

OPERATORS MANUAL



CORRU-GATOR

Professionally Corrugate Scissors and Shears

designed to be used with the
Twice As Sharp® Scissors Sharpening System

manufactured by WOLFF INDUSTRIES, Inc.
US Patent # 7,465,220 B1

Revision 10/21/16

Wolff Industries, Inc.
Professional Sharpening Equipment

Lee Wolff the inventor of the Twice As Sharp® scissors sharpening system worked on perfecting the process of scissors sharpening for many years. It is necessary to accurately control the cutting angles, reduce burr formation during sharpening, and do deburring and micro-sharpening as a final process. This method produces scissors that are normally twice as sharp, hence the name Twice as Sharp® scissors sharpener. A United States patent has been granted as well as several foreign patents.

Corrugating (serrating) scissors has always been a difficult process when resharpenering scissors. In September 2007 Wolff Industries applied for a patent on a fast and easy method to re-corrugate industrial, home, barber and grooming scissors. The process to corrugate the scissors starts by first sharpening the blade on the Twice As Sharp®, leaving the blade in the scissors clamp, flip it over into the honing position. The helical design of the corrugating wheel will pull the scissors blade across the face of the corrugating wheel creating perfect corrugations.

Technical support service is available Monday through Friday 8:00 AM to 5:00 PM eastern standard time. Call with your sharpening questions. If it is regarding a specific shear, please have the shear in hand. If your question is regarding a problem with the sharpener please have the sharpener nearby.

WOLFF®, **TWICE AS SHARP®**, **OOKAMI GOLD®**, and **HIRA-TO®** are registered trade marks of **WOLFF INDUSTRIES, INC.** And may only be used to describe items sharpened by using the equipment and methods described in this manual. Any other uses are forbidden without written permission from Wolff Industries.

Please send us any comments, suggestions, or newsworthy ideas, that we may include in our newsletter.

Thank you,

WOLFF INDUSTRIES, INC.
107 Interstate Park
Spartanburg, SC 29303

CORRU-GATOR SPECIFICATIONS

115 Volts AC, 60 Hz, 1.19 amps, 1/15 HSP, 400 RPM
Diamond plated helically cut wheel

US Patent # 7,465,220 B1

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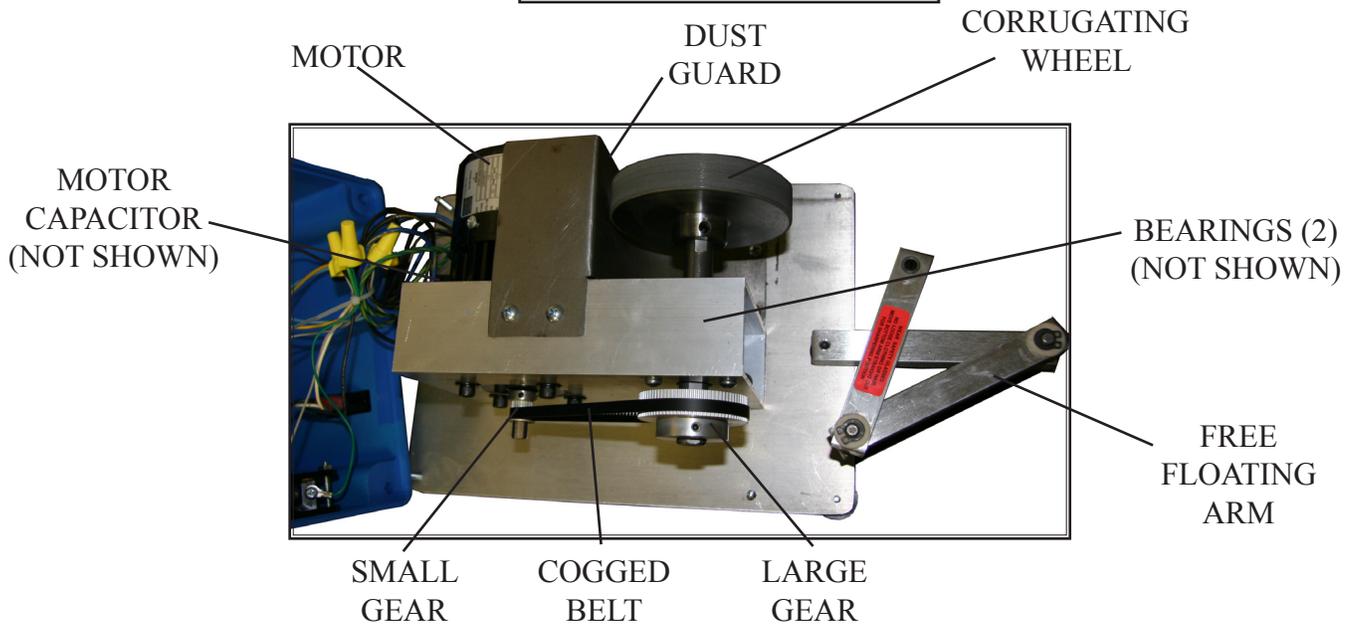
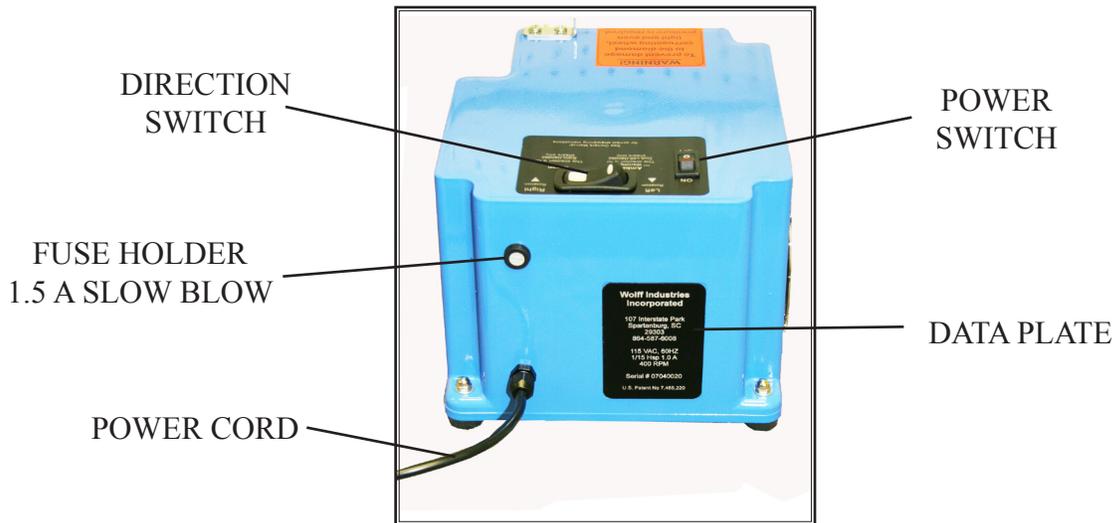
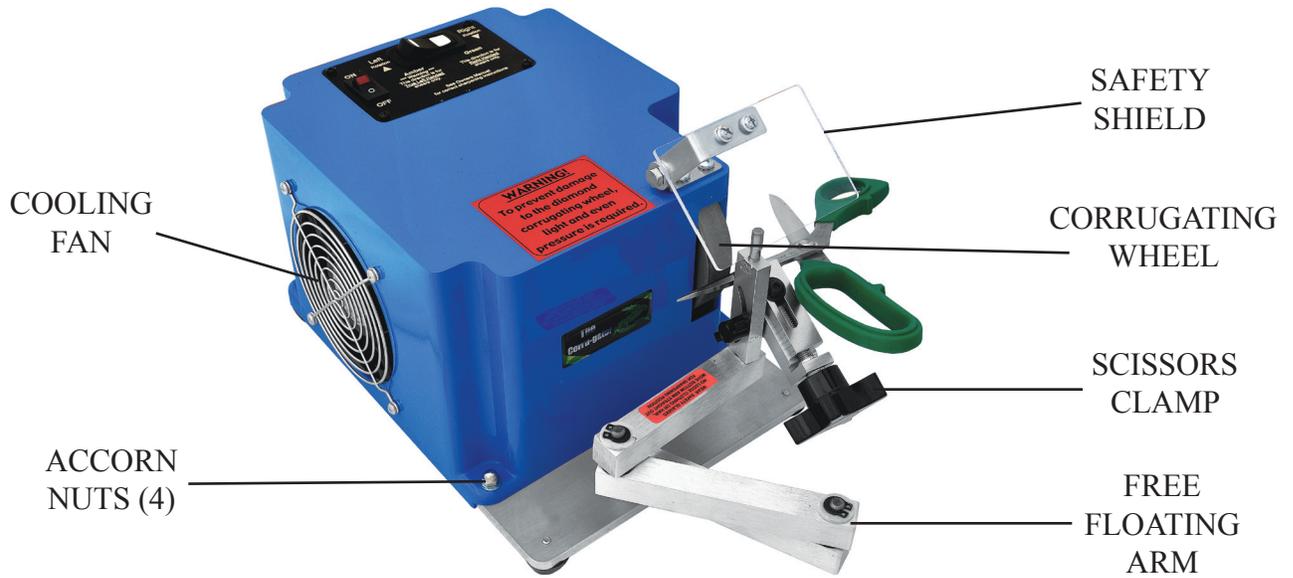
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IMPORTANT

Wolff Industries has found the optimum angle for most corrugated scissors is 25° on the corrugated blade and 35° on the non-corrugated blade. If you are doing a Kevlar scissors try 15° on both blades and do not hone the non-corrugated blade. Match the angle on beauty and grooming scissors.

Send your hard-to-cut material to Wolff Industries R & D department to find the best angles and corrugation configuration for your materials.

CORRU-GATOR PART NAMES



PARTS INCLUDED WITH THE CORRUGATOR

DESCRIPTION

QUANTITY

CGTR-110 (110 volt) or *CGTR-230* (220 - 240 volt) with fine tooth wheel
CGTR-110C (110 volt) or *CGTR-230C* (220 - 240 volt) with course tooth wheel

Corru-Gator Accessory Kit Includes:

<i>A</i>	Scissors Clamp #30004.....	1
<i>B</i>	Operators Manual #7002500.....	1
<i>C</i>	Instructional Video #702600.....	1
<i>D</i>	Scissors Lubricant # 20700.....	1
<i>E</i>	Hex Wrench # 20500	1
<i>F</i>	Dust Mask # 20200	1
<i>G</i>	Safety Glasses # 20300.....	1
<i>H</i>	Safety Shield # 20100	1
<i>I</i>	Screws for Safety Shield.....	2
<i>I</i>	Washers for Safety Shield.....	2
<i>J</i>	Nut and bolt for mounting safety shield	1



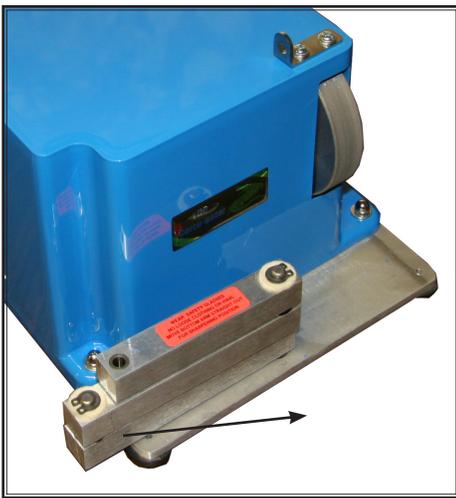
SET UP AND SAFETY



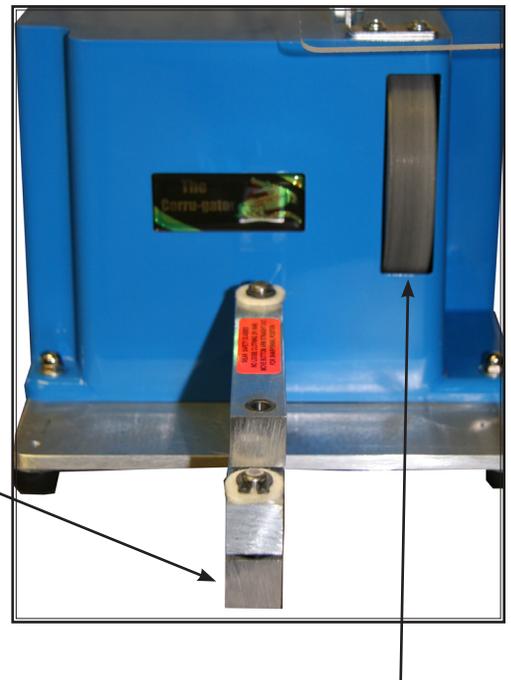
Inspect machine for shipping damage. Look for broken or bent parts. Notify freight carrier if damaged.

Assemble plastic eye shield as pictured. Attach to the machine with the bolt and nut provided.

NEVER OPERATE MACHINE WITHOUT EYE SHIELDS IN PLACE.



Bottom arm set is fastened to the machine with a friction adjustment. Pull arm set straight forward for sharpening position. If bottom arm ever loosens, tighten with hex wrench provided until it moves, but with quite a bit of resistance.

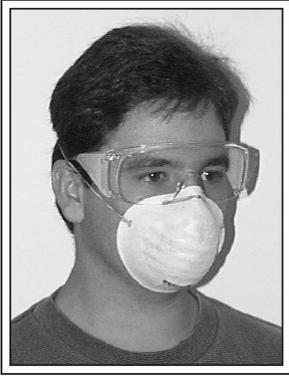


Be sure the wheel is tight and centered in the opening in the case.



Plug machine into a 3 wire grounded receptacle only. Make sure the direction switch is in the right hand scissors position. Turn on the the power switch and stand aside and let it run for one minute before using it the first time. Follow this step also after replacing the corrugating wheel.

SAFETY CONTINUED

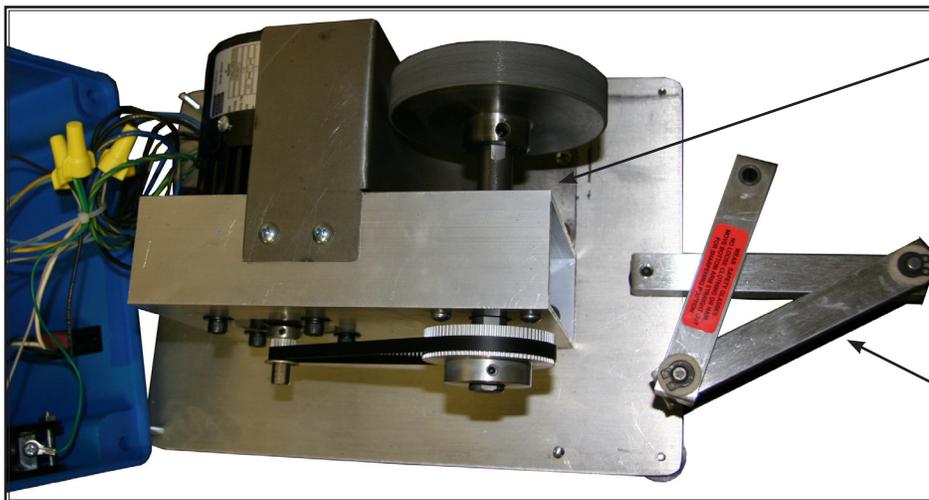


Use safety glasses and face mask to catch dust and grit. (Glasses provided are only for protection from flying grit and not intended for production work with danger from flying parts.)

MACHINE MAINTENANCE

NEVER OIL any part of your scissors corrugating machine. Motor bearings are sealed ball bearings. Arm bearings are self lubricating and need no lubrication.

***** WARNING - Prevent Electrical Shock and Possible Injury***
Remove power from the Corru-Gator before removing the cover**

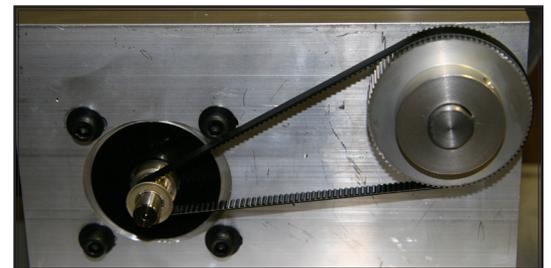


Dust Guard

Clean the dust out of the corrugator every time you remove the cover to replace the corrugating wheel. Replacement of worn wheel on page 8. If clamp movement becomes stiff or difficult, loosen angle knob and clean the grit out.

Clean Arm Assembly and scissors clamp

Adjusting belt tension by loosening the four (4) allen head motor mounting screws. Move the motor and tighten the screws when proper tension has been set.

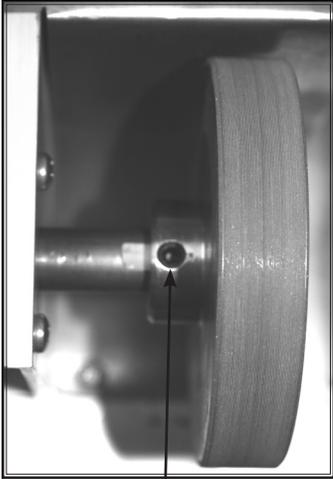


Move motor left or right to adjust the belt tension.

HOW TO CHANGE THE WHEEL

***** WARNING - Prevent Electrical Shock and Possible Injury***
remove power from the Corru-Gator before removing the cover**

Remove the four (4) acorn nuts and washers holding on the cover with a 3/8" nut driver. Remove the cover by lifting the rear (near the power switch) up, then move the front of the cover forward and up. Be careful of the wires attached at the rear of the cover.

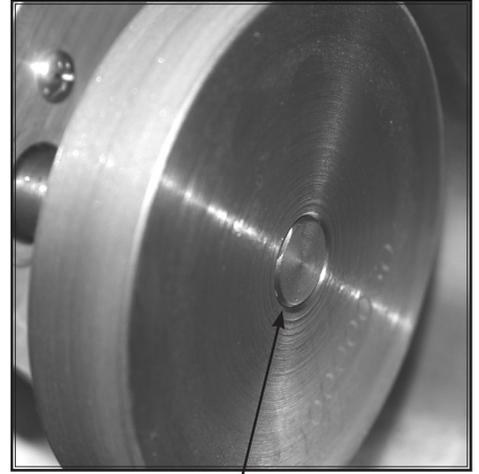


1/8" allen screw

Loosen the allen screw using a 1/8" allen wrench. Remove the wheel and carefully lay it aside.

Install the new wheel on the shaft setting the outside of the wheel flush with the end of the shaft. Tighten the 1/8" allen screw to lock the wheel in position. Install the cover and check to make sure that the wheel is centered in the hole

(Never run sharpener without covers on). A new wheel must be allowed to run for at least one minute before using.

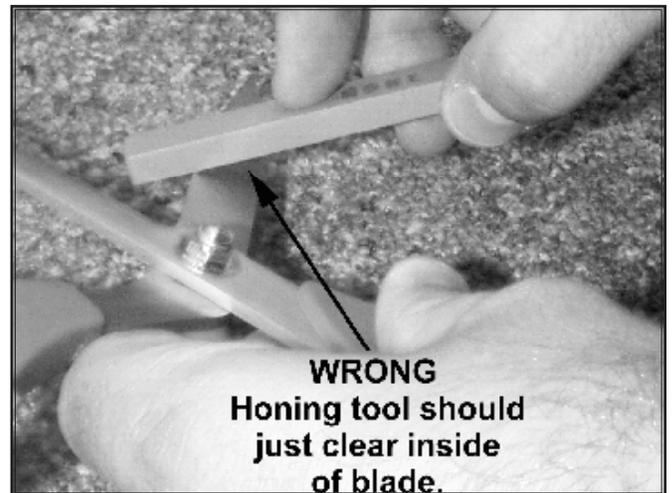
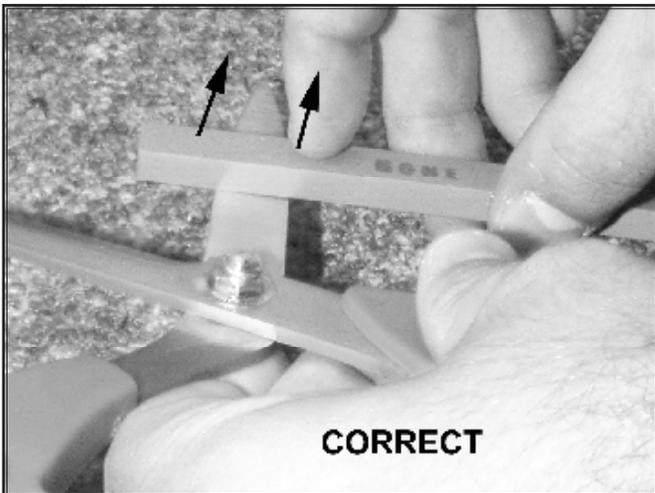


Outside of wheel flush to the end of the shaft

STEPS TO SHARPEN AND CORRUGATE SCISSORS & SHEARS

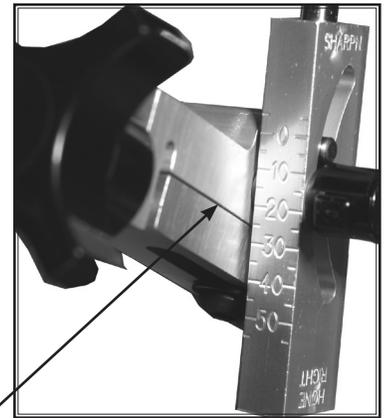
STEP 1: HONING DAMAGED SCISSORS

Test scissors by opening and slowly closing to feel for nicks. Nicks and rough spots should be removed before sharpening. Slide the rectangular pink hone down the inside of the damaged blade as shown. Hold hone almost flat. Hone as little as possible as it dulls the edge and must be done before sharpening.



STEP 2: SETTING CUTTING ANGLE

Loosen small black knob and move the clamp to the 25° angle. The angle is determined by the break line (space) between the upper and lower sections of the clamp and the line on the upright between the 20 and 30 marks.



Break line where upper & lower jaws come together

These next steps are on the Twice As Sharp® Scissors Sharpening System

***** WARNING - See Page 15 for TRUE LEFT HAND SCISSORS *****

STEP 3: INSTALLING CLAMP

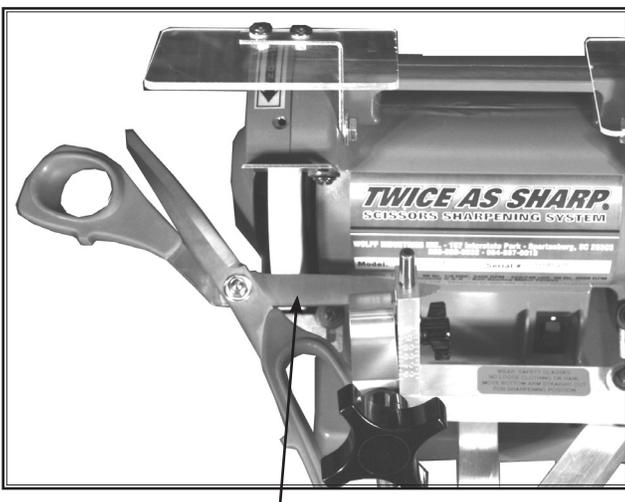
Place scissors clamp in the hole in the top arm. The word SHARPN must be on top as pictured.



STEP 4: CLAMPING SCISSORS

Place thumb blade on industrial scissors or the finger (tang) blade on barber, beauty and grooming scissors in the clamp. Be sure that the inside of the blade is facing you (up) as pictured. Tighten large black knob until scissors are held firmly. Small scissors may be clamped on handle or pivot. For the most accurate sharpening, the blade should protrude about 3/16 inch above the clamp.

**NOTE - Select the correct blade to be sharpened and corrugated
See Page 15 for information on sharpening and corrugating true left hand scissors**



Insert thumb blade (bottom blade)
on all industrial scissors

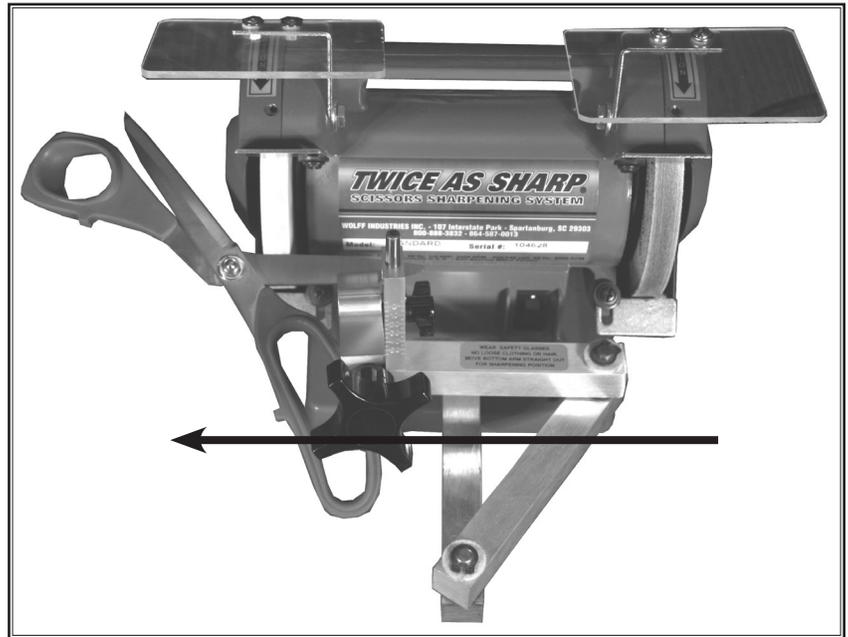


Insert finger blade (tang blade)
on all grooming, barber and beauty scissors

STEP 5: SHARPENING SCISSORS

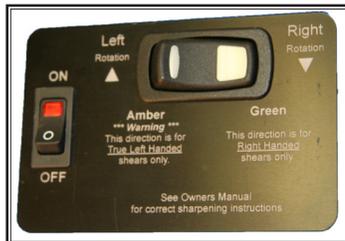
To sharpen, slide blade across the LEFT wheel slowly with a light pressure against the wheel. Keep arms in the position shown and move fixture from right to left. If machine slows down, use less pressure. Slide blade from pivot to tip.

Release pressure from wheel when tip reaches center of wheel. Repeat until a burr can be felt along the entire length of the blade. This burr, on the inside of the blade, shows that this step has been completed. You feel the burr by sliding your finger towards the cutting edge. A curved cutting edge is sharpened by keeping the edge parallel to the grinding wheel.



This next step you use the Corru-Gator Scissors Corrugating Machine

NOTE - Do not remove the scissors from the clamp when moving from the Twice As Sharp® to the Corru-Gator.



STEP 6: INSTALL CLAMP AND SCISSORS IN THE CORRUGATOR ARM

Flip the clamp over into the “HONE RIGHT” position and place it into the arm on the Corru-Gator. Make sure that the direction switch is in the right hand - green led position.



STEP 7: START AT PIVOT AND CORRUGATE TO THE TIP

Start at the pivot as shown in left hand picture then move the blade to flat position. Use just enough pressure to maintain the blade against the wheel keeping it flat against the wheel. The wheel is helically cut and will pull the scissors blade across the face of the wheel. Remove the scissors from the wheel when the tip reaches the middle.

WARNING - Let the corru-gator pull the blade across the face of the wheel
WARNING - Too much pressure on the scissors can damage the diamond plating on the wheel



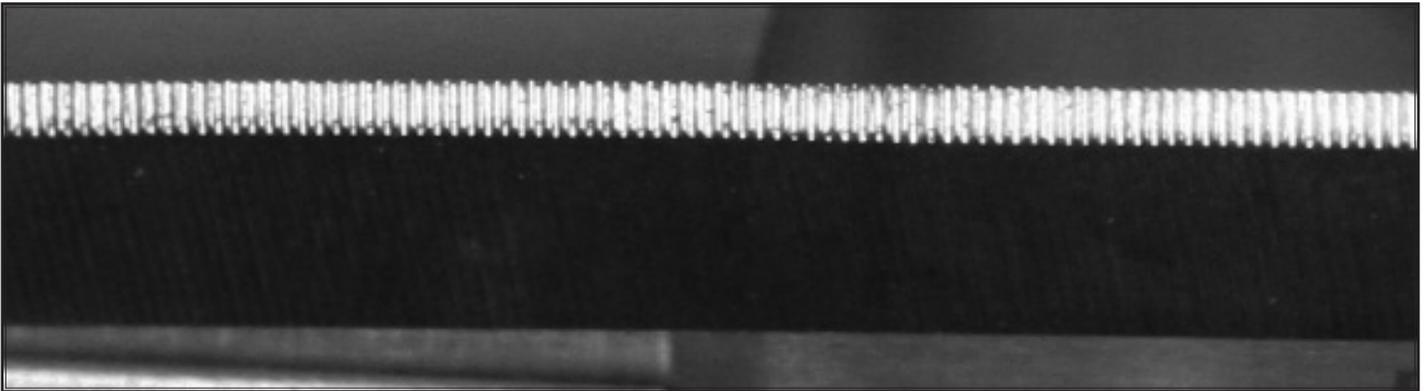
Start at the pivot at a slight angle



Move the blade flat against the wheel and let the corru-gator pull it across the face

STEP 8: CHECK THE CORRUGATION

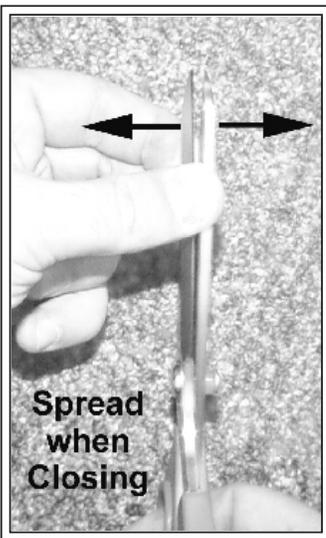
The corrugation should go all the way from the pivot to the tip; If it does go to step 9. If the corrugation does not go the full distance repeat step 7, the corrugator will catch the teeth and finish the job.



These next steps are on the Twice As Sharp® Scissors Sharpening System

STEP 9: SHARPEN THE OTHER BLADE

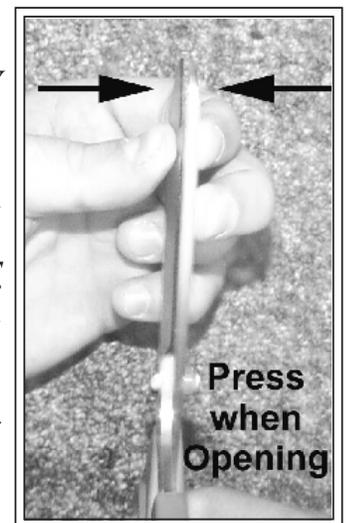
Loosen small black knob and move the clamp to the 35° angle. Install the finger blade of an industrial scissors or the thumb blade of the barber/grooming/beauty scissors that you are sharpening into the clamp. See step 5 on how to sharpen this blade on the left hand sharpening wheel.



STEP 10: DEBURRING

NEVER CLOSE SCISSORS THAT HAVE BEEN NEWLY SHARPENED UNTIL YOU DO THE FOLLOWING:

Both sides have now been sharpened and have burrs on them which require careful removal to prevent damage to the cutting edges. On the first two closings, the blades ***MUST*** be pushed apart while closing. If the burrs cut into each other, the cutting edge will be damaged. Press the blades together firmly while opening the scissors to pull the burrs back from the cutting edge. Repeat this step until the burr is completely removed.



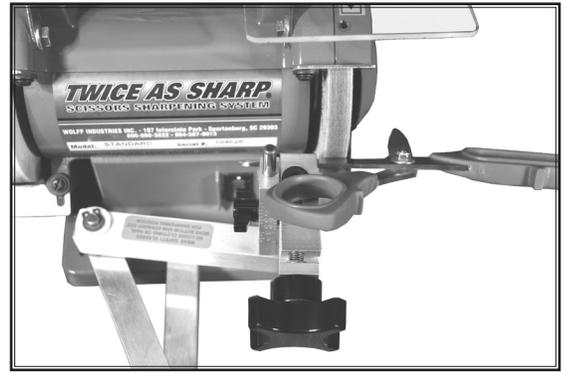
WARNING - Proper removal of the burr prevents damage to the cutting edge

Close scissors slowly to see if burrs are left, if there are burrs remaining repeat step 10 again.

TIP - cutting a paper towel during this step can help prevent damage to the cutting edge.

STEP 11: HONING

Insert the non-corrugated blade back into the scissors clamp, it is either the finger blade of an industrial scissors or the thumb blade of the barber/grooming/beauty scissors. Insert the clamp into the arm with the words "HONE RIGHT". Swing top arm to the right to hone on the right hand wheel. Slide the blade against the right wheel with firm pressure several times. Slide from pivot to tip, stopping when the tip is in the center of the wheel. Repeat several times until a light honing burr is created. Remove scissors and close the blades cutting off the tiny honing burr.



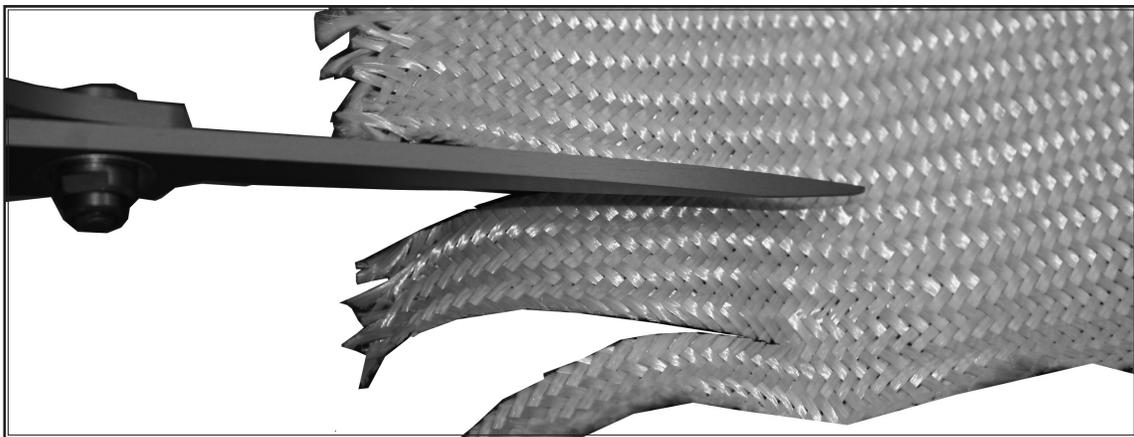
DO NOT SPREAD THE BLADES
Just close the scissors as you would normally cut

TIP - cutting a paper towel during this step can help prevent damage to the cutting edge.

STEP 12: TESTING

Your scissors are now sharp. Close several times normally, then wipe clean with cloth and test as follows;

Industrial Scissors: Test on the material that you will be cutting
Beauty, Barber and Grooming: Hair if available or 1 layer of tissue paper



Testing scissors by cutting Kevlar® fabric.

STEP 13: LUBRICATING AND CLEANING

Put a drop of scissors lubricant, Part # 20700 on the pivot and along the blades. Wipe off excess fluid and lint especially in the area of the pivot and screw. This lubricant dries quickly and will not stain or attract lint as oils do. It also improves pivot life and feel. The film it leaves on the blades help to prevent rust.



DOUBLE CORRUGATIONS

For some cutting applications you may need to corrugate both blades. Follow the steps in the follow sequence to do a double corrugation.

Do the following steps for the finger blade:

Using the Twice As Sharp® scissors sharpening system:

- Step 2 Setting cutting angle
- Step 3 Installing scissors
- Step 4 Clamping scissors
- Step 5 Sharpening scissors

Using the Corru-gator:

- Step 6 Install the clamp and scissors in the corrugating arm
- Step 7 Start at the pivot and corrugate to the tip
- Step 8 Check the corrugation

Do the following steps for the thumb blade:

Using the Twice As Sharp® scissors sharpening system:

- Step 2 Setting cutting angle
- Step 3 Installing scissors
- Step 4 Clamping scissors
- Step 5 Sharpening scissors

DOUBLE CORRUGATIONS - Continued

Using the Corru-gator:

- Step 6 Install the clamp and scissors in the corrugating arm
- Step 7 Start at the pivot and corrugate to the tip
- Step 8 Check the corrugation

WARNING - Proper removal of the burr prevents damage to the cutting edge

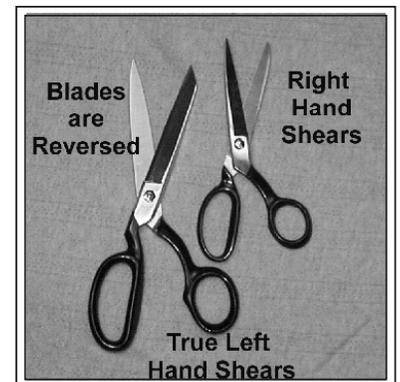
Close scissors slowly to see if burrs are left, if there are burrs remaining repeat step 10 again.

TIP - cutting a paper towel during this step can help prevent damage to the cutting edge.

- Step 10 Deburring
You do not hone double corrugated scissors
- Step 12 Testing
- Step 13 Lubricating and Cleaning

***How do you tell a “True Left Hand” scissors
from a “Right Hand Scissors”?***

- ***True left hand scissors the blades are reversed.***
- ***Many left hand scissors are “Left Handled” but have right hand blades. Sharpen and corrugate this type of scissors using the right hand instructions.***
- ***When you hold a “True Left Hand” scissors in your hand the finger blade is on the left hand side, the thumb blade is on the right hand side.***
- ***When you hold a left handled (or right hand) scissors in your hand the finger blade is on the right and the thumb blade is on the left.***



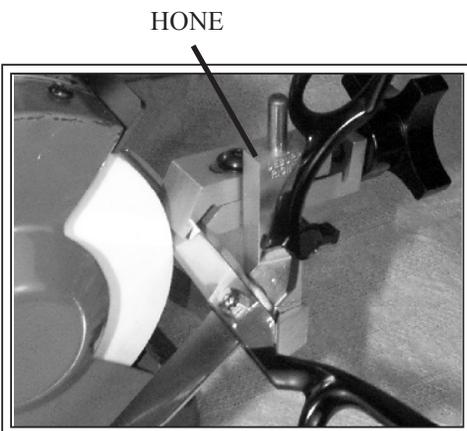
CORRUGATING TRUE LEFT HANDED SCISSORS

Refer to Page 20 of the Twice As Sharp® OPERATORS MANUAL:

Using the Twice As Sharp® scissors sharpening system do the following steps on page 20 of the Twice As Sharp® OPERATORS MANUAL:

- Step 1 Set angle
- Step 2 Clamp scissors in “HONE POSITION”
- Step 3 Sharpen - “Do Not Remove the Burrs”

TWO OPTIONS TO SHARPEN TRUE LEFT SCISSORS ON THE TWICE AS SHARP® SCISSORS SHARPENING SYSTEM



As shown in the Twice As Sharp® operators manual
Wheels in original position.

OR



Move sharpening wheel to
right hand side of sharpener and
honing wheel to left hand side.

***Easiest method to sharpen
true left hand scissors***

Using the Corru-gator:

WARNING - The cutting edge is up, use extreme caution when corrugating to prevent damage to the corrugating wheel.

Step 1: Flip the clamp over into the “SHARPN” position with the handles to the right. - Reduce angle used on Twice As Sharp® by 5°

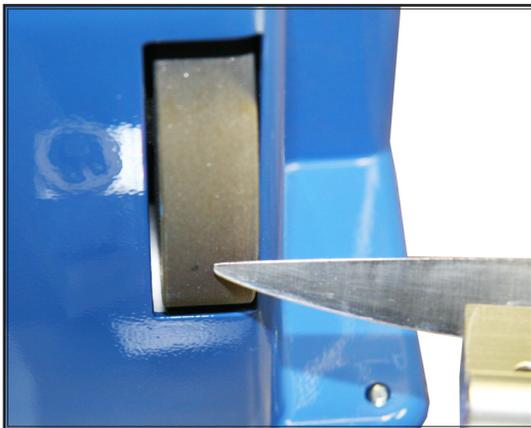
Example if you sharpened the blade at 25° then change the clamp angle to 20°

Step 2: Set the direction switch to the left position - turn on the power. The power switch will light up and the direction switch will display an amber light.

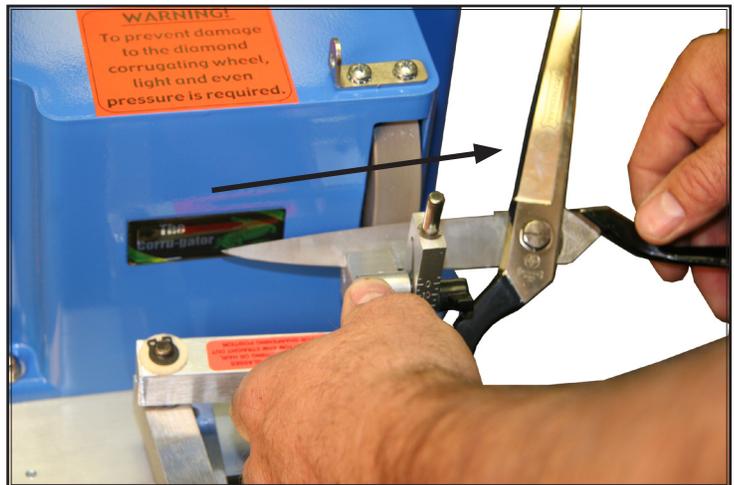


WARNING - The blade will move from the tip to the pivot this is the opposite direction of movement when you are doing a right hand scissors

Step 3: Carefully apply light pressure to the blade in the tip area and let the corrugating wheel move the blade across the face of the wheel. Remove the blade from the wheel when it approaches the pivot area.



START AT TIP



WHEEL MOVES BLADE TOWARDS PIVOT

Step 4: Check the blade for proper corrugation, if needed repeat step 3.

FINISH SHARPENING TRUE LEFT HAND SCISSORS

Using the Twice As Sharp® scissors sharpening system do the following steps on page 20 of the Twice As Sharp® OPERATORS MANUAL:

- Step 1 Set angle to 35 degrees
- Step 2 Clamp non-corrugated blade in “HONE POSITION”
- Step 3 Sharpen
- Step 4 Hone position
- Step 5 Hone the scissors
- Step 6 Test and clean the scissors

Corrugator Part Numbers

7002120 110 Volt Motor
 # 7002120-240V 220 - 240 Volt Motor

7002270 Corrugating Wheel Fine Tooth
 72 Teeth per inch
 # 7002271 Corrugating Wheel Course Tooth
 48 Teeth per inch

40000 Arm Assembly
 # 30004 Shears Clamp (not shown)

7002030 Bearings
 # 7002400 Transformer

7002130 Small gear

7002160 Large gear

7002150 belt

480-2141-ND Directional Switch

10401 Power Switch

7002170 Fuse

7002060 Fan



LIMITED WARRANTY

Two year warranty from date of purchase against defective parts or workmanship with the exception of the CORRUGATING wheel. Warranty limited to replacement of parts. Buyer must return warranty card to manufacturer for coverage of warranty. This warranty covers only the original purchaser. Use of non-factory parts voids any warranty. This warranty gives you specific rights. You may also have other rights which may vary from state to state. Some states do not allow limitation or implied warranties or consequential damages, so these may not apply to you.

DISCLAIMER

There is no expressed warranty other than the limited warranty stated above. There is no implied warranty for the merchantability or for fitness for a particular purpose. Wolff Industries, Inc., will not be responsible for any consequential damages. Damages are limited to the replacement of defective parts.

GUARANTEE

If you are not satisfied during the first thirty (30) days, return the merchandise for a complete refund.



Wolff Industries, Inc.
107 Interstate Park
Spartanburg, SC 29303
USA
(800) 888-3832
(864) 587-6008
(864) 587-0660 fax

customerservice@wolffind.com
www.wolffindustries.com