealer or agent as principal and the dealer has no authority from the Company to give any additional warranty or guarantee on the Company's behalf except as herein contained or herein referred to.

Warranty Conditions

This warranty only applies provided that the Product has been used in accordance with the manufacturer's recommendations under normal use and reasonable care (in the opinion of the Company) and such warranty does not cover consumable components, damage, malfunction or failure resulting from misuse, neglect, abuse, or used for a purpose for which it was not designed or is not suited and no repairs, alterations or modifications have been attempted by other than an Authorised Service Agent. This guarantee will not apply if the tool is damaged by accident or if repairs arise from normal wear and tear.

Accessories such as bits, blades, sanding discs, cutting lines, etc. are excluded from this guarantee. Normal consumable parts, such as carbon brushes, bearings, chucks, cord assembly's, spark plugs, recoil pulleys and bump head assembly's are specifically excluded from this guarantee.

The Company accepts no additional liability pursuant to this warranty for the costs of traveling or transportation of the Product or parts to and from the service dealer or agent - which costs are not included in this warranty. Nothing herein shall have the effect of excluding, restricting or modifying any condition, warranty, right or liability imposed, to the extent only that such exclusion, restriction or modification would render any term herein void.

RYOBI®

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THIS WARRANTY FORM
SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES.

For your record and to assist in establishing date of purchase (necessary for in-warranty service), please keep your purchase docket and this form, completed with the following particulars.

PURCHASED FROM :...

ADDRESS OF DEALER :..

DATE:...........................MODEL NO.:...............................SERIAL NO.: ....

Present this form with your Purchase Docket when Warranty Service is required.

RYOBI®

OWNER'S OPERATING MANUAL

WOOD LATHE

MODEL WL-140

SPECIFICATIONS

Maximum turning length..1000mm
Maximum swing over bed..350mm
Motor power...400W S_2 20min
Voltage/Frequency...230V~50Hz
Nett weight...30kg
Number of change speed...4
Rotational frequency...........................810, 1180, 1700, 2480

THANK YOUR FOR BUYING A RYOBI WOOD LATHE

Your new wood lathe has been engineered and manufactured to Ryobi's high standard of dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble free performance. If you use your wood lathe properly and only for what it is intended, you will enjoy years of safe, reliable service.

CAUTION: Carefully read through this entire owner's manual, payiing close attention to the general safety rules and rules for safe operation, before using.

KEEP THIS MANUAL FOR FUTURE REFERENCE

GENERAL SAFETY RULES

The purpose of safety rules is to attract your attention to possible dangers. The safety symbols and the explanations with them, require your careful attention and understanding.
The safety warnings by themselves do not eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.

SAFETY ALERT SYMBOL
Indicates caution or warning.
May be used in conjunction with other symbols or pictures.

Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.
Do not attempt to operate this tool until you have read thoroughly and completely understood the safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock or serious personal injury. Save this Owners Operating Manual and review it frequently for continual safe operation and for instructing others who may use this tool.

The operation of any tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eye glasses or standard safety glasses with side shields.

Due to Ryobi's continued product refinement policy, product features and specifications can and will change without notice. Check current features and specifications with your Ryobi retailer.

RULES FOR SAFE OPERATION

1. **KNOW YOUR POWER TOOL.** Read this Owners Operating Manual carefully. Learn its applications and limitations as well as the specific potential hazards related to this tool.
2. **CHECK THE POWER SOURCE VOLTAGE.** Before connecting a tool to a power source (power point receptacle, outlet, etc.) be sure that the voltage supply is the same as that specified on the nameplate of the tool. A power source with a voltage greater than that specified for the tool can result in serious injury to the user, as well as damage to the tool. If in doubt, do not plug in the tool. Using a power source with a voltage less than the nameplate rating is harmful to the motor.
3. **GUARD AGAINST ELECTRICAL SHOCK.** Prevent body contact with grounded surfaces and objects such as water pipes, radiators, cookers and refrigerator enclosures.
4. **KEEP WORK AREA CLEAN.** Cluttered work areas and benches invite accidents and injury.
5. **AVOID DANGEROUS WORK ENVIRONMENTS.** Do not use power tools in damp or wet locations or expose power tools to rain. Do not use power tools in the presence of flammable liquids or grease as normal sparking of the motor could ignite fumes. Keep work areas well lit.
6. **KEEP CHILDREN AND VISITORS AWAY.** Visitors and children should wear safety glasses and be kept a safe distance from the work area. Do not let others make contact with the tool or extension cord.
7. **AVOID UNINTENTIONAL STARTING.**Always check that the switch is in the OFF position before plugging in the tool to the power supply. Do not carry a plugged in tool with your finger on the switch.
8. **STORE TOOLS SAFELY.** When not in use, tools should be stored in a dry, high and locked-up place, out of reach of children.
9. **DISCONNECT IDLE TOOLS.** Switch off the power and disconnect the plug from the power supply before servicing, when changing accessories and when the tool is not in use.
10. **DO NOT FORCE THE TOOL.** The tool will do the job better and safer working at the rate for which it was designed.
11. **USE THE CORRECT TOOL FOR THE JOB.** Do not force small tools or attachments to do the job of a heavier duty tool. Never use a tool for a purpose for which it was not intended.

RULES FOR SAFE OPERATION

12. **THE TOOL MUST BE USED FOR ITS PRESCRIBED PURPOSE.** Any use other than those mentioned in this manual will be considered a case of misuse. The user and not the manufacturer shall be liable for any damage or injury resulting from such cases of misuse.
13. **DO NOT MAKE ANY CHANGES TO THE TOOL.** The manufacturer shall not be liable for any changes made to the tool nor for any damage resulting from such changes.
14. **DRESS CORRECTLY.** Do not wear loose clothing or jewelry, they can be caught in moving parts. Rubber gloves and non-slip footwear are recommended when working outdoors. If you have long hair, wear a protective hair covering.
15. **ALWAYS USE SAFETY ACCESSORIES.** Safety glasses and earmuffs should always be worn. Everyday eyeglasses have impact resistant lenses only, they are not safety glasses. A face or dust mask is also required if dust is going to be created.
16. **DON'T OVERREACH.** Keep proper footing and balance at all times. Do not use tool on a ladder or unstable support. Secure tools when working at elevated levels.
17. **SECURE YOUR WORK.** Use clamps or a vice to hold your work. It is safer than using your hands and it frees both hands to operate the tool.
18. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged have them repaired by an authorised service facility. Inspect extension cords periodically and replace them if damaged. Keep tool handles dry, clean and free from oil and grease. Never use brake fluids, gasoline, petroleum based products, or any strong solvents to clean your tools.
19. **REMOVE ADJUSTING KEYS AND WRENCHES.** Check to see that keys and adjusting wrenches are removed from the tool before switching it on.
20. **CONNECT DUST EXTRACTION EQUIPMENT.**If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.
21. **CHECK DAMAGED PARTS.** Before using a tool,check that there are no damaged parts. If a part is damaged, carefully determine if it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, proper mounting and any other conditions that may affect the operation of the tool. A part that is damaged should be properly repaired or replaced by an authorised service centre, unless otherwise indicated in this Owner's Operating Manual. Defective switches must be replaced by an authorised service centre. Do not use a tool if the switch does not turn the tool on and off correctly.
22. **USE ONLY APPROVED PARTS.** When servicing, use only identical replacement parts. Use an authorised service centre to fit replacement parts.
23. **DO NOT ABUSE THE CORD.** Never carry the tool by its cord or yank it to disconnect it from the socket. Keep the cord away from heat, oil and sharp edges.
24. **EXTENSION CORD.** When an extension cord is used make sure:
    a) That the pins on the plug of the extension cord are the same in number, size and shape as those of the plug on the unit.
    b) That the extension cord is properly wired and in good electrical condition.
    c) That the wire size is large enough for the AC ampere rating of the unit.
    Ensure that the male and female plug connection is elevated and out of the way of any water contact.
25. **OUTDOOR USE EXTENSION CORDS.** When the tool is used outdoors, use only extension cords intended for use outdoor and so marked.
26. **STAY ALERT AND EXERCISE CONTROL.** Watch what you are doing and use common sense. Do not operate a tool when you are tired. Do not rush.
27. **DO NOT OPERATE THIS TOOL WHILE UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR ANY MEDICATION.**

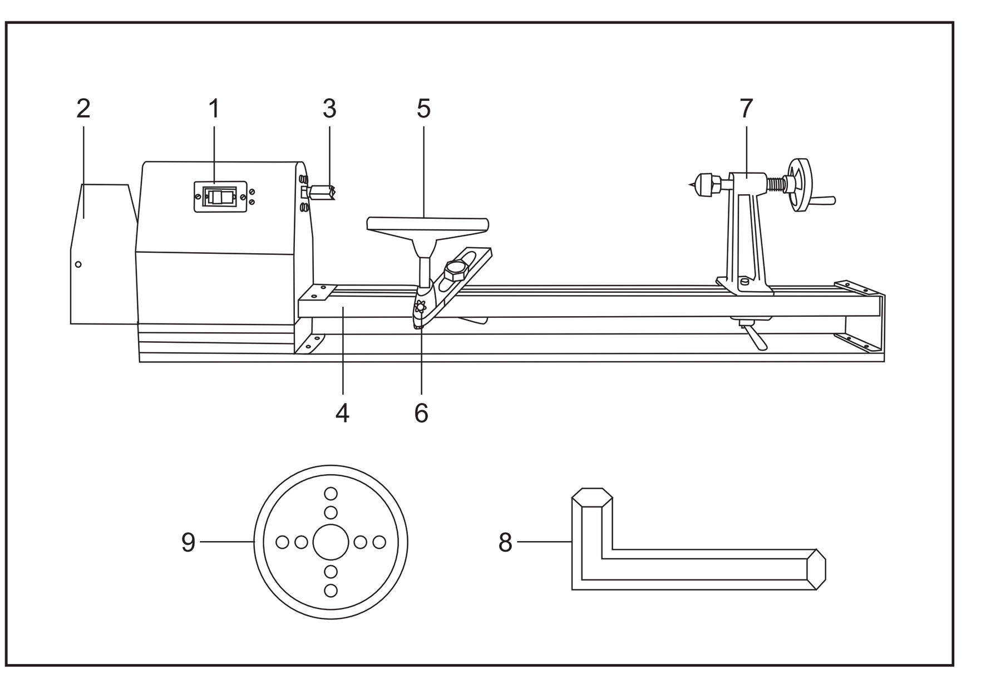
SPECIFIC RULES FOR WOOD LATHE

1. **For your own safety, read the entire instruction manual before operating the lathe.**
2. **Always wear eye protection.**
3. **Do not wear gloves, neckties, or loose clothing.**
4. **Tighten all locks before operating.**
5. **Do not mount a split workpiece.**
6. **Use the lowest speed when starting to cut a new workpiece.**
7. **Read the warning label attached to the wood lathe.**
8. **When turning a workpiece, always rough the wood to round form please. Stop wood lathe at slow speed.** If the lathe is runing so fast that it vibrates, there is a risk that the workpiece will be thrown out or the tool jerked from your hands.
9. **Always rotate the workpiece by hand before turning on the lathe.** If the workpiece strikes the tool rest, it could split and be thrown out of the lathe.
10. **Do not allow the turning tools to bite into the wood.** The wood could split or be thrown out from the lathe.
11. **Do not operate the lathe if it is rotating in the wrong direction.** The workpiece must always be rotating toward you.
12. **Before attaching a workpiece to the faceplate, always rough it out to make it as round as possible, this minimizes the vibrations while the piece is being turned.** Always fasten the workpiece securely to the faceplate, failure to do so could result in the workpiece being thrown away from the lathe.
13. **Position your hands so that they will not slip onto the workpiece.**
14. **Remove all loose knots in the stock before mounting it between the centers or on the faceplate.**

WARNING:
Do not operate your wood lathe until it is completely assembled and installed according to the instructions.

WARNING:
This electric tool is manufactured in accordance with the relevant safety requirements. To assure safety and reliability, all repairs should be performed by an Authorised Service Centre or other Qualified Service Organisation.

DESCRIPTION



1. ON/OFF switch
2. Belt and pulley cover
3. Drive center
4. Bed rails
5. Tool rest
6. Tool rest lock knob
7. Tail stock assembly
8. Faceplate
9. Hex wrench (size: 1/8")

ASSEMBLY AND ADJUSTMENTS

MOUNTINIG TAIL STOCK ASSEMBLY AND TOOL REST

1. Disconnect the lathe from power source.
2. Assembly the tool rest using the assembly knob.
3. Slide the tail stock assembly and tool rest to the position you want. Retighten the lock handle. **(Fig. 1)**

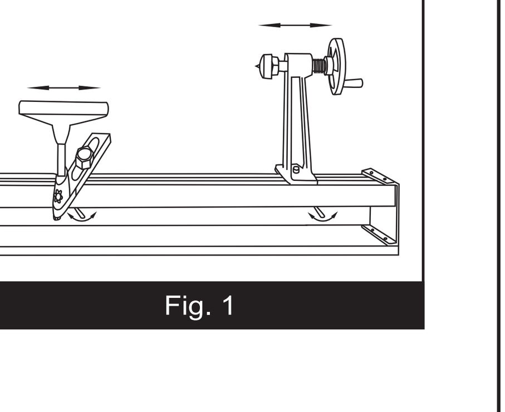


Fig. 1

MOUNTING THE LATHE

The lathe must be mounted to a firm supporting surface such as a stand or workbench when operating.

1. Disconnect the lathe from power source.
2. Locate and mark where the lathe is to be mounted.
3. Drill four holes through workbench.
4. Place lathe on the workbench, aligning holes in bed with holes drilled in workbench.
5. Insert four bolts (not supplied) and tighted them.

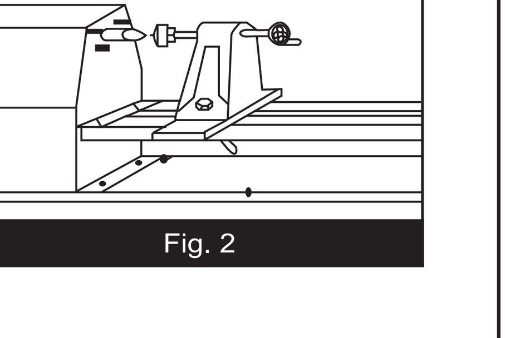


Fig. 2

INSTALLING FACEPLATE/DRIVE CENTER

1. Disconnect the lathe from power source.
2. Use the wrench hold the flat neck of the driving spindle.
3. Screw drive center/faceplate into spindle.

ALIGNING CENTERS

Always check if the centers are in lines, make the following adjustments before operation.

1. Move the tail stock assembly close to the drive center assembly. **(Fig. 2)**
2. Lock the tail stock assembly.
3. If the centers are not in line loosen the four hex bolts around the drive center. Swing the drive center till the two centers are in line, then tighten the bolts.

ADJUSTING SPEED

Four spindle speeds are available with this lathe. **Fig. 3** illustrates how to obtain the speed you need.

1. Disconnect the lathe from power source.
2. Open the belt and pulley cover.

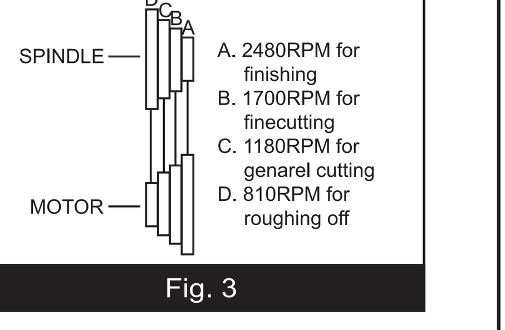


Fig. 3

ASSEMBLY AND ADJUSTMENTS

3. Loosen the motor pulley by loosening the bolts with adjustable wrench. **(Fig. 4)**
4. Place belt to correct position for desired speed.
5. Adjust belt to proper tension and tighten the motor pulley.

NOTE: For proper belt tension. Press down on the belt with hand. The belt should move 1/2" when set properly.

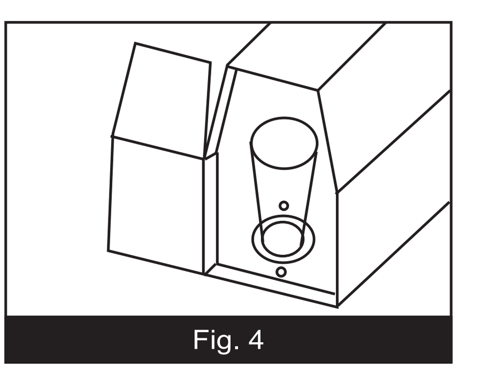


Fig. 4

OPERATION

SPINDLE TURNING

The following instruction will give a beginner a start on wood lathe operation. Use a piece of straight wood to check setting and to get the feel of the operations before attempting regular work.

WARNING! Always keep hands away from drive center or faceplate when the power is on.

1. Select a piece of straight wood.
2. Draw diagonal lines on each end to locate center. **(Fig. 5)**
3. On the end, make a saw cut on each diagonal line. A mini hacksaw is useful for this. The saw cuts are for the drive center and tail stock center.
4. Place the wood between the centers and the tail stock body.
5. Move the tail stock center into the wood by turning the hand wheel. Make sure that the driving center and tail stock center are "seated" into the wood in the saw cuts made before. Rotate the wood by hand while turning the hand wheel.
6. Adjust the tool rest approximately 1/8" away from the corners of the wood and 1/8" above the center line. Lock the tool rest base and tool rest readjust when the stock diameter is reduced. **(Fig. 6)**
7. Rotate the wood by hand to make sure that the corners do not strike the tool rest.
8. Select the correct speed according to the speed selection chart.

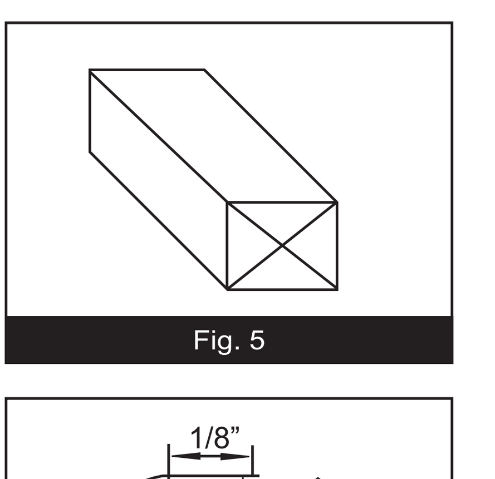


Fig. 5

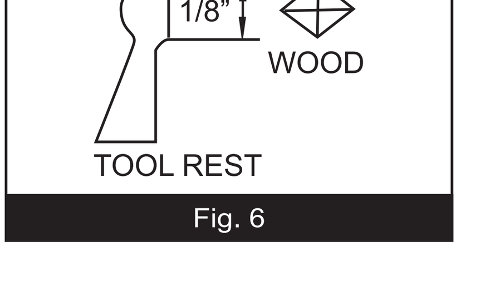


Fig. 6

OPERATION

HAND POSITION

The position of your hand to the tool will be determined by the amount of leverage required. The tool rest hand position is normally in a palm-up grip. The first finger acts as a guide, sliding along a tool rest as the cut is made. The palm-down grip can be utilized for heavy roughing applications. The heel of the hand or the little finger will serve as a guide.

ROUGHING A SPINDLE CYLINDER

The large gouge is used for this turning operation. Run the lathe at low speed for this operation. The cut should start about 2" from the end of the tail stock and will continue back toward the tail stock end. Each corresponding cut will take place about 3" to the left side of the first cut. This will continue until you reach a position 2" from the head stock center. You will then roll the gouge in the opposite direction, which will carry the cut to the end of the spindle.

HOW TO USE A PARTING TOOL

The parting tool has one primary purpose: to cut straight into the work piece as deep as desired or all the way through to make a cut-off. It is, therefore, a very narrow tool(1/8" wide) and is shaped to cut its own clearance so that the edge will not be burned. When used for scraping, however, it should be backed off regularly to prevent overheating.
Unlike the gouge and skew, the parting tool is seldom held with the bevel against the work. As the amount of stock removed is small, a support for the bevel is not necessary. The tool is simply fed into the work at an angle (for cutting), or pointed at the work piece center (for scraping).

HOW TO USE A SKEW

This tool is nearly always used to make finished cuts, to cut vees and beads, or to square shoulders. Properly used, it produces the best finish that can be obtained withe a chisel. It should be used very little for scraping, as this quickly dulls it.
For finish cutting, the skew is held with the cutting edge considerably in advance of the handle, bevel side down. Keep the skew well over the work, pull it back until the edge begins to cut, then swing the handle into position tho advance the cut. Both the toe and the heel of the skew can be used for taking light cuts. Do not penetrate the wood too deeply without cutting clearances, as there is danger of burning the tip of the tool.

CUTTING A SHOULDER

A shoulder can the side of a square portion left in the work piece, the side of a turned section, or the end of work piece. Most shoulders are perpendicular the work axis,but a shoulder can be at any angle.
First, mark the position of the shoulder with a pencil held to the revolving work piece. Then make a sizing cut via the parting tool, placing the cut about 1/16" outside the shoulder position. Cut to within 1/8" of the depth desired for the area outside the shoulder. If shoulder is shallow, the toe of the skew can be used to make the sizing cut. Do not going in deeper than 1/8" with the skew unless wider vees are cut to provide clearance for the tool.
Use the gouge to remove any waste stock outside of the shoulder. Smooth the section up to within 1/8" of the shoulder. Unless it is more than 1" high,it is best done with the 1/2" skew. First, use the toe of the skew to remover the shavings from the side of the shoulder down to the finished size. Hold the skew so the bottom edge of the bevel next to the shoulder will be very nearly parallel to the side of the shoulder, Made sure this is with the cutting edge turned away at the top, so that only the extreme toe will do the cutting. If the cutting edge is flat against the shoulder the chisel will run. Start with the handle low and then raise it to advance the toe into the work. Cut down o finished diameter of outside area, then clean out the corner by advancing the heel of the skew into it along the surface the outside area. Tilt the cutting edge, with the handle raised up, so that only the extreme heel does the cutting if the shoulder is at the end of work, process is called "squaring the end." In this case,reduce the outer portion to a diameter about 1/4" larger than the tool center diameter.Saw off the waste stock later.

CUTTING COVES

Use a pencil mark to indicate the edges. Then rough it out to within about 1/8" of the desired finish surface by scraping with the gouge or round nose chisel. If the cove is to be very wide, sizing cuts can be made to plot the roughing out. Once it is roughed out, the cove can be finished in two cuts; one from each side to the bottom center.
At the start of either cut, gouge is held with handle high and the two sides of blade held between the thumb and forefinger of the tool rest handle, just behind the bevel. Position the fingers ready to roll the blade into cove. Hold blade so that bevel is at 90 degree angle to the work axis, with point

OPERATION

touching the pencil line and pointed into work axis.
From this start, depress point slightly to start cut, then continue to move point down in an are toward the bottom center cove. At the same time, toll chisel uniformly so that, at the end of the cut, it will be flat at the bottom of the cove. The object is to keep the extreme point of the gouge doing the cutting from start to finish. Reverse movements to cut the opposite side.

CUTTING VEES

Vee grooves can be cut with either the toe or heel of the skew. When the toe is used, the cutting action is exactly the same as in trimming a shoulder, except that the skew is tilted to cut at the required bevel. Light cuts should be taken on one side first, then the other, gradually enlarging the vee to the required depth and width.
When the heel is used, the skew is rotated down into the work, using the tool rest as a pivot. Otherwise, cutting position and sequence of cuts is the same. As when using the toe,it is important that cutting be done only by the extreme end of cutting edge. If deep vees are planned, it is quicker to start them by making a sizing cut at the center of each vee. Vees can also be scraped with the spear point chisel or a three-sided file.

LAYING OUT THE PROJECT

Make a layout first, to provide a visual pattern to follow while working the turning. The pattern can be laid out in the same manner as spindle patterns. Templates can be held against the work for visual comparison. Circles to locate the carious critical points can be quickly scribed on the rotating work by using the dividers.

TURNING THE PROJECT

The first step is to remove as much wood as possible by boring into the center with the largest wood bit available. Be careful to measure in advance the depth to which the drill can be allowed to go .
Next, remove the bulk of the waste by scraping with the round-nose scraper or the bow1 gouge. Remove up to within 1/8" of finished size in this manner. Finish off the inside circumference by scraping with the round nose or left round nose or left round scraper. Smooth the bottom of the recess by scrapinig it flat nose scraper. Always try to position the part of the tool rest that supports the tool as close to the working surface as possible.

MOUNTING WORKPIECE TO THE FACEPLATE

You can directly mount the faceplate to the workpiece by fastening four (or eight) wood screws (sold separately). This is an easy process that should be used whenever possible. **(Fig. 7)**

WARNING! Always make sure the workpiece is securely fastened to the faceplate or between centers. When faceplate is turning. Always make sure the screw fasteners do not come in contact with the turning tool as work progresses.

FACEPLATE TURNING

Turning which do not mount between centers require a faceplate for holding the workpiece. All workpiece of this type should slightly over-size to eliminate roughing cuts and vibration.

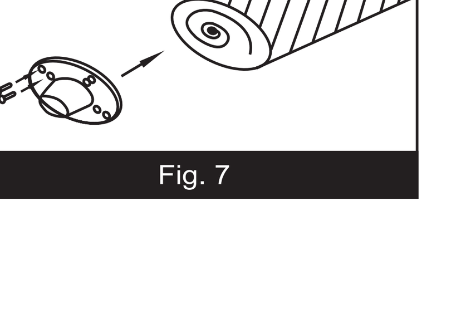


Fig. 7

RYOBI®	ARTWORK	JOB DESCRIPTION	manual	ARTWORK SCALE 1:1	SOLID COLOURS	
		CREATED BY	QINGDAO XIAOLONG POWER EQUIPMENT CO., LTD			
PRODUCT NAME	wood lathe	MATERIAL	NUMBER	DIMENSIONS	PROCESS COLOURS	BLACK
MODEL NO.	WL-140	paper	20071224A1	145mm x 210mm		