

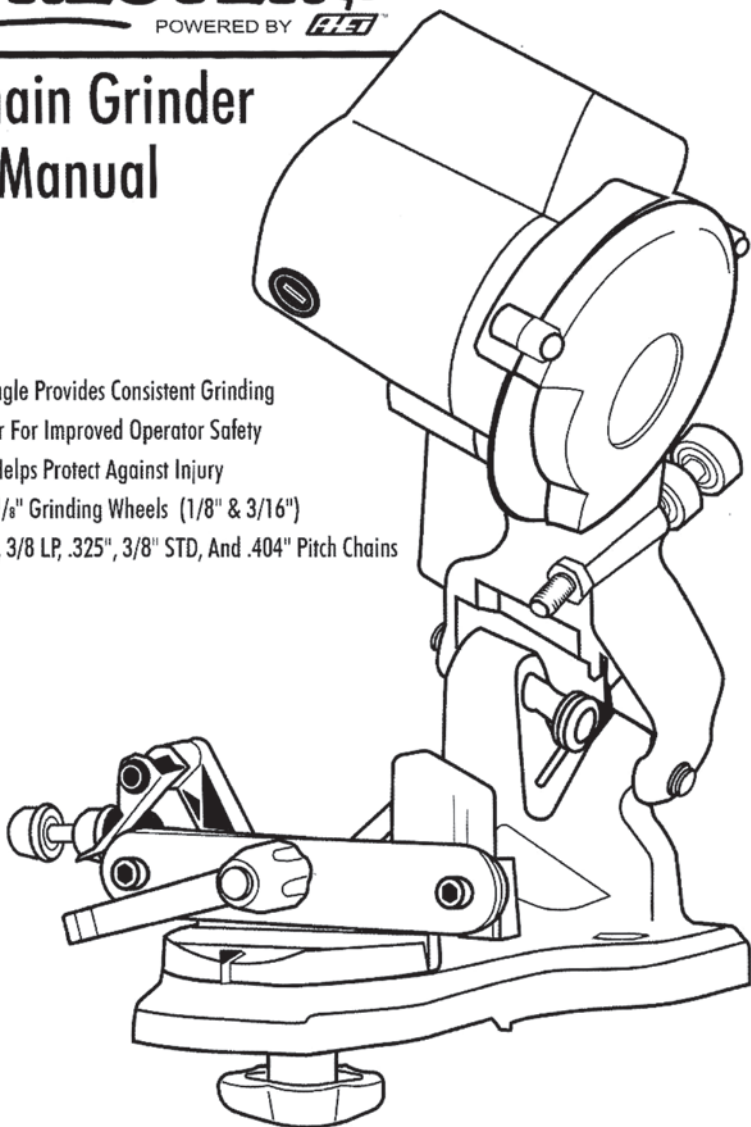


POWERED BY **FLEET**

Saw Chain Grinder User's Manual

FEATURES:

- Compact Size
- Fixed Motor Angle Provides Consistent Grinding
- One-way Motor For Improved Operator Safety
- Safety Guard Helps Protect Against Injury
- Includes (2) 4 1/8" Grinding Wheels (1/8" & 3/16")
- Sharpens 1/4", 3/8 LP, .325", 3/8" STD, And .404" Pitch Chains



READ BEFORE USE

Made in China

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Technical Information

Model No	04844
Voltage	120V ~ 60Hz
Rated Power	85W
Max Speed	4600 rpm

FORESTER
POWERED BY **STIHL**
Ahlborn Equipment, Inc.
2924 ST. HWY 155
Sayner, WI 54560 USA



Grinding Wheel Dimensions

Outside Ø:
4 1/8" (105 mm)

Inside Ø:
7/8" (22.2mm)

Thickness:
1/8" (3.2 mm)
3/16" (4.7 mm)

IMPORTANT INFORMATION REGARDING EXTENSION CORDS

Ensure the electrical system power supply complies with values rated on the nameplate. If using an extension cord (not included), be sure to use one heavy enough to carry the current of the grinder. Use of an improper, under sized extension cord will result in a drop in line voltage, causing overheating and loss of power. Refer to the chart at the right for minimum compatible extension cord gauges for this machine. Never use a damaged extension cord. Always inspect extension cords for damage before use.

Minimum Extension Cord Gauges

Length	Gauge, AWG
25ft / 7.6m	18
50ft / 15.2m	16
100ft / 30.5m	16
150ft / 45.7m	14

Safety Information

READ THIS MANUAL BEFORE USE! Keep in a safe place for future reference for safety information, installation, operation, and maintenance information.

Wear the Right Personal Protection Gear!

Always wear proper safety eye wear and protective gloves when operating the grinder. Dust masks are also recommended if there is a lot of dust while cutting. Do not overreach. Stand on stable, dry floor when operating. Non-slip shoes are also recommended.

Never wear loose clothing, neckties, or jewelry (necklaces, rings, bracelets, etc.) while operating the grinder. Keep long hair up and out of the way, wearing protective hair covering if needed. These can become caught in moving parts of the unit and can cause serious injury to the user and/or property damage.

Inspect the Grinder Before Each Use!

Always inspect the unit for loose parts, damage, or other defects before operating. Keep safety guard shields in place, and inspect for improper fit or damage before starting unit. Damaged shields could compromise the effectiveness of the safety feature. Always be sure the unit is mounted securely in place.

If the grinding wheel shows any sign of cracks or damage, discard and replace immediately to avoid serious injuries to operator and/or bystanders.

NEVER ATTEMPT TO STOP A MOVING GRINDING WHEEL WITH YOUR HANDS!

To do so may cause serious abrasive burns or other injuries.

Beware of Electrical Hazards! DO NOT OPERATE UNIT IN WET ENVIRONMENTS!

Operate in clean, dry environments only. Never operate near flammable or combustible materials. Ensure the power switch is turned to the OFF position before connecting to the power mains.

Keep Others Safe!

Keep grinder, accessories, and tools out of reach of children. This device is only intended for use by adults. Do not allow children or anyone unfamiliar with the grinder to operate the unit. Keep children and bystanders at a safe distance away from the work area. Never leave machine running unattended!

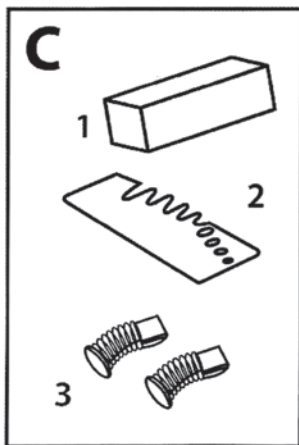
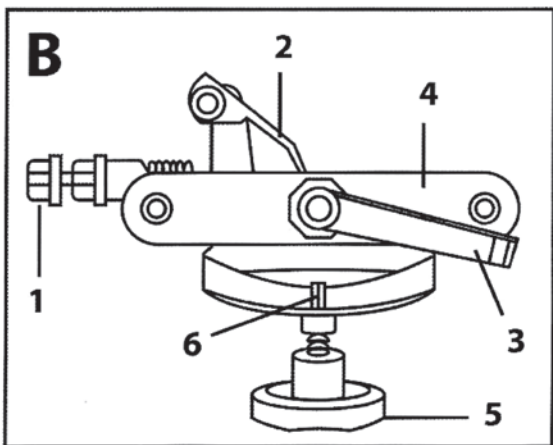
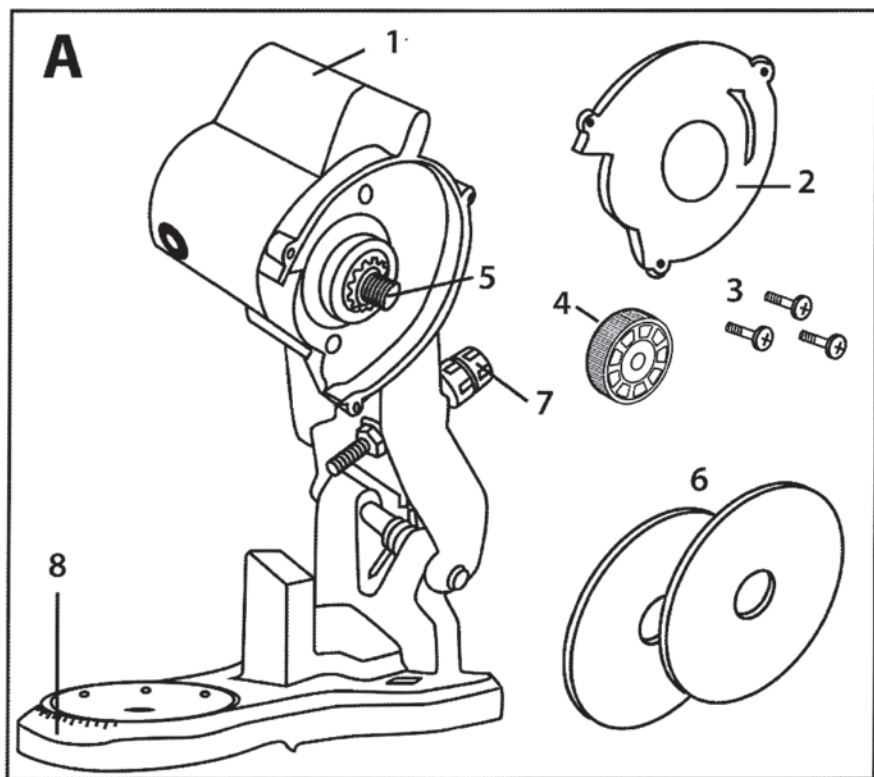
Do Not Use Grinder for Anything Other Than Intended Purposes!

This electric grinder is intended for sharpening saw chain for chain saws. Any other use is considered "improper use", which also includes incorrect installation, lack of maintenance, use of non-original parts, unauthorized repairs, and failure to follow instructions and safety guidelines. Improper use will void any warranties.

Manufacturer will not be held liable for injury or damages caused by the improper use of this machine!

Getting Started

Included Parts



Getting Started

Included Parts & Descriptions

This unit is partially pre-assembled.

A. Motor Unit

1. Operating Handle
2. Grinding Wheel Shield
3. Shield Screws
4. Flange Knob
5. Wheel Flange
6. (2) Grinding Wheels
 - 3/4" x 1/8" x 7/8" (Installed)
 - 3/4" x 3/16" x 7/8" (Included)
7. Depth Adjustment Knob
8. Vise Angle Guide Plate

B. Vise Assembly

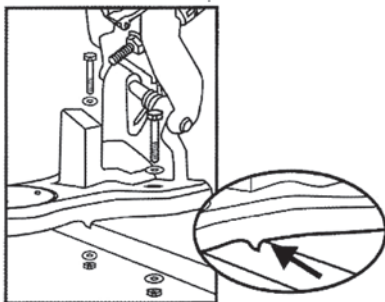
1. Chain Stop Adjustment Knob
2. Chain Stop
3. Vise Handle
4. Vise Jaws
5. Vise Adjustment Knob
6. Reference Mark Pointers

C. Additional Parts

1. Dressing Brick
2. Shape Template
3. (2) Motor Brushes

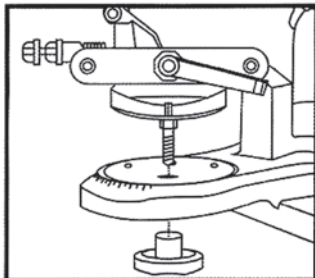
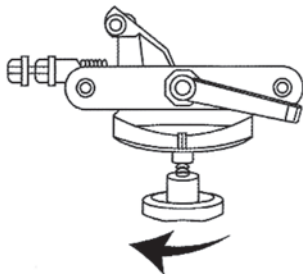
Bench Mounting the Unit

Use (2) bolts with washers & nuts (Not included). Insert into mounting holes, being sure to position the unit so that it hangs over the edge of the bench.



Attaching the Vise

Unscrew the vise adjustment knob by turning clockwise. Put the vise assembly bolt into the hole on the motor unit and reattach the adjustment knob to secure.

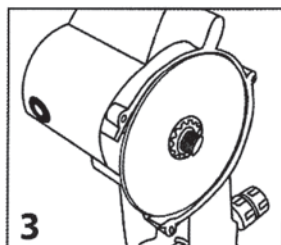
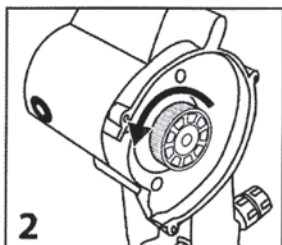
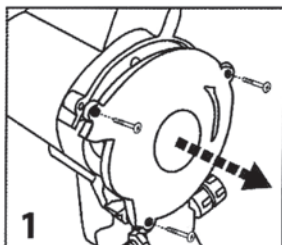
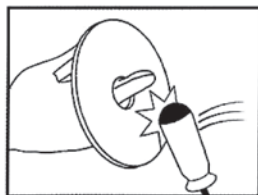


Installing a Grinding Wheel



Test the Grinding Wheel Before Use!

Hold the grinding wheel by its arbor (center hole) and gently tap the edge of the wheel with a non-metallic object. A non-metallic, dull sound indicates the wheel may be damaged and **SHOULD NOT BE USED**.



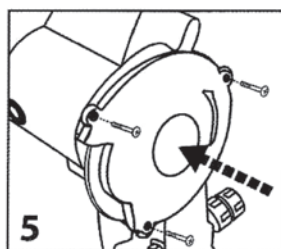
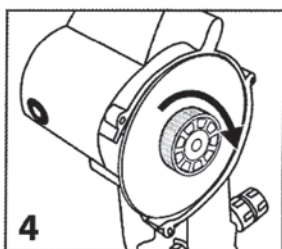
1.) Using a Phillips head screwdriver, remove the 3 screws holding the wheel shield in place. Remove the wheel shield.

2.) Remove the flange knob by unscrewing counter-clockwise.

3.) Insert the grinding wheel so that it sits perfectly center on the flange.

4.) Reinstall the flange knob by screwing clockwise until securely tightened.

5.) Reinstall wheel shield using a Phillips head screwdriver to replace the 3 screws.



WARNING!



- Never use force when installing the grinding wheel
- Never alter the grinding wheel's arbor (center hole)
- Only use grinding wheels that fit properly on your grinder
- Always ensure flange & flange knob are clean and undamaged.

Checking the Grinding Wheel Assembly

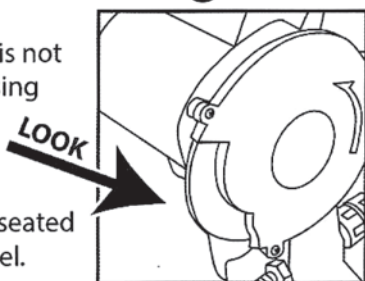
! WARNING! Always check newly installed grinding wheels at working speed for at least one minute before using the grinder. Stand at a safe distance to the side of the unit and keep other people away from the machine. Never touch the moving grinding wheel with your hands or any other body part or object. Doing so may result in burning, abrasions, and other injury or damages.

Standing at the side of the grinding wheel, start the grinder by turning the switch to the **"ON"** position.



Visually inspect the grinding wheel, ensuring it is not spinning sideways, crosswise, or otherwise causing any abnormal vibrations.

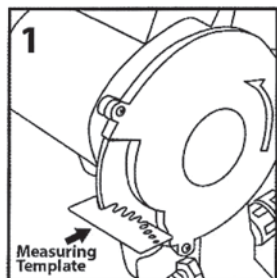
If the wheel is spinning abnormally, turn off the machine immediately and check if the wheel is seated correctly. If necessary, replace the grinding wheel.



Dressing the Grinding Wheel

! When dressing the grinding wheel, be sure to wear eye, ear, and hand protection.

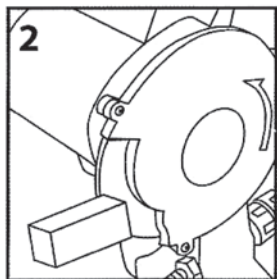
1.) While the machine is turned **OFF**, check the grinding wheel profile using the measuring template. If necessary, you will have to dress the grinding wheel to restore the profile.



2.) Turn on the grinder. Carefully shape the profile of the grinding wheel with a dressing brick, holding it firmly with both hands.



3.) Turn the machine off and wait for the grinding wheel to come to a complete stop. Check the grinding wheel's profile again using the template. If necessary, repeat dressing the wheel until the profile correctly matches the template.



Sharpening Instructions

Ready to start grinding? Below are sharpening instructions.

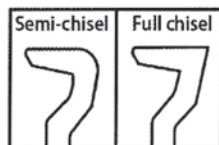
! WARNING! Remember to always have your grinder turned off while preparing to grind. Always read your saw chain manufacturer's filing/grinding instructions before sharpening your chainsaw chain. Saw chain can be very sharp, always wear protective gloves while handling chain.

Please check the size of the saw chain you are using:

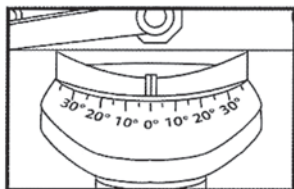
Examples of saw chain sizes will be **1/4", 3/8" EXT.** (small 3/8" chain) **.325", 3/8"** (large) and **.404"**.

- For **1/4", 3/8" EXT.** and **.325"** size saw chain, please use the **1/8"** grinding wheel provided in this package.
- For **3/8"** and **.404"** size saw chain, please use the **3/16"** grinding wheel provided in this package.

Verify if your saw chain has a round tooth (semi-chisel) or a square/flat tooth on top (full chisel.)



Place the saw chain into the vise, make sure that the chain will flow freely through the vise, pulling it to the right. (See Page 7)



You will notice connected to the vise on the bottom there is an aluminum base with numbers. These numbers are the grinding degree angles needed to properly set your grinder to be able to grind your saw chain back to its original angles and cutting shape.

VERY IMPORTANT! Rule of thumb for saw chain grinding:

- **Know your size** (same as above) of saw chain.
- **Know your tooth design** (as above) round tooth (semi chisel) or square/flat tooth (full chisel chain)

Depending on your tooth design, this will determine the # of angle/degrees you will use to grind your saw chain.

Most saw chain manufacturers have determined that 25° is best for round tooth (semi chisel) and 30° is best for Square/flat tooth (full chisel.)

For example, if you have a small 3/8" EXT. chain, you will place your saw chain in the vise, with teeth facing to the right. Since we have determined that this is a round tooth (semi-chisel) chain, we will set the bottom base to 25°.

Sharpening Instructions

Let's start from the beginning!



Step 1: Select the correct wheel size for your saw chain.

Step 2: Determine your tooth design.

Step 3: Set your degree on your bottom base for your tooth design.
25° for round tooth, 30° for square.

Step 4: Put chain into vise, with all teeth facing to the right

Step 5: Make sure chain flows freely through the vise.

Step 6: Finding the tooth on the chain you feel is the "shortest" (left or right hand teeth; check both sides at this time,) you will need to start with this tooth first.

Step 7: For your saw chain to cut the best after using/grinding, you will want ALL teeth- right **and** left hand cutters- to be the same length after grinding.

Step 8: Start by turning the base to the left and to your desired degree setting. Pull the chain through and back, so the first right tooth to be ground is back against the chain catch. The chain catch will secure the back of the tooth down while sharpening. It is also important at this time to clamp the vise tightly to secure chain in vise while sharpening to ensure safety and a perfect angle while grinding.

VERY IMPORTANT! After grinding a few teeth and getting the hang of it, you will need to set the DEPTH of the grinding wheel. Going too low will actually hurt the chains cutting ability (see page 10, diagram 11, step 11.) Set your depth using the depth adjustment knob. After setting the depth of the first tooth, you will use the same depth for all teeth, both left and right hand cutters, giving it a uniform depth.

Step 9: Grind all right hand teeth using above directions.

Step 10: Simply turn vise/base back to the right, setting your degrees (25° for round, 30° for square tooth chains.) Now you can sharpen all of the left hand teeth cutters, using same steps above, except with the left hand teeth/cutters.

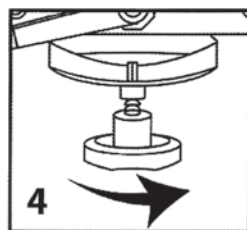
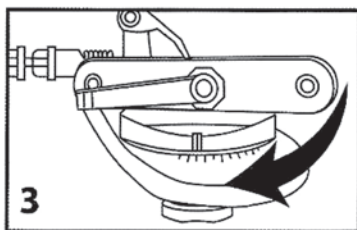
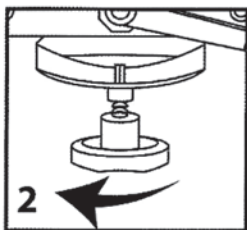
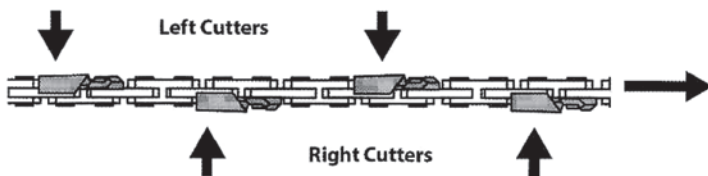
Refer to the following pages for more detailed instructions, illustrations, and more. As always, follow all safety warnings and guidelines provided in this manual.

Putting the Chain into the Vise

! WARNING! Always wear hand protection when handling saw chain. Make sure the motor is off and the wheel is completely stopped before placing chain in the vise. Do not over grind the chain or rest the wheel on any one cutter for too long. Make sure the chain is clean before sharpening. Never use any cooling fluids while sharpening.

1.) Check the chain before sharpening, find and take note of the most damaged cutter. This should be the cutter you start with.

Make sure the chain is placed in the vise with the cutter direction going right.



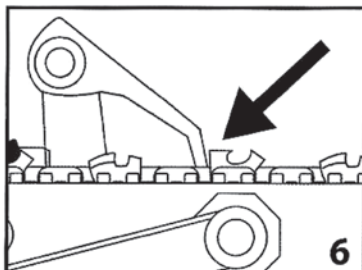
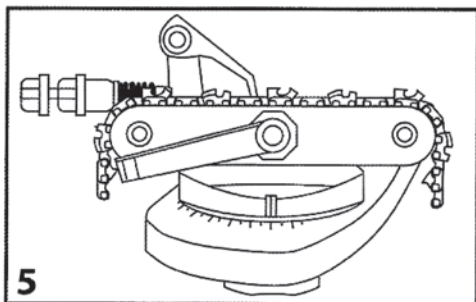
2.) Loosen the adjustment knob on the vise.

3.) Rotate the vise assembly to desired angle; To the left for right hand cutters and right for left hand cutters.

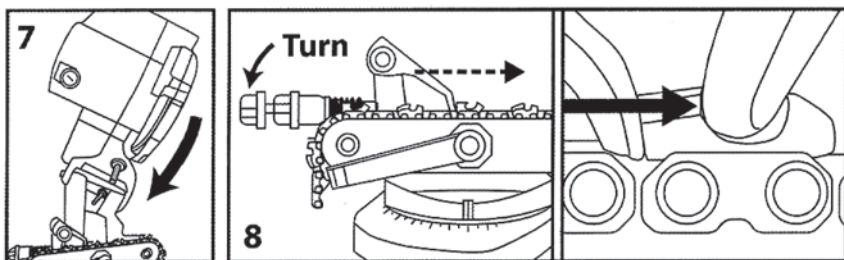
4.) Re-tighten the adjustment knob on the vise.

5.) Place the chain in the vise.

6.) Slide a cutter against the chain stop.

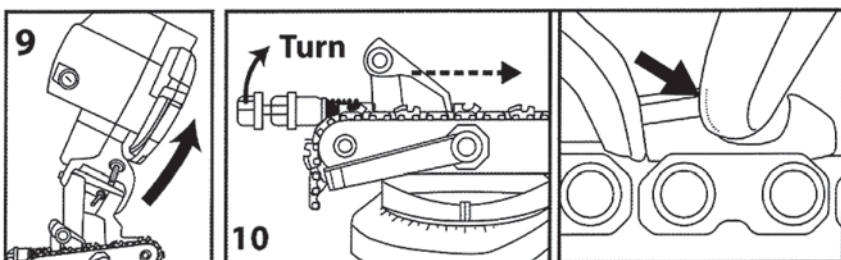


Putting the Chain into the Vise



7.) Position the grinding wheel onto the cutter you will be sharpening by pulling the operating handle down to lower the motor unit.

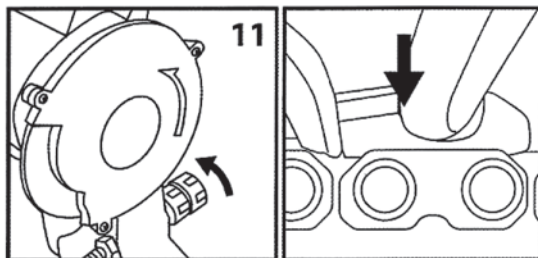
8.) Use the chain stop adjustment knob to move the chain, making it so the cutter edge just grazes the grinding wheel. The chain should move freely over the vise, but with no clearance.



9.) Use the operating handle to raise the motor unit again.

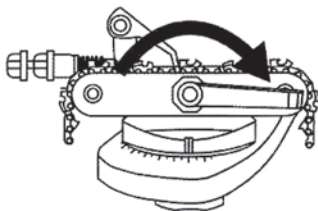
10.) Turn the chain stop adjustment knob clockwise, slowly moving the cutter to be sharpened forward. The forward movement will correspond to the amount of material to be ground from the cutter. The more damaged or dull the cutters, the greater the forward movement should be. Cutters that are not so dull need only slight grinding.

11.) Turn the depth adjustment knob to adjust the sharpening depth for the cutter. The grinding wheel should vertically graze the bottom of the cutter.



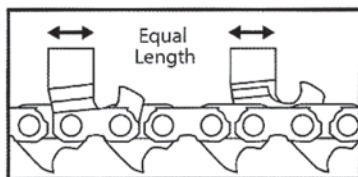
Operating the Grinder

After you've found the correct position for the cutter, depress the center button on the vise handle and rotate the handle clockwise to tighten the clamp. You're ready to sharpen the chain.

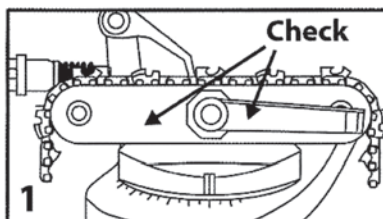


⚠ WARNING! Always wear hand & eye protection when operating grinder.

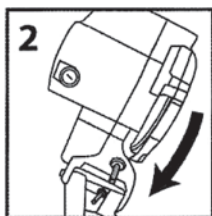
- Ensure all cutter top plates are equal length. Sharpen all cutters on one side, and then adjust the vise again to sharpen the opposite side.
- Be careful not to grind too much material in one pass, as this could cause the cutter to burn and reduce its hardness.



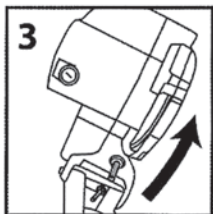
1.) Ensure the vise handle has been securely tightened clockwise so that the vise jaws are tight and the cutter is stopped.



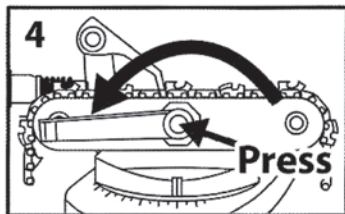
2.) Start the grinder by turning on the unit. Use the operating handle to lower the unit and sharpen the cutter.



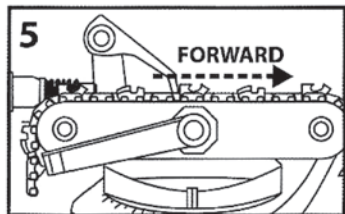
3.) Once you have sharpened the first cutter, use the operating handle to raise the unit again.



4.) Press the center vise handle button and rotate the handle counter clockwise to loosen.



5.) Move the chain forward, positioning the next cutter to be sharpened. Make sure the chain stop is firmly seated against the rear of the cutter. Tighten the vise handle again to clamp the chain and proceed to sharpen the next cutter.

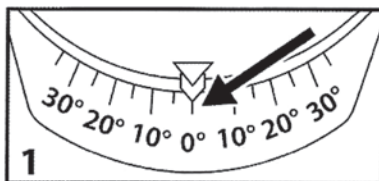


Setting The Depth Gauge

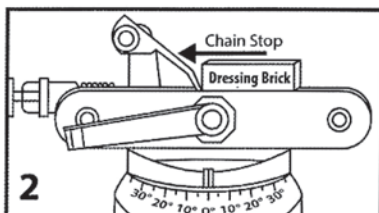
- ! WARNING!** Always wear hand & eye protection when operating grinder.
• Depth gauges can be set using 1/4" wheel (Not included) or by using a flat file and depth gauge tool (Not included).

1.) To dress the grinding wheel to set the depth gauge, fit a 1/4" thick grinding wheel (Not included), following the same instructions given previously for installing a grinding wheel
(Please note that you do **NOT** need to check or dress the grinding wheel shape.)

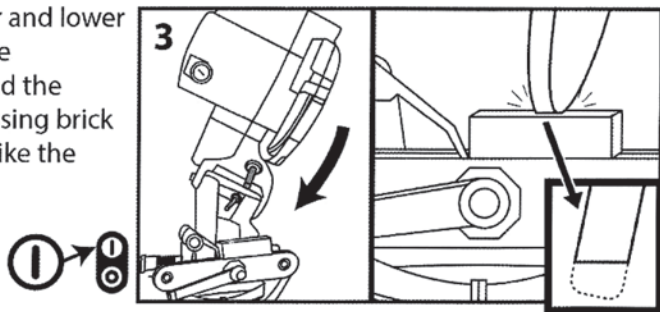
Turn the vise so the reference mark pointer is set to 0°.



2.) Position the dressing brick onto the vise, against the chain stop. Hold the brick firmly with one hand, ensuring your hands and fingers are clear of the grinding wheel.



3.) Turn on the grinder and lower the motor unit with the operating handle. Grind the wheel against the dressing brick until the profile looks like the figure shown.



When dressing the grinding wheel, be sure to use only intermittent strokes as to avoid causing burns to the dressing stone.

- ! WARNING!** Contact with the grinding wheel during operation at high speeds could cause injury or damage by burning and abrasions. Avoid contact with spinning grinding wheel.

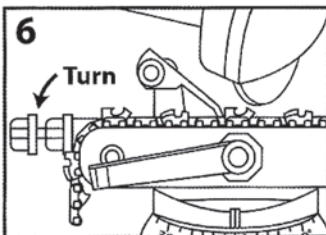
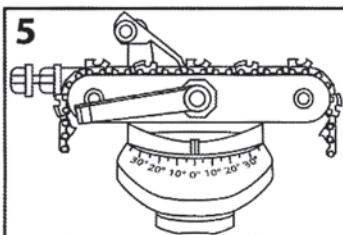
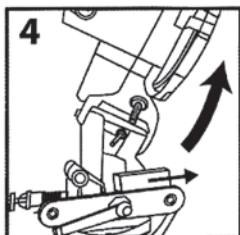
Setting The Depth Gauge

4.) Raise the unit with the operating handle and stop the grinder by turning the unit off. Remove the dressing brick from the vise.

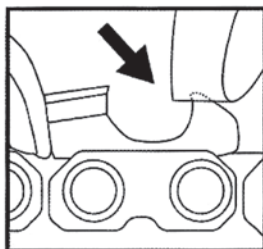
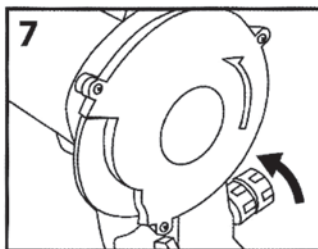


5.) Put your chain in the vise, putting a cutter up against the chain stop.

6.) Pull the motor unit down and turn the chain stop adjustment knob, moving the chain so the cutter's depth gauge is below the grinding wheel.

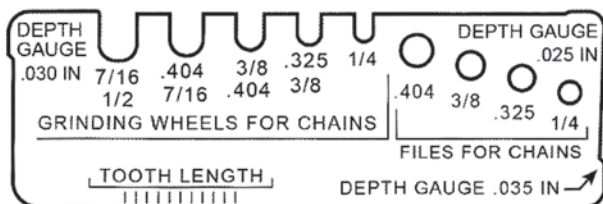


7.) While the motor unit is pulled down, adjust the grinding depth on the gauge by turning depth adjustment knob.



8.) To set the depth gauge, refer to the instructions for sharpening the chain. For this method, there is no difference between right and left cutters, so you may sharpen all gauges one after another.

Check if the gauge depth is correct by using the template shape that corresponds with the type of chain you are sharpening.



Cleaning & Maintaining Your Grinder

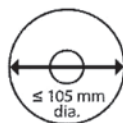
When you are finished using the machine, turn the power switch to the off position and disconnect the power cable from mains. Store in a dry, clean environment.



- Before cleaning or performing maintenance on your grinder, ensure that the power is turned off and the power cord is disconnected from the mains. Regularly inspect the power cord for damage. Disconnect power cord from outlet immediately if the cable appears cut or damaged in any way.



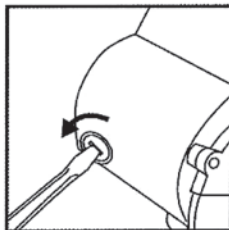
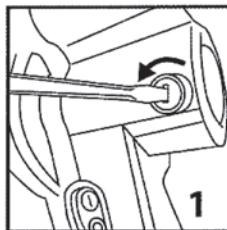
- When the grinding wheel reaches a minimum diameter of around 105 mm, it is time to replace it.



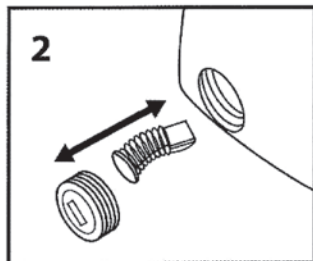
- After about 40 hours of use, you should thoroughly clean the grinder carefully, using a cleaning brush or rag. Use caution when cleaning the motor and sliding guards. **Never use compressed air to clean your grinder!**

If there is a decrease in performance, or if the motor fails, replace the motor brushes.

- 1.) Power down the grinder and unplug power from mains. Use a flat head screwdriver to unscrew and remove the two brush covers.



- 2.) Remove the old brush and replace it with a new one, making sure to seat it fully within the unit before replacing the brush covers.





Proper Disposal of Guidelines

This machine should **not** be disposed of in household garbage. Contact an authorized dealer or shop for proper disposal instructions according to the laws in your area. The machine should only be demolished by qualified personnel in accordance with these regulations. Before scrapping, remove the power cable to render the machine unusable.

WARRANTY

This chain grinder includes an unconditional 30 day warranty on materials and workmanship.
(Proof of purchase date must accompany warranty claim.)

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