USER'S GUIDE FOR THE

KEN ONION EDITION KNIFE & TOOL SHARPENER MK.2

WSKTS-KO2



WATCH DEMO



▲ WARNING! To reduce the risk of injury, the user must read and understand this instruction manual before using product. Failure to follow this warning could result in severe injury or death. Save these instructions for future reference.



KEN ONION DESIGNED, WORK SHARP ENGINEERED

Work Sharp partnered with legendary hall-of-fame knife maker Ken Onion to develop new, innovative sharpeners! The combination of Work Sharp engineered and Ken Onion's industrial design has created a fast, easy and stylish way to sharpen all your knives and tools with precision and repeatability.

"I am proud to be affiliated with this company, I am proud to be affiliated with this sharpener. I am proud of all the projects we have worked on together; because I know how much love, and heart, and compassion goes into everything Work Sharp does.

There are a lot of my ideas and designs in this sharpener, it was so much fun to collaborate and create with this team. For the average person who wants their knives sharp, it really is the best thing out there. I feel it's an honor to be a part of this team, I will be eternally grateful.

Thank you for your purchase, and your trust in us to sharpen all of your knives."



Len Crion

KEN ONION Legendary Hall-of-Fame Knife Maker

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PLEASE LEAVE A REVIEW ON AMAZON, WORKSHARPTOOLS.COM OR WHEREVER YOU PURCHASED YOUR PRODUCT



SAFETY INFORMATION

You will be creating incredibly sharp knives with this sharpener. Always keep your fingers, hands, and body clear of the knife edge. Failure to follow these warnings could result in severe injury or death.

GENERAL POWER TOOL SAFETY WARNINGS

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.



Save all warnings and instructions for future reference. The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) WORK AREA SAFETY

- a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b) Do not operate power tool 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.
- c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- a) 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.
- b) 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.
- c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d) 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.
- e) 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.
- f) If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Use of an GFCI reduces the risk of electric shock.

3) PERSONAL SAFETY

- a) 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.
- b) 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.
- c) 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.
- d) 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.
- e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f) 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.
- g) 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.
- h) Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

4) POWER TOOL USE AND CARE

- a) 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 is was designed.
- b) 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.
- c) Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.
- d) 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.
- e) Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) 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.
- h) Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

5) SERVICE

a) 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.

WORK SHARP	
Mail	210 E. Hersey St. Ashland OR 97520 US
Phone	1 (800) 597-6170
Fax	1 (541) 552-1377
E-mail	info@worksharptools.com
Web	www.worksharptools.com

b) Do not dispose of electrical products with household waste. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.



c) To replace a damaged power supply cord (Type Y), your power tool must be returned to the Service Center.

BELT SANDER SAFETY RULES

Hold the power tool by insulated gripping surfaces, because the sanding surface may contact its own cord. Cutting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury. Always use NIOSH/ OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

SAFETY GUIDELINES — DEFINITIONS

The label on your tool may include the following symbols.

٧	Volt	A amperes
Hz	Hertz	W watts
min	minutes	C alternating current
	direct current	no no load speed
□	Class II Construction	🖶earthing terminal
	safety alert symbol	min ⁻¹ revolutions or reciprocations per minute

MOTOR

Be sure your power supply agrees with nameplate marking. Do not operate AC tools on DC. This information is printed on the nameplate.

INTENDED USES:

- · Grinding, Sharpening and Honing applications on knives and tools
- · Light duty metal grinding
- · Only for consumer use
- Tool should only be used with sharpening cassette or approved attachment installed.

UNINTENDED USES:

- Industrial or commercial grinding or sharpening applications.
- · Extended, continuous use beyond 30 minutes per hour.

WARRANTY



This sharpener is covered by Work Sharp's 3-year warranty. We stand behind and support our products – contact us if you need assistance, parts, or service. Warranty for consumer not industrial or commercial use, excludes abrasives.

Register your warranty online at www.worksharptools.com.

SHARPENING BASICS

WHAT EDGE ANGLE AND WHY?

Our recommendations (found in the Sharpening Reference Chart, pg 15) are based on our extensive testing and driven by three primary factors: 1) Optimizing the edge angle for the intended purpose of the knife. 2) Optimizing edge retention for the knife's purpose. 3) Speed of sharpening process.

WHY IS A CONVEX EDGE SUPERIOR?

Our blade use and sharpness testing have taught us that a convex edge is a superior edge. The smooth radius edge type does not have "shoulders" like a flat grind and creates less friction or resistance when cutting. A convex edge provides more steel behind the edge to support it, so the edge stays sharper longer. Lastly, our convex method thins the bevel when you sharpen the blade, while flat ground blades become thicker and thicker as you re-sharpen.

THE SHARPENING PROCESS



FACTORY FOGE

Most knives are flat ground from the factory and have a smaller bevel height or surface area.



CONVEX GRIND IN PROCESS

Re-sharpening to a lower angle and a convex grind takes time. Be patient and ensure you create a burr.



CONTINUE TO NEXT GRIT

Sharpen one side of the knife until a burr is created. Switch to the other side and create a burr before switching to a finer grit belt.

ANGLE CHANGES - WHAT TO EXPECT WITH A DECREASED ANGLE

DURATION: If you are sharpening a knife to an angle lower than the factory grind (ex.: factory 25° sharpening to a 15°), you should expect this process to take longer. This is due to the amount of material being removed to "thin" the edge.

BEVEL HEIGHT: You should also expect the look of your edge to change if you are decreasing the edge angle. The bevel (the area being sharpened) will become taller as the edge angle is reduced and will create more surface area.

THE FASTEST WAY TO A SHARP EDGE

TOOTHY SHARP

OUTDOOR KNIFE: Angle = 25° | Speed = 3

- X65: 3-5 strokes per side, then X22 (2 strokes per side)

KITCHEN KNIFE: Angle = 20° | Speed = 2

- X65: 2-4 strokes per side, then X22 (2 strokes per side)

SHAVING SHARP

OUTDOOR KNIFE: Angle = 25° | Speed = 3

- X65: 3-5 strokes per side, then X4 (5 strokes per side)

KITCHEN KNIFE: Angle = 20° | Speed = 2

- X65: 2-4 strokes per side, then X4 (5 strokes per side)

SHINY SHARP

OUTDOOR KNIFE: Angle = 22.5° | Speed = 3

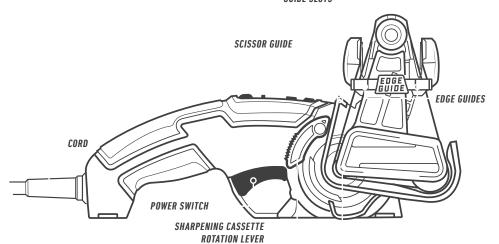
- X65, then X22, then X4 (10 strokes each per side)

KITCHEN KNIFE: Angle = 17.5° | Speed = 2

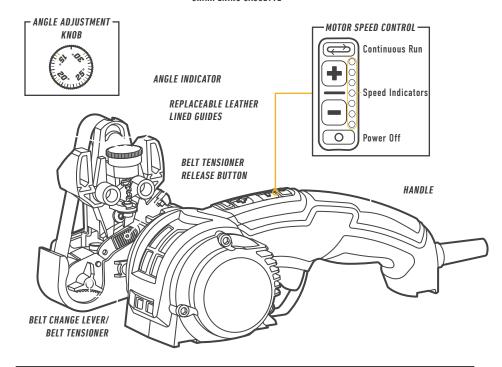
- X65, then X22, then X4 (10 strokes each per side)

GETTING TO KNOW YOUR KEN ONION SHARPENER

SHARPENING **GUIDE SLOTS**

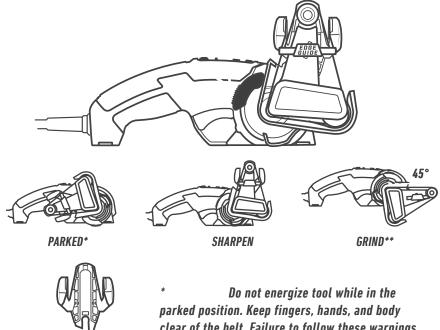


SHARPENING CASSETTE



1. SHARPENING CASSETTE POSITIONS

Squeeze and hold sharpening cassette rotation lever and rotate the cassette up, clockwise to the SHARPEN or GRIND position.



- clear of the belt. Failure to follow these warnings could result in severe injury or death.
- For grinding applications, remove the Angle Guide by pulling straight up and off. Rotate the edge guide to the vertical position for grinding applications.

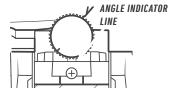
REMOVING THE SHARPENING CASSETTE FOR ATTACHMENTS:

- Remove belt from sharpening cassette (See PG 13 for details)
- Push and hold lock lever and rotate cassette to position show.
- Dismount cassette by pulling outward.
- Locate this same position to re-install sharpening cassette or attachments.



2. KNIFE SHARPENING GUIDE ADJUSTMENT

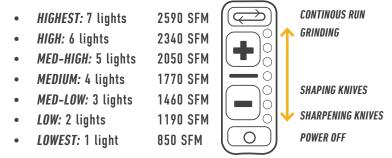
 15° - 30° in $1/2^{\circ}$ increments. Angle is measured per side of the knife (ex. 20° per side equals a 40° inclusive edge angle). Align desired angle with the indicator line on the guide.



3. SPEED CONTROL ADJUSTMENT

CONTINUOUS MOTOR RUN MODE: Depress the Power Switch and press the button directly above the speed controls to lock the motor on.

Use the Plus (+) and Minus (-) buttons to increase or decrease the speed of the abrasive belt. SFM = Surface Feet Per Minute



4. BELT INFORMATION

BELT NAME	GRIT	COLOR	APPLICATION
Extra-Coarse	P120	RED	Extra-Coarse grit belt for tool sharpening and knife repair.
Coarse	X65	DARK GREY	Coarse grit belt for knife shaping.
Medium	X22	LIGHT GREY	Medium grit belt for knife sharpening.
Fine	Х4	WHITE	Fine grit belt for honing knives and scissors.
Extra-Fine	6000	PURPLE*	Extra-Fine grit belt for serrations and gut hooks.

Abrasive belt dimensions: 3/4" x 12", *1/2" x 12"

Replacement belts and more grit selection available at: www.worksharptools.com

- Engineered abrasives are longer lasting and should meet your sharpening needs.
- Keep belts clean and dry for best performance and life.
- Belt grits are labeled on backing (µ=micron)
 For reference, belts are equivalent to: X65 (P220) | X22 (P1000) | X4 (P3000)

Only use abrasives recommended for this tool in accordance with these instructions.

ABRASIVE BELT WEAR: Belt discoloration is not an indicator of wear. Engineered belts expose new abrasive as they break down. Used belts may take extra strokes, but will continue to remove material. These belts will keep going longer than you think. Keep using them as long as they are still removing material.

5. EDGE GUIDE

WHEN AND WHY TO USE THE EDGE GUIDE:

- Most pocket / outdoor knives are best sharpened without using the Edge-Guide since they often have thumb studs or belt clips that can obstruct full blade insertion.
- It is helpful to support and guide long blades (filet knives and machetes) through the sharpening process.

PULL AND ROTATE



6. BELT CHANGE

Unplug sharpener from power supply.

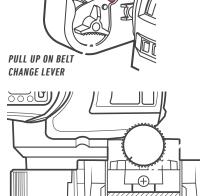
Pull up the Belt Change Lever to lock it into place to remove belt.

Route belt around all 3 pulleys. Be sure belt is within pulley flanges.

Press RED Belt Tensioner Release Button to retension the belt.

Lay tool onto its back for easier belt changes.

* Rotate the Edge Guide out of the way for easier belt installation.



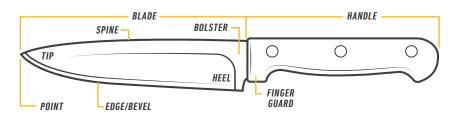


ROTATE SCREW TO TRACK BELT

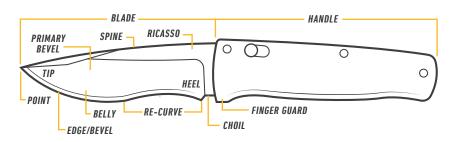
BELT TRACKING: Rotate screw above the top pulley to center the belt on the top pulley.

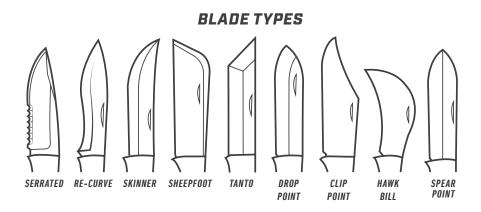
THE ANATOMY OF A KNIFE

KITCHEN KNIFE



OUTDOOR KNIFE





SHARPENING REFERENCE CHART

KITCHEN KNIVES

PULL RATE: 1" OF BLADE PER SECOND . USE EDGE GUIDE

	ANGLE	SPEED	X65	X22	Х4	6000
WESTERN	20°	3	4-8	4-8	10	0
ASIAN	16°	3	0	4-8	10	0
PARING	20°	3	4-8	4-8	10	0
CLEAVER	30°	4	4-8	2-8	0	0
BREAD	Χ	2	0	0	0	2
				*10 Stroke	s = 5 per	side

OUTDOOR KNIVES

PULL RATE: 1" OF BLADE PER SECOND . NO EDGE GUIDE

	ANGLE	SPEED	X65	X22	Х4	6000
POCKET	25°	3	6-10	6-10	10	0
HUNTING	25°	3	6-10	6-10	10	0
FILLET	20°	2	6-10	6-10	10	0
SERRATED	Х	2	0	0	0	2
GUT HOOK	Χ	3-5	0	0	0	2
			*	10 Strokes	s = 5 per s	ide

BEST TECHNIQUES:

- Resharpen using X4 only.
- · Follow the curve of the knife when sharpening for best results.
- Use the Edge Guide on long or flexible blades when possible.
- Use a practice knife to learn.



WITH THE MOTOR OFF, POSITION BELT AT THE HEEL OF YOUR KNIVES EDGE.

SHARPENING OUTDOOR KNIVES

Reference Belt Information, pg 12 and the Sharpening Reference Chart, pg 15 for recommended angle settings, belt selection, stroke count, speed and choice of edge type.

1. PLACE THE BLADE IN THE GUIDE

WITH POWER OFF, insert blade into right side of sharpening guide all the way to the heel of the edge.

Place knife to the bottom of the guide slot and lean against the outside guide.

Do not put pressure onto / into the sharpening guide. It is intended to provide a reference point for blade position.

Only use light pressure (weight of the blade) when using the sharpening quide to yield best results.



2. POWER ON AND PULL THE KNIFE

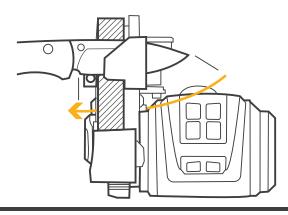
WITH POWER OFF and blade placed in the guide, simultaneously squeeze the power switch and pull blade steadily through the guide at 1" per second.

Follow the curve of the blade as you pull through the guide. Keep cutting edge perpendicular to the travel of the belt for best and most consistent results.

Use only the weight of the blade - DO NOT PRESS DOWN INTO / ONTO GUIDE. Hover the blade and let the tool do the work for best results.

Power off as the point of the knife approaches the center of the belt.

Pay attention to the proper angle for outdoor knives found on page 15. Ensure you are using the correct angle for each knife.

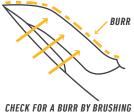


3. REPEAT AND FEEL FOR BURR

Continue sharpening on right side of guide. Check for a burr every 2-3 strokes (see picture).

Sharpen until a burr is created along the entire length of the edge.

If burr is not yet raised, See "KNIFE NOT GETTING SHARP" in Troubleshooting section.



CHECK FOR A BURR BY BRUSHING FINGERS ACROSS/AWAY FROM THE BLADE EDGE.

Repeat same number of strokes on other side of blade / sharpening guide. Once the edge is shaped / formed, continue with finer grit belts using alternating strokes. Alternating strokes removes the burr and refines the edge faster.

See **SHARPENING REFERENCE CHART** for the fastest way to a sharp edge section for recommended belt use and stroke count based on the edge you want (Toothy, Shaving, Shiny).

BEST TECHNIQUES: (Avoid rounding the tip)
Maintain factory blade profile / shape:



Follow the curve of the blade so the edge remains perpendicular to the travel of the belt. Power Off as the point of the knife approaches the middle of the belt. Lift the knife up and out of the quide.





Pull straight through the guide and do not lift the blade handle as you pull. Power off as the point of the knife approaches the middle of the belt. Lift the knife up and out of the quide.

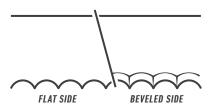


USE THIS TECHNIQUE FOR

Do not use excessive pressure when drawing the blade toward yourself. Let the abrasive do the work, and use light pressure. Failure to follow this warning could result in severe injury or death.

SHARPENING SERRATED KNIVES

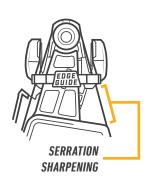
Most serrated knives have a flat side and a bevel side on the blade; SHARPEN ONLY THE FLAT SIDE.

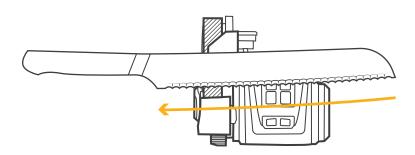


ONLY USE THE FINEST GRIT 6000 BELT FOR SERRATED SHARPENING.

Place flat side of blade at the bolster / handle against the fine grit abrasive belt. Set to speed 2 and squeeze the power switch and pull knife steadily across the belt from bolster to tip. An 8" blade should take 8 seconds.

Repeat until no burr remains on the flat side of the blade and serration 'teeth' are sharp.





BEST TECHNIQUES:

Serrated knives can be sharpened with or without the Knife Sharpening Guide installed depending on height of serrated knife.

Only place serrated blades on the right side of the cassette so the belt is traveling downward. Otherwise you risk cutting the belt.

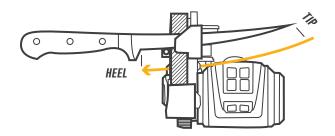
SHARPENING FILLET KNIVES



Reference the SHARPENING REFERENCE CHART, pg 15 for recommended angle settings, belt selection and speed. Otherwise sharpening a filet knife is the same as other knives.

Use the Edge Guide to help support these long, flexible blades during sharpening to ensure a consistent sharpening along the entire edge.

USE VERY LIGHT PRESSURE IN THE SHARPENING GUIDE SO THE BLADE DOES NOT FLEX.



SHARPENING GUT HOOKS

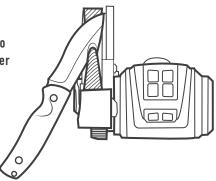


ONLY USE FINEST GRIT 6000 BELT FOR SHARPENING GUT HOOKS.

Place curve of gut hook over the belt on the right side of the cassette so the belt is traveling downward; allow belt to conform to blade's curve. Squeeze power switch; hone 2 to 4 seconds. Repeat on other side.

BEST TECHNIQUES:

Only place gut hook on downhill - right side of belt. Otherwise you risk cutting the belt.



SHARPENING KITCHEN KNIVES

Reference the Sharpening Reference Chart, pg 15 for recommended angle settings, belt selection, stroke count, speed and choice of edge type.

MOST KITCHEN KNIVES SHOULD BE SHARPENED WITH THE EDGE-GUIDE.



1. PLACE THE BLADE IN THE GUIDE

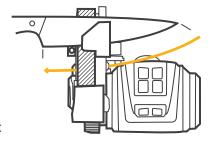
WITH POWER OFF, insert blade into right side of sharpening guide all the way to the heel of the blade. Place knife to the bottom of the guide slot and lean against outside guide.



2. POWER ON AND PULL THE KNIFE

WITH POWER OFF and blade placed in the guide, simultaneously squeeze the power switch and pull blade steadily through the quide at 1" per second.

Follow the curve of the blade as you pull through the guide. Keep cutting edge perpendicular to the belt for best and most consistent results.



Use only the weight of the blade - DO NOT PRESS DOWN INTO / ONTO GUIDE.

Hover the blade and let the tool do the work for best results.

Continue sharpening on right side of guide. Check for a burr every 2-3 strokes.

Repeat SAME NUMBER OF STROKES on other side of blade / sharpening guide.

After the burr is formed, continue sharpening with finer grit belts using ALTERNATING STROKES.

Alternating strokes removes the burr and refine the edge faster.

SHARPENING SCISSORS

Sharpen ONLY THE BEVELED SIDE of your scissors. Marking the beveled side with a black marker will make it easier to see when the cutting edge has been fully sharpened along entire edge.

Use the 6000 grit belt at speed 3 to hone or touch-up scissors.

Use the X22 belt at speed 3 to sharpen damaged scissors.



Once scissor blade is properly placed in Sharpening Guide, squeeze power switch and simultaneously pull the scissor blade steadily through the guide at 1" per second.

Repeat 1-2 more times or until marker is removed from cutting edge.

Repeat on other scissor blade.

Test scissors for sharpness. Continue sharpening as needed.



GRINDING

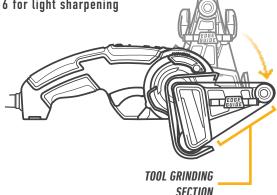
Remove Sharpening Guide. Pull up firmly.

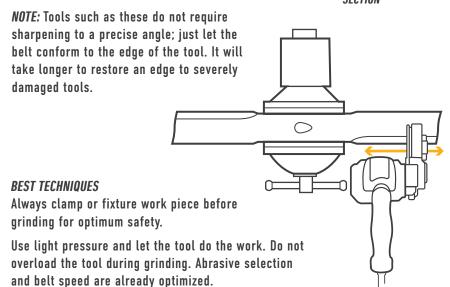
Ensure the Edge Guide is in the parked position and that the Knife Sharpening Guide has been removed before grinding.

Push Cassette Lock Release Lever to rotate cassette to grind mode.

Use the *P120* belt and speed 6 for light sharpening and grinding tasks.

Loose items can be caught in moving parts. Keep your hair, clothing and gloves away from moving parts. Failure to follow this warning could result in moderate or minor injury.





Only use the tool grinding section of the belt.

PRUNING SHEARS

Remove Sharpening Guide. Pull up firmly.

Ensure the Edge Guide is in the grinding position.

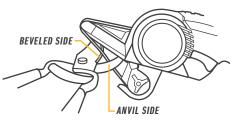
Use the 6000 grit abrasive belt at speed 3 to hone the cutting blade.

Use the X22 grit abrasive belt at speed 3 to sharpen a damaged or dull cutting blade.

Hone the beveled side after sharpening a damaged or dull cutting blade.

Only sharpen the beveled side of the cutting blade.

Place the Anvil Blade behind the belt as shown and slowly pull the Cutting Blade across the abrasive belt.



SHARPENING NOTES

KNIFE / TOOL	NOTES



WORK SHARP 210 E Hersey St. Ashland OR 97520 USA

Phone: 1 (800) 597-6170 Fax: 1 (541) 552-1377 Email: info@worksharptools.com Visit: Worksharptools.com

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