



**ORIGINAL INSTRUCTION MANUAL  
Bench Chain Grinder Model 410-120**

**MANUEL D'INSTRUCTIONS ORIGINAL  
Meuleuse électrique pour chaînes de scie  
à moteur modèle 410-120**

**MANUAL ORIGINAL DE INSTRUCCIONES  
Afiladora eléctrica para cadenas  
de motosierra modelo 410-120**



## ENGLISH . . . . . 4

**⚠ WARNING: READ AND UNDERSTAND ALL SAFETY WARNINGS AND ALL INSTRUCTIONS. FAILURE TO FOLLOW THE WARNINGS AND INSTRUCTIONS MAY RESULT IN ELECTRIC SHOCK, FIRE AND/OR SERIOUS INJURY. SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.**

This instruction manual contains translations of a manual drafted in English and are provided to assist those who do not speak English as their first language. Being a technical writing, some terms may not have a like or equivalent meaning as translated. Therefore, you should not rely on this translation, and should cross-reference the English version, where relying on the translated instructions could result in harm to your person or property.

## FRANÇAIS . . . . . 37

**⚠ AVERTISSEMENT : VEUILLEZ LIRE ET COMPRENDRE TOUS LES AVERTISSEMENTS DE SÉCURITÉ ET TOUTES LES INSTRUCTIONS. LE NON-RESPECT DES AVERTISSEMENTS DE SÉCURITÉ ET DES INSTRUCTIONS PEUT ENTRAÎNER UNE DÉCHARGE ÉLECTRIQUE, UN INCENDIE ET/OU DES BLESSURES GRAVES. CONSERVEZ L'ENSEMBLE DES AVERTISSEMENTS ET INSTRUCTIONS POUR RÉFÉRENCE ULTÉRIEURE.**

Ce manuel d'instructions est une traduction d'un manuel rédigé en anglais, fournie pour aider ceux dont l'anglais n'est pas la langue maternelle. Étant donné qu'il s'agit d'un document technique, certains termes peuvent ne pas avoir de signification similaire ou équivalente lorsqu'ils sont traduits. Par conséquent, vous ne devez pas vous fier à cette traduction et devriez consulter la version anglaise également, au cas où les instructions traduites pourraient provoquer des blessures ou des dommages matériels.

## ESPAÑOL . . . . . 71

**⚠ ADVERTENCIA: LEA Y COMPRENDA TODAS LAS ADVERTENCIAS DE SEGURIDAD Y LAS INSTRUCCIONES. LA OMISIÓN EN SEGUIR ESTAS ADVERTENCIAS E INSTRUCCIONES PODRÍA OCASIONAR UNA DESCARGA ELÉCTRICA, UN INCENDIO Y/O LESIONES PERSONALES GRAVES. GUARDE TODAS LAS ADVERTENCIAS E INSTRUCCIONES PARA REFERENCIA FUTURA.**

Este manual de instrucciones contiene traducciones de un manual redactado en inglés y se provee para ayudar a aquellas personas que no hablan inglés como su primer idioma. Dado que el manual es un documento técnico, es posible que algunos términos no tengan un significado similar o equivalente al traducirlos. Por lo tanto, no debe confiar en esta traducción y debe consultar la versión en inglés; confiar en las instrucciones traducidas podría provocar lesiones personales o daños materiales.

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

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## NAMES AND TERMS

**Skilled Technician:** a person who is generally employed by the service center and who is trained to carry out extraordinary maintenance jobs and repairs on the machine.

## SYMBOLS AND LABELS

These symbols and labels appear on the tool and/or in this manual.

SYMBOL	NAME	EXPLANATION
	SAFETY ALERT SYMBOL	INDICATES THAT THE TEXT THAT FOLLOWS EXPLAINS A DANGER, WARNING, OR CAUTION.
	READ INSTRUCTIONS	THE ORIGINAL INSTRUCTION MANUAL CONTAINS IMPORTANT SAFETY AND OPERATING INFORMATION. READ AND FOLLOW THE INSTRUCTIONS CAREFULLY.
	WEAR EYE PROTECTION	WEAR EYE PROTECTION.
	WEAR HAND PROTECTION	WEAR GLOVES WHEN HANDLING SAW CHAIN.
	DO NOT DISPOSE	DO NOT THROW IN HOUSEHOLD WASTE. TAKE TO AN AUTHORIZED RECYCLER.
	DAMAGED CABLE	INSPECT THE POWER CORD REGULARLY FOR DAMAGE. REMOVE THE PLUG FROM THE MAINS IMMEDIATELY IF THE CABLE IS DAMAGED OR CUT.
	UNPLUG BEFORE MAINTENANCE	UNPLUG BEFORE PERFORMING ANY MAINTENANCE.

## SAFETY INFORMATION

### FOR YOUR OWN SAFETY READ THIS OPERATOR'S MANUAL BEFORE OPERATING GRINDER

Keep this manual for future reference. To ensure the correct use of the grinder and to prevent accidents, do not start working without having read this manual carefully. The manual explains how the various components work and provides instructions for carrying out the necessary checks and maintenance operations.

### SAFETY RULES AND PRECAUTIONS

**⚠ WARNING** The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to operator or bystander. Any maintenance operation not described in this manual must only be carried out by an AUTHORIZED service center.

**⚠ CAUTION** The following instructions should be carefully followed in order to reduce the risk of kickback resulting from improperly sharpened saw chain.

**⚠ WARNING** Replace cracked or damaged grinding wheel immediately. Serious injury to operator or bystander could result from a damaged wheel.

### USERS

The grinder must only be used by adults. Users must be in good physical condition and familiar with the instructions for use.

### KEEP BYSTANDERS AND CHILDREN AWAY

All bystanders should be kept at a safe distance from work area.

### WEAR PROPER APPAREL

Never wear loose clothing, bracelets, neckties, rings or any other jewelry that could come into contact or get caught with the grinding wheel or any other moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

### ALWAYS USE SAFETY GLASSES AND GLOVES

Always wear gloves and protective eyewear while operating the grinder and while retouching the grinding wheel using the dressing stone. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

### NEVER STOP THE WHEEL WITH YOUR HANDS

Never attempt to stop the rotation of the grinding wheel with your hands.

### DISCONNECT TOOLS BEFORE SERVICING

Make sure the plug is disconnected when fitting or changing the grinding wheel and during any other operation of maintenance or transport.

### KEEP GUARDS IN PLACE AND IN WORKING ORDER

Never start the grinder without the wheel guards in place.

### REMOVE ADJUSTING KEYS AND WRENCHES

Make sure that keys and adjusting wrenches are removed from tool before turning it on.

### DON'T FORCE TOOL

It will do the job better and safer at the rate for which it was designed. Each grinder has a plate indicating:

– Size of arbor: Ø .866" (22 mm)

– No-load speed in revolutions per minute: RPM 3150

– Always read operator's manual before operating the machine

– Always wear eye and face protection

– Always use the proper grinding wheel

Also make sure that the voltage and frequency indicated on the plate applied to the grinder correspond to those of the mains hook-up.

### REDUCE THE RISK OF UNINTENTIONAL STARTING

Always make sure that the start-up switch is in the "0" (OFF) position before connecting the plug to the outlet.

### NEVER USE CABLES, PLUGS OR EXTENSION CABLES THAT ARE DEFECTIVE OR NON-STANDARD

See "Minimum Extension Cord Gauges" table on page 12 Remove the plug from the mains immediately if the cable is damaged or cut; for cable repair or replacement, contact your authorized dealer or service center. The power supply cable is complete with terminals – with protection. The internal electrical connection consists of inserting the feeding cable terminals directly in the switch. The electrical connection to the mains shall be made in such a way as to prevent damage by people or vehicles which could endanger both them and you.

### KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents. Make sure that the grinding wheel working area is free of tools or other objects before starting up the grinder. Frequently clean grinding dust from beneath grinder.

### DON'T USE IN DANGEROUS ENVIRONMENTS

Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

### CHECK THE POSITION OF THE CABLE DURING OPERATION

Make sure that the cable remains outside the range of action of the grinding wheel and is not under tension. Never operate in the vicinity of other electrical cables.

### DIRECTION OF FEED

Feed work into a blade or cutter against the direction of rotation of the blade or cutter only. Never advance the chain with your left hand until the grinding wheel has moved entirely outside the work area.

### MAKE WORKSHOP CHILD PROOF

Use padlocks, master switches. Do not allow anyone but the user to remain in the vicinity of the grinder while it is operating or to touch the grinder supply cable.

### ALWAYS KEEP THE HAND GRIPS CLEAN AND DRY

### SECURE GRINDING WHEEL

Make sure the grinding wheel is secured before starting the grinder. Do not over-tighten the wheel nut.

### SECURE WORK

Make sure that the machine is stable and firmly secured. Use the vise to hold chain. This frees both hands for moving the wheel down to grind the chain.

### DON'T OVERREACH

Keep proper footing and balance at all times.

### NEVER STAND ON TOOL

Always work in a stable and safe position. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

### ALWAYS FOLLOW MAINTENANCE INSTRUCTIONS

### CHECK FOR DAMAGED PARTS

Before using the grinder, check to make sure that all the devices, those for safety and others, are in good working order. A guard, a wheel or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard, a wheel or other part that is damaged should be properly repaired or immediately replaced.

### USE RECOMMENDED ACCESSORIES

Consult the operator's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons. Use only flanges furnished with the grinder. To guarantee the efficient and consistent operation of your grinder, remember that any worn or broken parts must only be replaced using ORIGINAL SPARE PARTS.

### USE ONLY RECOMMENDED GRINDING WHEELS

### CHECK YOUR MACHINE

Never work with a damaged, poorly repaired, incorrectly fitted, or arbitrarily modified grinder. Do not remove, damage, or disable any safety device.

### USE THE RIGHT TOOL

Never use the grinder as a cutter or for grinding objects other than saw chains. Don't force tool or attachment to do a job for which it was not designed.

### EXPERT USERS ONLY

Only lend your grinder to expert users who are familiar with its operation and correct use, and always give them the operator's manual to read before they start a job.

### MAINTAIN TOOLS WITH CARE

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

### STORE YOUR GRINDER IN A DRY PLACE

Keep it off the ground and out of the reach of children.

### NEVER LET YOUR GRINDER BE EXPOSED TO RAIN OR DAMPNES

### NEVER USE THE GRINDER IN AN EXPLOSIVE OR INFLAMMABLE ATMOSPHERE

### TAKE THE GRINDER TO YOUR DEALER

When your grinder is not in working order, do not abandon it on the work site or elsewhere. Take it to your dealer who will store or dispose of it correctly.

### CONSULT YOUR DEALER

Always consult your dealer for any clarification or important maintenance or repair operation.

### NEVER JERK THE CABLE TO DISCONNECT IT FROM THE OUTLET

Keep the cable away from heat, oil, and sharp objects.

### USE PROPER EXTENSION CORD

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

The table below shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Minimum Extension Cord Gauges for 410-120 Grinder	
Length	Gauge, AWG
25 ft. / 7.6 m	18
50 ft. / 15.2 m	16
100 ft. / 30.5 m	16
150 ft. / 45.7 m	14

#### NEVER LEAVE TOOL RUNNING UNATTENDED

Turn power off. Do not leave tool until it comes to a complete stop.

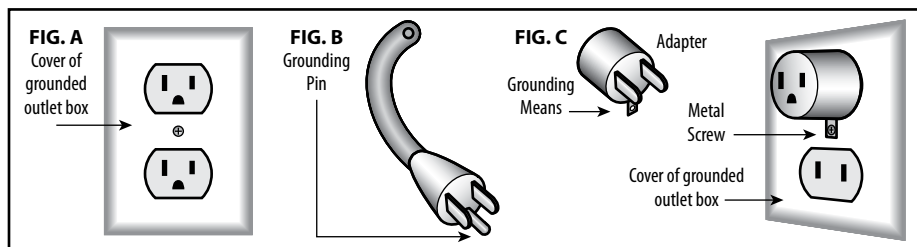
#### SETTING UP THE GRINDER

**CAUTION** The grinder must only be used in a place that is protected from dust and dampness, is well-lit, out of the reach of children, and away from gases or other flammable or explosive liquids.

The grinder must be situated near a normal grounded electrical outlet. Avoid using dangerous extension cables.

#### ELECTRICAL CONNECTION

- Make sure the electrical system power supply complies with the values written on the rating nameplate.
- The power supply voltage must not differ from that written on the nameplate by  $\pm 5\%$ .
- The connection to the electric mains must be prepared subject to current standards in force in the country in which the machine is used.
- The mains used for the machine must be grounded, have an adequate fuse, and must be protected by a ground fault protection device with tripping sensitivity no higher than 30 mA.



#### GROUNDING INSTRUCTIONS

**A.** In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. Repair or replace damaged or worn cord immediately.

**B.** Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150V~. This tool is intended for use on circuit that has an outlet that looks like the one illustrated in FIG. A. The tool has a grounding plug that looks like the plug illustrated in FIG. B. A temporary adapter, which looks like the adapter illustrated in FIG. C, may be used to connect this plug to a 2-pole receptacle as shown if a properly grounded outlet is not available. The temporary adapter should be used only until a qualified electrician can install a properly grounded outlet. The Grounding Means green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

#### GENERAL INFORMATION

The manufacturer is not liable for damages in the following cases:

- Failed observance of the instructions given herein;
- Use of the machine other than that described in the "INTENDED USE" section;
- Failure to use in compliance with current standards on Health & Safety at the workplace;
- Incorrect installation;
- Lack of scheduled maintenance;
- Modifications or jobs that are not authorized by the manufacturer;
- Use of non-original or inadequate spare parts;
- Repairs that are not carried out by a specialist.

#### USING AND KEEPING THE OPERATOR'S MANUAL

The characteristics and the information given in this manual are merely indicative. The manufacturer reserves the right to add any modifications to the grinder considered necessary at any time. It is forbidden to reproduce any part of this document without authorization on behalf of the manufacturer.

The operator's manual is an integral part of the machine and must be kept in a safe place so that it can be consulted whenever need be. If you should lose your manual or it should deteriorate, you can request your dealer or an authorized service center for another copy. The manual shall accompany the machine at all times.

#### SAFETY DEVICES

The grinder is equipped with the safety devices illustrated on page 10.

- Shield guards: they protect the operator from parts of the grinding wheel that may come away during the sharpening process. These guards must always be fitted in place when the machine is in use. Always make sure the guards are efficient and fitted properly. Operator safety could be compromised if the guards are damaged and/or cracked.
- Switch: the machine features a safety switch with release coil. In the case of a sudden power failure, the switch trips automatically and disconnects the machine from the mains. The machine will not start even if the power supply is suddenly restored. You need to restart the grinder by turning the on-off switch to the on position, "I".

#### INTENDED USE

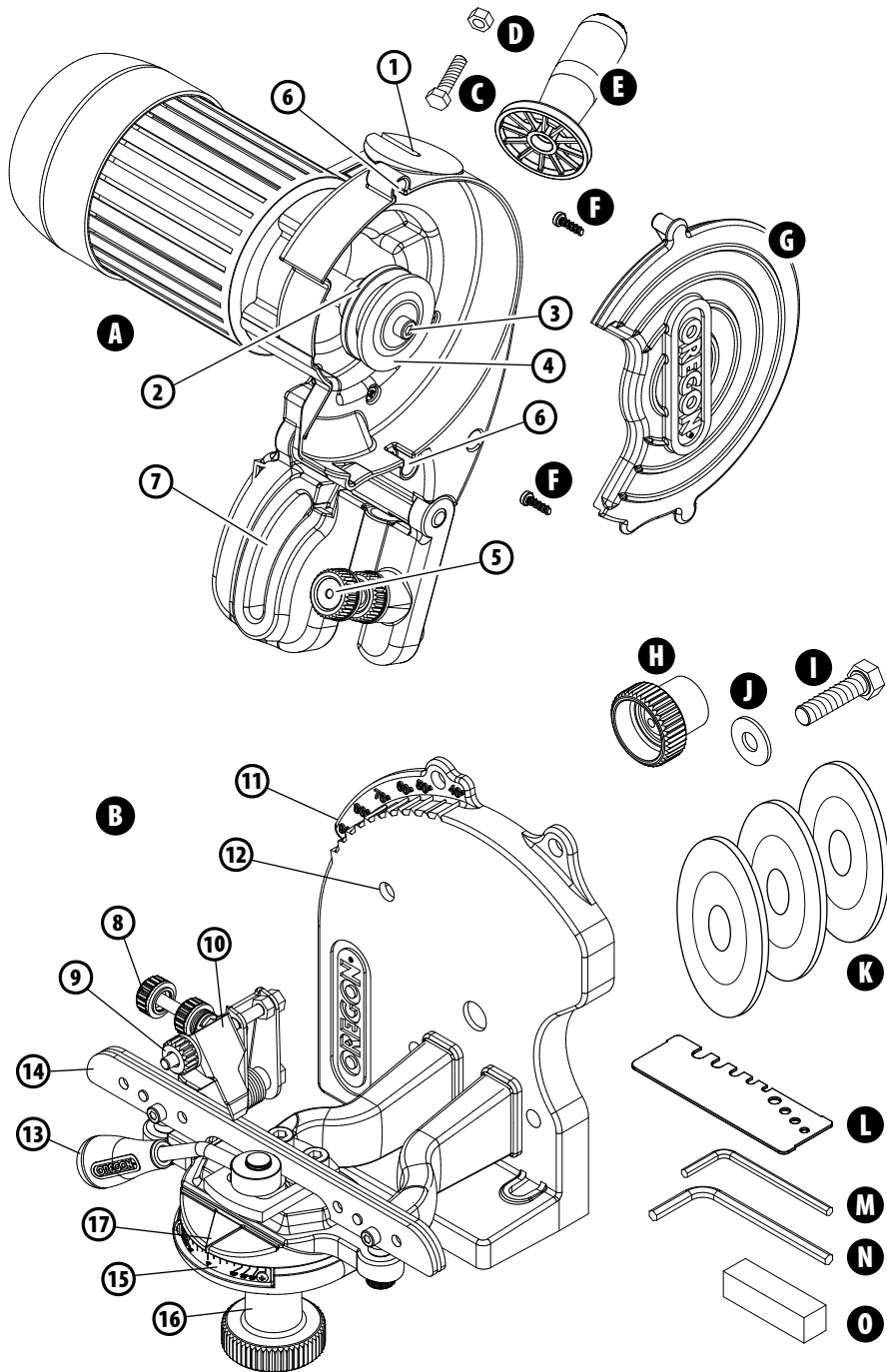
This machine is an electrical grinder for saw chains used on chain saws.

- Use the machine exclusively for the types of chains stated in the technical data chart.
- Do not use the machine to cut or grind anything other than the chains envisaged.
- Secure the machine firmly to the bench or wall.
- The machine must not be used in corrosive or explosive environments.
- Any other use is to be considered improper. The manufacturer is not liable for damages following improper or incorrect use of the machine.

#### TECHNICAL DATA

Model	410-120
Voltage	120V~ 60Hz
Rated power	220W
Grinding wheel dimensions	Outside Ø : 5 3/4" (145 mm) Inside Ø: 7/8" (22,2 mm) Thickness: 1/8" (3.2 mm) 3/16" (4.7 mm) 1/4" (6.3 mm)
Maximum speed of grinding wheel	3150 min <sup>-1</sup>
Maximum power of lamp	0,5W
Acoustic pressure level	77 dB(A)
Level of vibrations on operating handle	< 2,5 m/s <sup>2</sup>
Types of chains that can be sharpened	1/4" .325" 3/8" .404" 3/4" (*)
Weight (complete machine)	13.9 lbs/ 6.3 kg

(\*) only with specific kit (vise+grinding wheel) to be ordered separately.



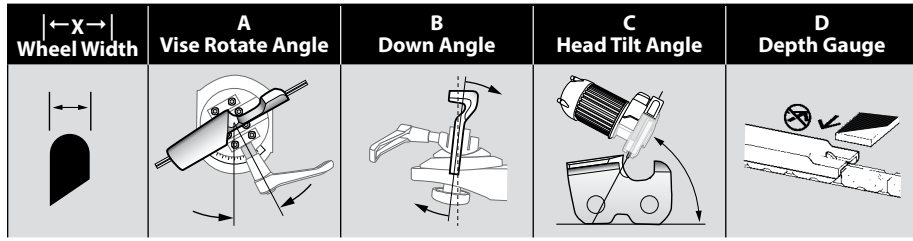
## PART DESCRIPTION

The grinder is supplied already partially assembled.

- A. Upper housing / motor unit
- B. Base unit
- C. Operating handle securing bolt
- D. Operating handle securing nut
- E. Operating handle
- F. Guard securing screws (2)
- G. Shield guard
- H. Upper housing locking knob (for bench-mount only)
- I. Upper housing securing bolt
- J. Upper housing washer
- K. Grinding wheels:  
 $5\ 3/4" \times 1/8" \times 7/8"$  (145 x 3.2 x 22.2 mm)  
 $5\ 3/4" \times 3/16" \times 7/8"$  (145 x 4.7 x 22.2 mm)  
 $5\ 3/4" \times 1/4" \times 7/8"$  (145 x 6,3 x 22.2 mm)
- L. Sharpening template
- M. 4 mm Allen wrench
- N. 5 mm Allen wrench
- O. Dressing brick

- 1. Operating handle mounting slot
- 2. Grinding wheel hub
- 3. Grinding wheel flange screw
- 4. Grinding wheel flange
- 5. Height adjustment knob
- 6. Shield guard mounting holes
- 7. Upper housing / motor unit mounting slot
- 8. Saw chain cutter adjustment knob
- 9. Chain stop adjustment knob
- 10. Chain stop
- 11. Head tilt angle guide plate
- 12. Upper housing / motor unit mounting hole
- 13. Vise handle
- 14. Vise (chain jaws)
- 15. Vise rotate angle guide plate
- 16. Vise adjustment knob
- 17. Vise reference mark pointers

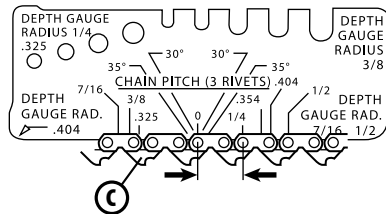
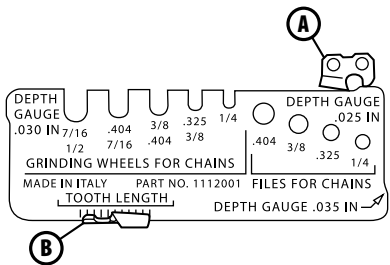
# GRINDING ANGLES CHART



		X	A	B	C	D
MICRO CHISEL®	20-21-22BPX	3/16"	30°	10°	55°	.025" .65 mm
	25AP, 25A, 25F	1/8"	30°	0°	55°	.025" .65 mm
	27A, 27AX	3/16"	30°	10°	55°	.030" .75 mm
	95VPX	3/16"	30°	10°	55°	.025" .65 mm
ROUND GROUND CHISEL	20-21-22LPX	3/16"	25°	10°	55°	.025" .65 mm
	M20-21-22LPX	3/16"	25°	10°	55°	.025" .65 mm
	58, 59L, J	3/16"	25°	10°	55°	.025" .65 mm
	68JX, LX	3/16"	25°	10°	55°	.030" .75 mm
	68CJ, CL		45°	45°	-	.030" .75 mm
	72-73-75JGX, JPX, LGX, LPX, M72-73-75LPX	3/16"	25°	10°	55°	.025" .65 mm
72-73-75V	3/16"	25°	10°	55°	.025" .65 mm	
SEMI-CHISEL	72APX/72-73-75DPX	3/16"	35°	10°	55°	.025" .65 mm
	91PXL, 91VXL, M91VLX	1/8"	30°	0°	55°	.025" .65 mm
RIPPING CHAIN	27R, RA	3/16"	10°	10°	50°	.030" .75 mm
	72-73-75RD	3/16"	10°	10°	50°	.025" .65 mm
CHAMFER CHISEL™	90PX, 90S, 90SG	1/8"	30°	0°	55°	.025" .65 mm
	91P, 91PX, 91VG, 91VX, M91VX	1/8"	30°	0°	55°	.025" .65 mm

# INSTRUMENTAL MEASUREMENTS

- A Measure the gauge depth using the suitable shape.
- B Measure the cutter length.
- C Measure the chain pitch.



# PREPARING FOR USE

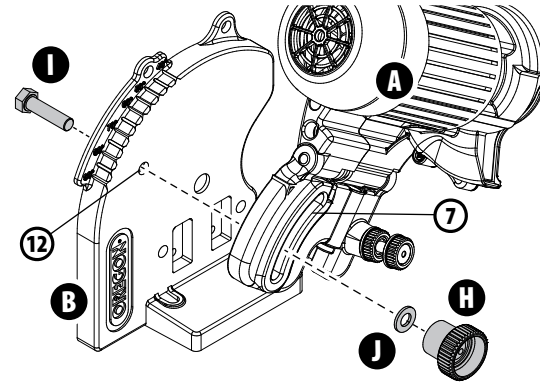
**ATTENTION** Do not install the machine at eye level. You are recommended to install it at a height of no more than 3.9 to 4.2 feet (1.2 – 1.3 m) from the floor. The machine can be bench mounted or wall mounted.

## MOUNTING THE BASE UNIT - MOTOR UNIT

### SECURING THE UPPER HOUSING / MOTOR UNIT

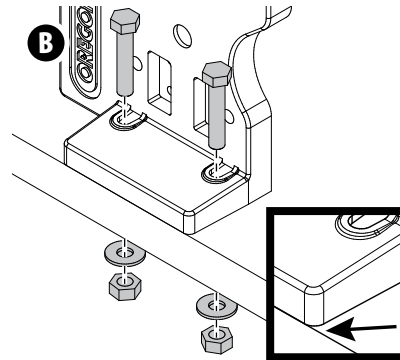
Insert the bolt (I) in the dedicated slot (7) in the motor unit (A) and through the mounting hole (12) in the support unit (B). Insert the washer (J) at the front and tighten the locking knob (H).

NOTE: you may need to depress the upper housing to ensure correct alignment.



### BENCH-MOUNTING

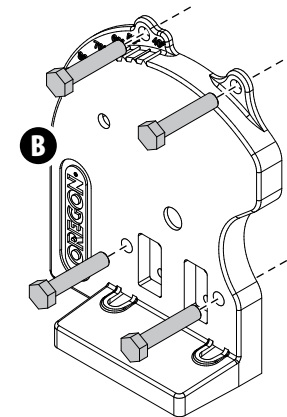
Use two (2) appropriate bolts complete with washers and nuts (not supplied), inserted in the securing holes. Make sure you position the base unit hanging over the edge of the bench as shown in the detail.



### WALL-MOUNTING

NOTE: assemble the upper housing / motor unit (A) to the base unit (B) before mounting to your wall.

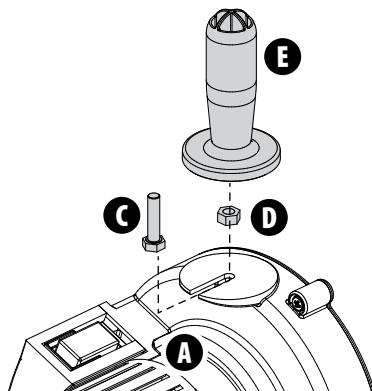
Use four (4) appropriate bolts complete with washers (not supplied), inserted in the securing holes.



**ASSEMBLY**

**SECURING THE OPERATING HANDLE**

- insert the nut (D) into the handle (E).
- insert the bolt (C) into the slot (1).
- Completely screw the operating handle (E) onto the bolt (C).



**CHOOSING AND INSTALLING THE GRINDING WHEEL**

**⚠ WARNING**

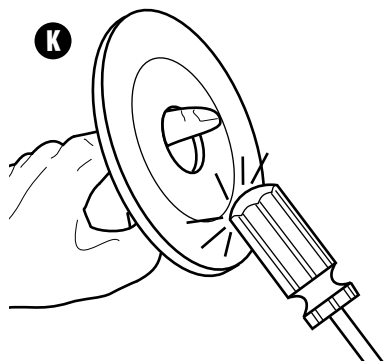
- Do not force the grinding wheel (K) on the hub (2) and do not alter the center hole diameter. Do not use grinding wheels that do not fit perfectly in place.
- Ensure hub (2) and flange (4) are clean and intact.

**CHOOSE THE GRINDING WHEEL**

Choose the correct size grinding wheel based on the type of chain to be sharpened (see the chain chart on page 12).

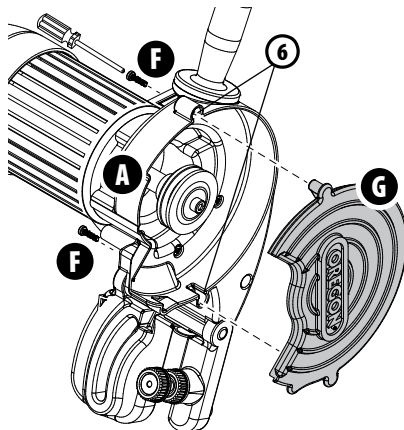
**⚠ TESTING THE GRINDING WHEEL**

Hold the grinding wheel (K) up by its center hole. Knock the edge of the grinding wheel gently with a non-metallic object. If it makes a dull, non-metallic noise it means that the wheel could be damaged: DO NOT USE IT!



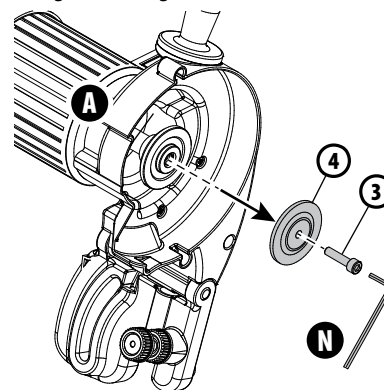
**REMOVE WHEEL GUARD**

Remove wheel guard (G) by removing the guard securing screw (F) from holes (6) using screwdriver (not included).



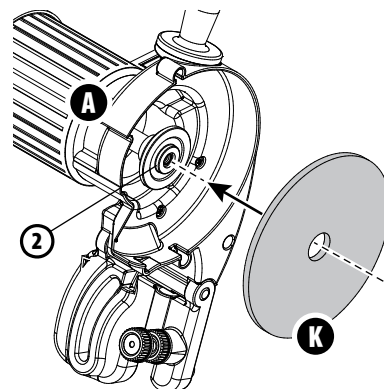
**REMOVE FLANGE**

Using the 5 mm Allen wrench (N), remove the grinding wheel flange screw (3) and the grinding wheel flange (4) from the hub.



**INSTALL GRINDING WHEEL**

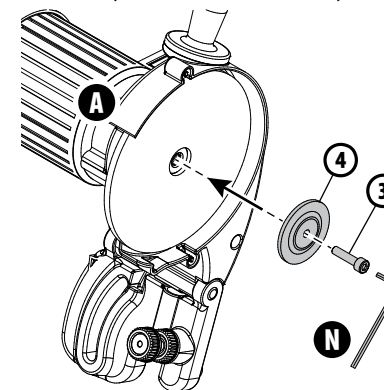
Insert and perfectly center the grinding wheel (K) in the dedicated seat on the hub (2).



**REINSTALL FLANGE**

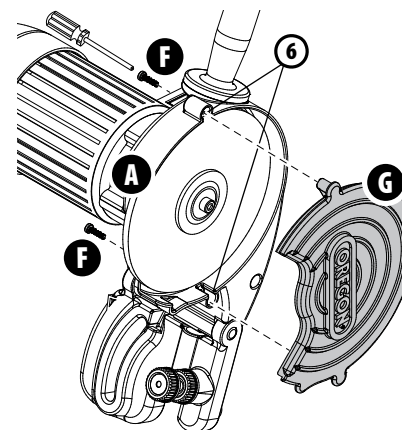
Using the 5 mm Allen wrench (N), insert the flange (4) and tighten the screw (3).

⚠ Make sure you fit the flange as illustrated. If the grinding wheel is fitted with the flange too tight, it could break during use and put the operator at risk. To avoid such risk, tighten screw (3) to 62 in-lbs. (7 Nm). If possible, check with a torque wrench.



**REINSTALL WHEEL GUARD**

Reinstall wheel guard (G) with guard securing screw (F) in holes (6) using screwdriver (not included).



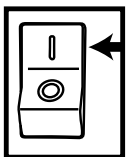


### CHECKING THE ASSEMBLY OF THE GRINDING WHEEL

Stand at the side of the grinding wheel.

Start the grinder by turning the switch to position "I".

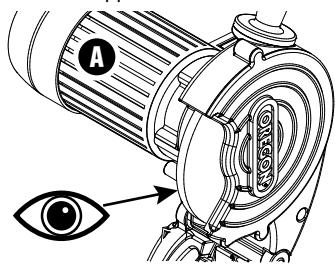
Once started, the lamp lights up to illuminate the sharpening area.



Visually make sure the grinding wheel does not oscillate sideways or crosswise, consequently causing abnormal vibrations.

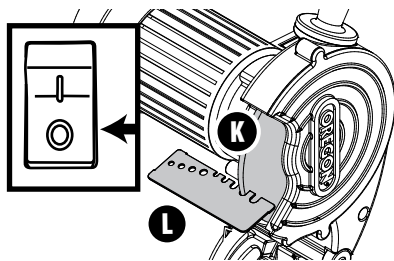
If this should be the case, stop the machine immediately and check if the grinding wheel has been fitted correctly. If necessary, replace the grinding wheel with another original one.

**⚠ WARNING** Always check a freshly fitted grinding wheel at working speed for at least one minute before you start grinding, standing at a safe distance to the side of the grinder, making sure no one else approaches the machine.



### CHECKING THE GRINDING WHEEL SHAPE

With the machine turned off, check the grinding wheel (K) profile using the measuring template (L); if necessary, dress the wheel to restore the correct profile.



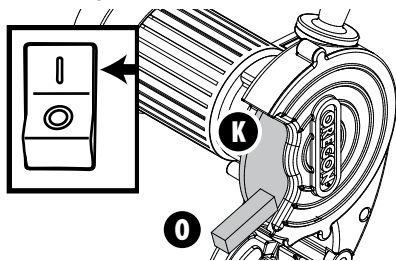
### GRINDING WHEEL DRESSING

Wear personal protection equipment.

Start the grinder by turning the switch to position "I".

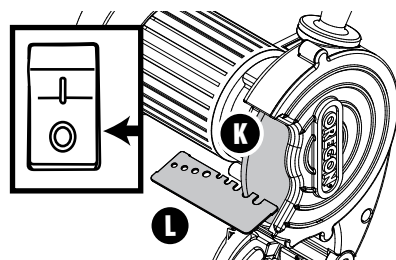
Profile the grinding wheel (K) with the dressing brick (O), always working with extreme caution, holding it with two hands firmly and effectively.

**⚠ WARNING** Contact with the grinding wheel while it spins at high speed may cause burning and abrasions.



Stop the grinder by turning the switch to position "O".

Check if the grinding wheel (K) profile is correct using the template (L). Continue to dress wheel until profile matches template.



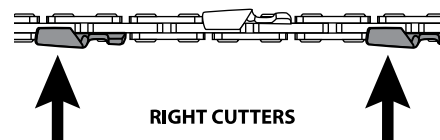
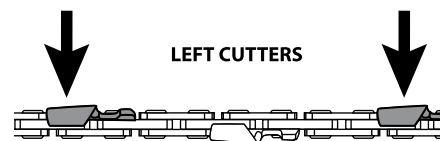
## SETTING THE SHARPENING ANGLES



### ⚠ WARNING

- Wear personal protection equipment when sharpening.
- All adjustments must be made with the motor switched off and the grinding wheel completely stopped.
- In the case of accidental impact or collision of the grinding wheel during the sharpening process, follow the instructions given in the "CHOOSING AND INSTALLING THE GRINDING WHEEL - WARNINGS" section.
- Clean the chain before sharpening it.
- To avoid overloading the motor excessively and to avoid damaging the chain cutters, grind minimum quantities of material and do not stop along the same cutter as this could burn the cutting edge.
- Do not use cooling liquids during the sharpening process.

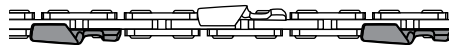
**⚠ WARNING** Grinding creates sparks which could ignite flammable materials. Do not operate grinder in presence of flammable materials or explosive atmospheres.



**FOR RIGHT-HAND CUTTERS WITHOUT A DOWN ANGLE (0°)**

Once you have established the type of chain to be sharpened, look up the adjustment angles (vise, down and head tilt angles) in the "Grinding Angles Chart" on page 12 (columns A/B/C).

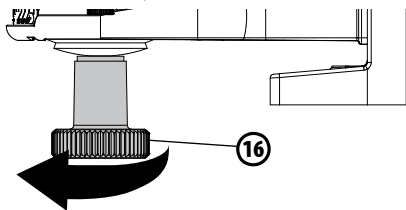
NOTE: if your chain has a down angle in column B on the "Grinding Angles Chart," please see the "For Right-Hand Cutters with a Down Angle" section on page 19.



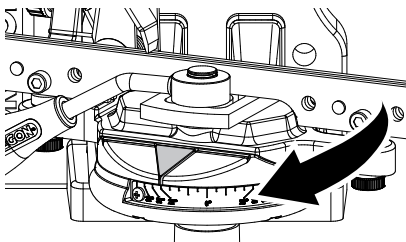
**RIGHT-HAND CUTTERS**

**SETTING THE VISE ROTATE ANGLE**

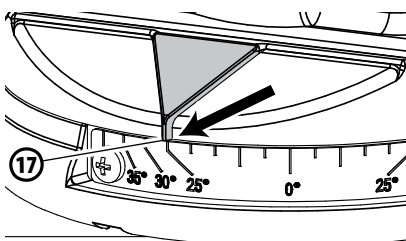
Loosen the vise adjustment knob (16).



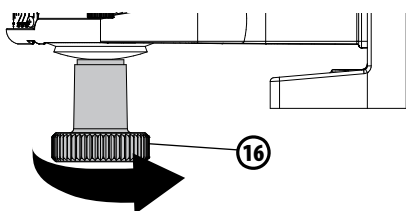
Turn the vise clockwise.



Position the reference mark pointer (17) on the vise by the desired vise rotate angle.

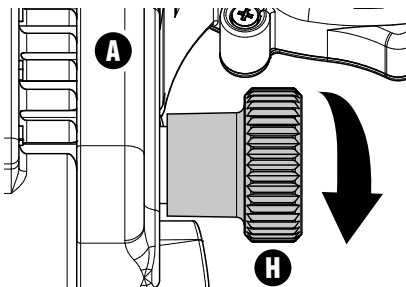


Tighten the vise adjustment knob (16).

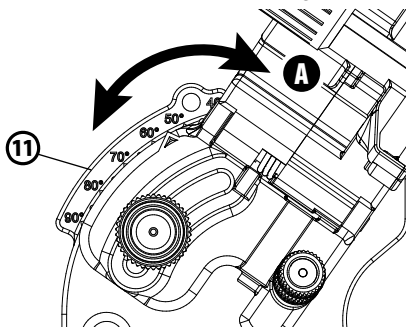


**SETTING THE HEAD TILT ANGLE**

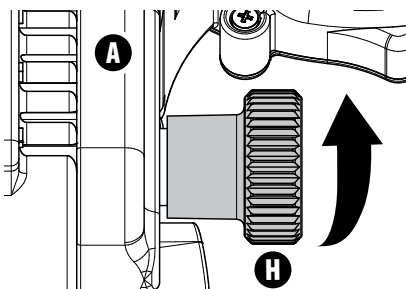
Loosen the arm locking knob (H) at the back of the motor unit (A).



Rotate the entire motor unit (A) until the reference mark on the edge of the arm is positioned at the desired head tilt angle (11).

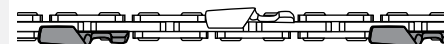


Tighten the locking knob (H) at the back of motor unit (A).



**FOR RIGHT-HAND CUTTERS WITH A DOWN ANGLE**

This section describes how to adjust the grinder for those chain types that require a down angle setting. To find out which chains require this setting, consult column B in the "Grinding Angles Chart" on page 12.

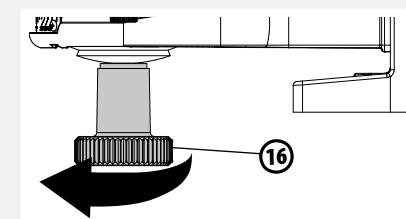


**RIGHT-HAND CUTTERS**

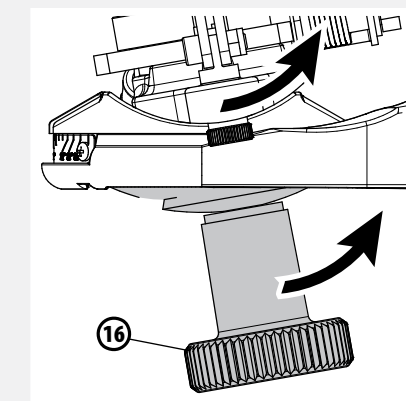
**SETTING THE DOWN ANGLE**

Find the correct angle using the "Grinding Angles Chart" chart on page 12.

Loosen the vise adjustment knob (16).

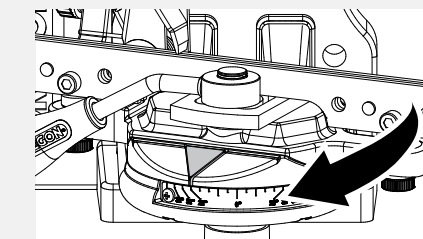


Push the vise adjustment knob (16) away from you and up as far as it will go to rotate vise.

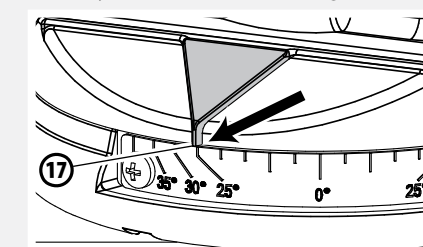


**SETTING THE VISE ROTATE ANGLE**

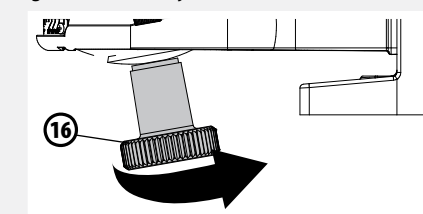
Turn the vise clockwise.



Position the reference mark pointer (17) on the vise by the desired vise rotate angle.

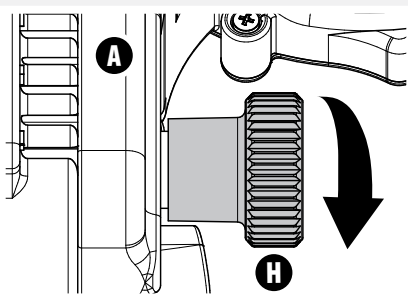


Tighten the vise adjustment knob (16).

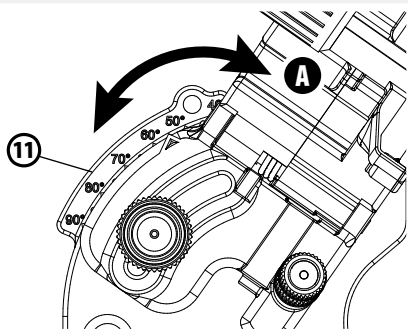


**SETTING THE HEAD TILT ANGLE**

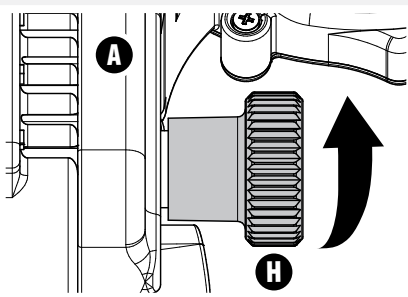
Loosen the locking knob (H) at the back of the motor unit (A).



Rotate the entire motor unit (A) until the reference mark on the edge of the arm is positioned at the desired head tilt angle (11).



Tighten arm locking knob (H) at the back of the motor unit (A).



**FOR LEFT-HAND CUTTERS WITHOUT A DOWN ANGLE (0°)**

Once you have established the type of chain to be sharpened, look up the adjustment angles (vise, down and head tilt angles) in the "Grinding Angles Chart" on page 12. (columns A/B/C).

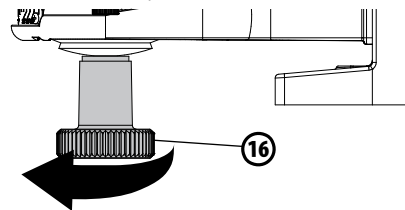
NOTE: if your chain has a down angle in column B on the "Grinding Angles Chart," please see the "For Left-Hand Cutters with a Down Angle" section on page 22.



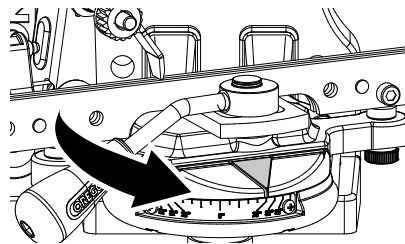
**LEFT-HAND CUTTERS**

**SETTING THE VISE ROTATE ANGLE**

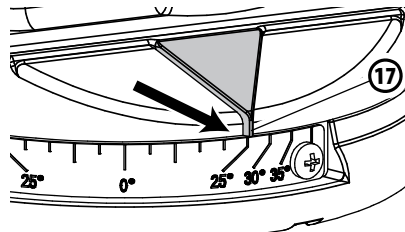
Loosen the vise adjustment knob (16).



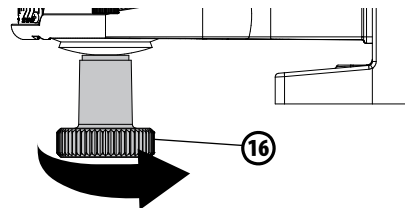
Turn the vise counter-clockwise.



Position the reference mark pointer (17) on the vise by the desired vise rotate angle.

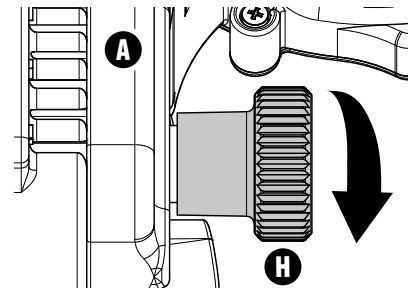


Tighten the vise adjustment knob (18).

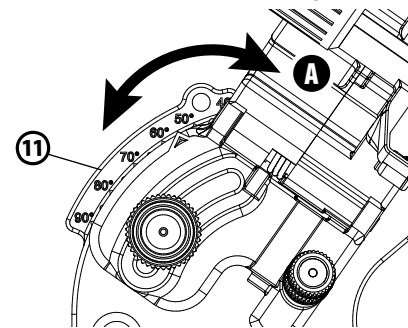


**SETTING THE HEAD TILT ANGLE**

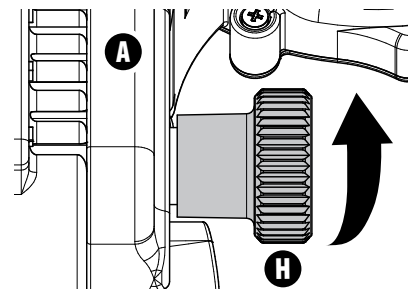
Loosen the locking knob (H) at the back of the motor unit (A).



Rotate the entire motor unit (A) until the reference mark on the edge of the motor unit is positioned at the desired head tilt angle (11).



Tighten the locking knob (H) at the back of the motor unit (A).



**FOR LEFT-HAND CUTTERS WITH A DOWN ANGLE**

This section describes how to adjust the grinder for those chain types that require a down angle setting. To find out which chains require this setting, consult column B in the chain chart on page 12.

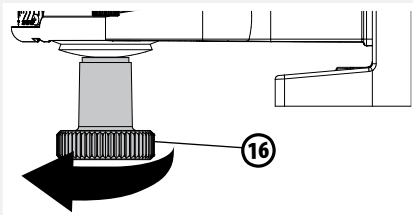


**LEFT-HAND CUTTERS**

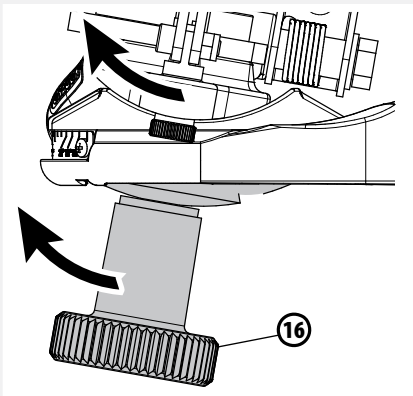
**SETTING THE DOWN ANGLE**

Find the correct angle using the "Grinding Angles Chart" on page 12.

Loosen the vise adjustment knob (16).

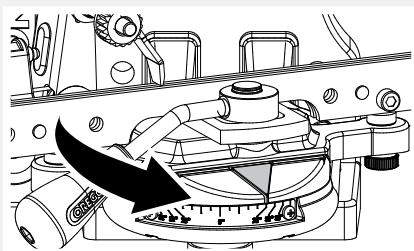


Pull the vise adjustment knob (16) towards you and up as far as it will go to rotate vise.

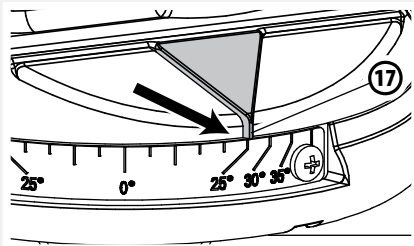


**SETTING THE VISE ROTATE ANGLE**

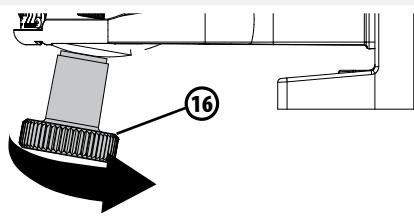
Turn the vise counter-clockwise.



Position the reference mark pointer (17) on the vise by the desired vise rotate angle.

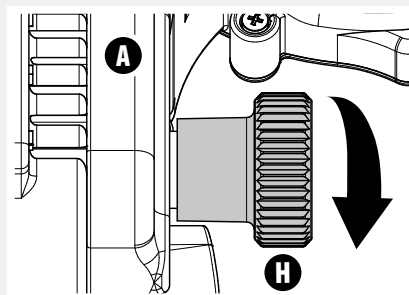


Tighten the vise adjustment knob (16).

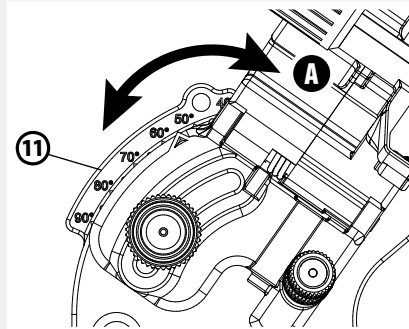


**SETTING THE HEAD TILT ANGLE**

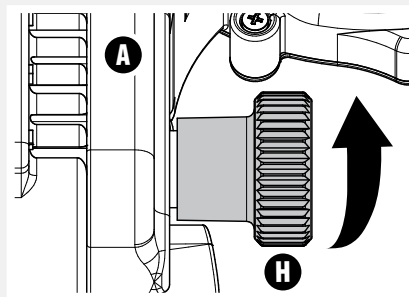
Loosen the locking knob (H) at the back of the motor unit (A).



Rotate the entire motor unit (A) until the reference mark on the edge of the arm is positioned at the desired head tilt angle (11).



Tighten locking knob (H) at the back of the motor unit (A).



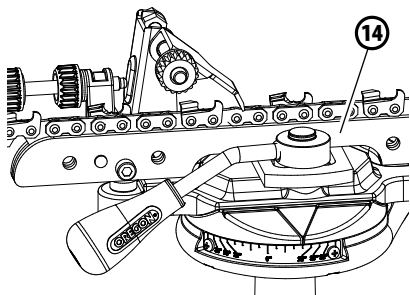
## PLACING THE CHAIN IN THE VISE

- Clean the chain before sharpening it.
- Check the cutters and find the one with the most damage, you will want to start with this cutter.
- Ensure chain is placed in vise as shown, cutter direction heading toward right.

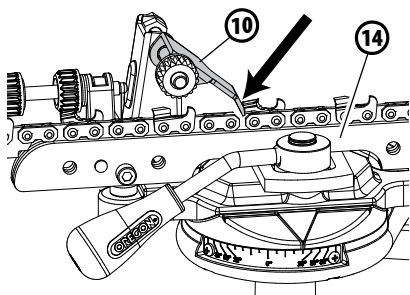


### SETTING THE CHAIN STOP

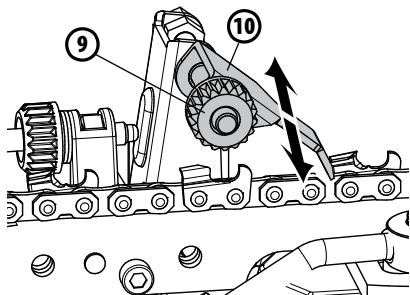
Put the chain in the vise (14).



Slide a chain cutter up against the chain stop (10).

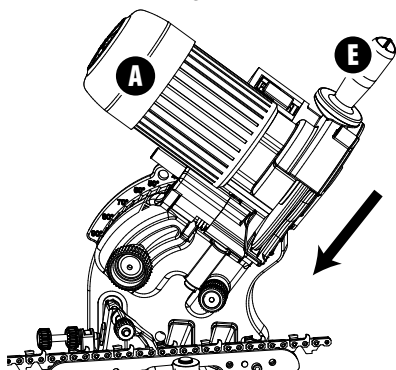


Turn the adjustment knob (9) to position the chain stop (10) laterally to the center of the cutter.

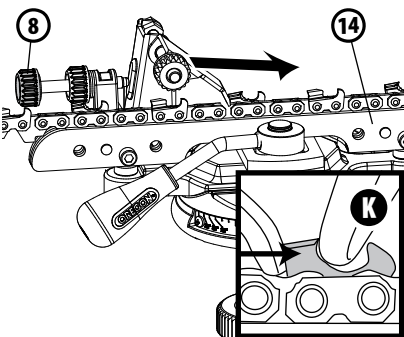


### POSITIONING THE CUTTER

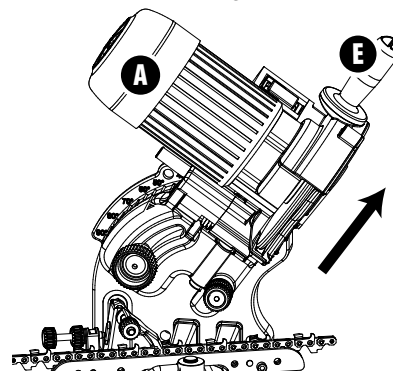
Move the grinding wheel onto the cutter to be sharpened by pulling the motor unit (A) downwards using handle (E).



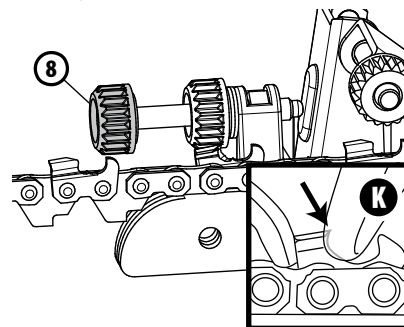
Turn the cutter adjustment knob (8) to move the chain so that the cutter cutting edge skims the grinding wheel (K). The chain should run freely over the vise (14) throughout this procedure but without any clearance.



Raise the motor unit (A) using handle (E).



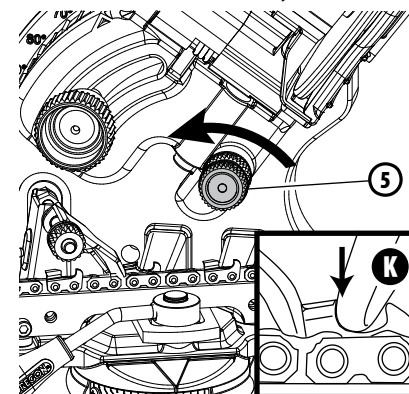
Turn the cutter adjustment knob (8) clockwise, to slightly move the cutter to be sharpened further forwards.



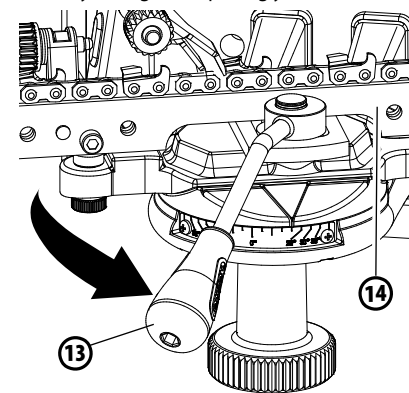
This forward movement corresponds to the quantity of material to be ground from the cutter. The more dull or damaged the cutters, the greater this forward movement should be. For cutters that are not too dull, simply grind a slight amount of material.

It is also important not to grind too much material in one pass. This could result in "burning" the cutter, reducing its hardness, and causing excessive burrs.

Turn cutter sharpening depth adjustment knob (5) to adjust the cutter sharpening depth. The grinding wheel (K) should skim the bottom of the cutter vertically.



Once you have found the exact position of the cutter, pull the vise handle (13) to the right to tighten the vise jaws (14). You are now ready to begin sharpening your chain.

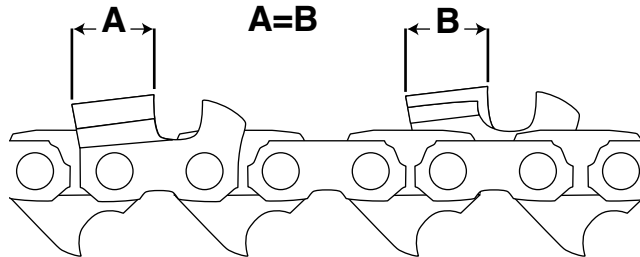


## OPERATING INSTRUCTIONS

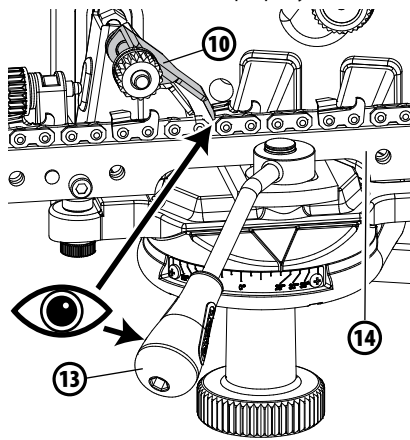


### SHARPENING THE CHAIN

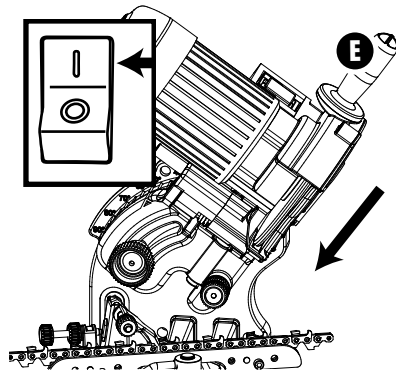
- Wear personal protection equipment.
- Sharpen all the cutters on the same side and then adjust the vise as explained in the previous sections, and sharpen the cutters on the opposite side.
- When grinding is complete, ensure all cutter top plates equal length.



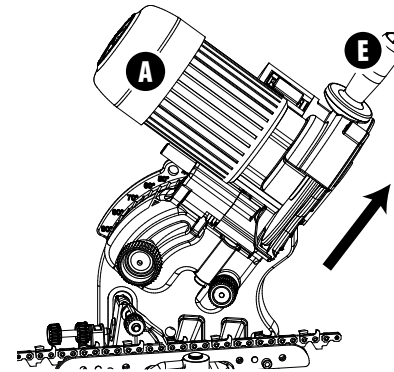
Make sure the vise handle (13) has been pulled to the right and the vise jaws (14) are tight, and the cutter is blocked (10) properly.



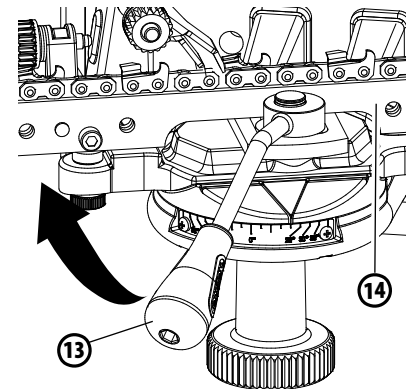
Start the grinder by turning the switch to position "I". Sharpen the cutter by lowering the grinding wheel with handle (E).



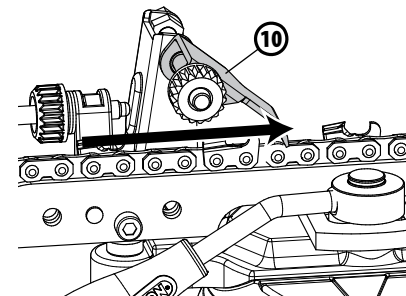
Once you have sharpened the first cutter, raise the motor unit with handle (E).



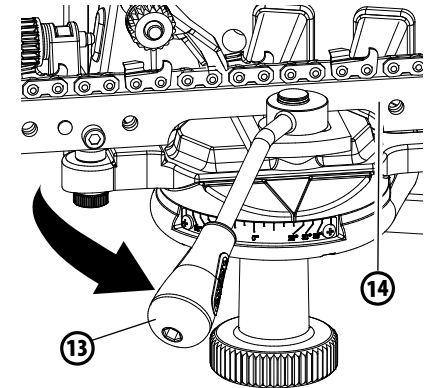
Loosen the vise handle (13).



Advance the chain forward to position the next cutter to be sharpened, assuring that the chain stop (10) is seated firmly against the rear of the cutter.



Clamp chain again with the vise handle (13) and sharpen the next cutter.

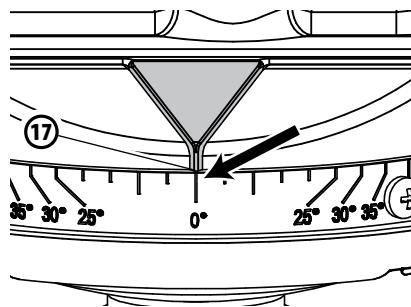




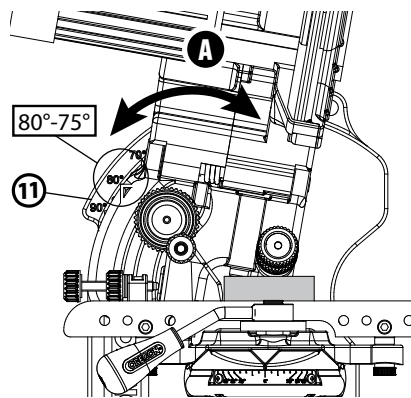
### GRINDING WHEEL DRESSING FOR SETTING THE DEPTH GAUGE

Fit the 1/4" (6,3 mm) thick grinding wheel, following the instructions given on pages 14–16. DO NOT check the grinding wheel shape or dress the grinding wheel as shown on page 16.

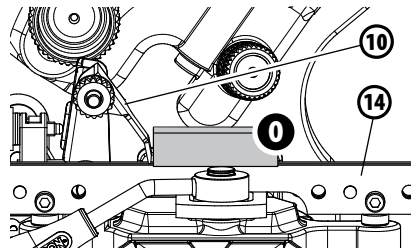
Turn the vise so that the reference mark (17) is on 0°.



Turn the motor unit (A) to take the reference mark to 80°-75° on the head tilt angle guide plate (11).

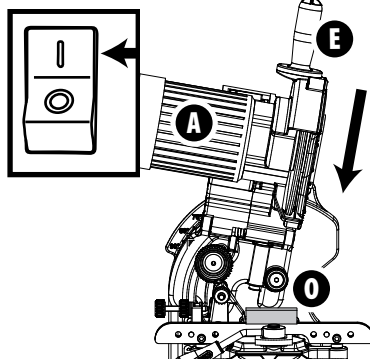


Position the dressing brick (O) on the vise jaws (14) and against the chain stop (10). Hold the dressing brick firmly with one hand, keeping fingers / hands clear of the grinding wheel.



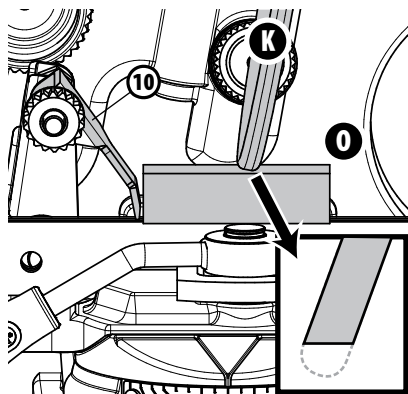
Start the grinder by turning the switch to position "I".

Lower the motor unit (A) with handle (E).

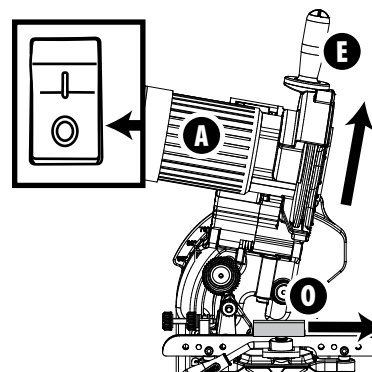


Grind the wheel against the dressing brick until you obtain a profile like the one illustrated.

**⚠ WARNING** Contact with the grinding wheel while it spins at high speed may cause burning and abrasions.

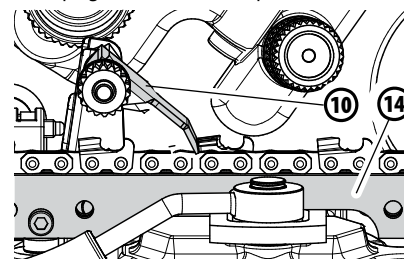


Raise the motor unit (A) with handle (E). Stop the grinder by turning the switch to position "O" and remove the dressing brick (O) from the vise.



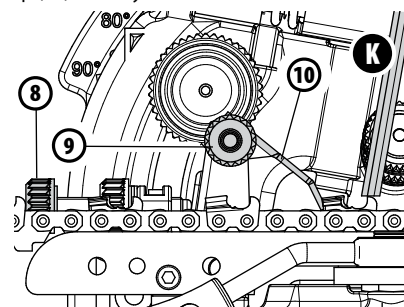
### SETTING THE DEPTH GAUGE

Put the chain in the vise jaws (14), with a cutter up against the chain stop (10).

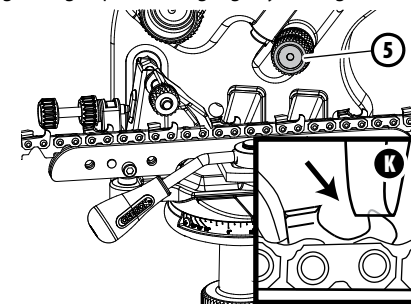


With the motor unit (A) pulled down, turn the cutter adjustment knob (8) to move the chain so that the cutter's depth gauge is below the grinding wheel (K).

Turn the adjustment knob (9) to position the chain stop (10) laterally to the center of the cutter.

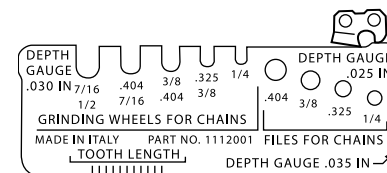


With the motor unit (A) pulled down, adjust the grinding depth on the gauge by turning knob (5).



Set the depth gauge following the instructions given in the "OPERATING INSTRUCTIONS, SHARPENING THE CHAIN" section on pages 26–27. For this type of sharpening procedure, there is no difference between the right and left cutters, therefore sharpen all the gauges one after the other.

Check if the gauge depth is correct, using the template with the shape related to the type of chain used. Also consult the chain table on page 12., column D.



## STOPPING AND SHUTTING DOWN

### STOPPING

Turn the machine off by turning the switch to position "0" and unplug the power cable from the mains.

### SHUTTING DOWN

Once you have finished using the machine, disconnect it and clean it thoroughly. Store it in a dry, safe place, protected against dust and dampness.

## MAINTENANCE AND CLEANING



**WARNING** Grinder must be turned off and the power cable unplugged from the mains before any maintenance is performed.

Inspect the power cord regularly for damage. Remove the plug from the mains immediately if the cable is damaged or cut.

When the grinding wheel reaches a minimum diameter of approximately 105 mm, replace the grinding wheel.

After 40 hours of use:

- Clean the lamp carefully using a rag or a cleaning brush. Do not use compressed air.
- Clean the grinder carefully using a rag or a cleaning brush. Clean the electric motor and the sliding guides with caution. Do not use compressed air.

## DEMOLITION AND DISPOSAL



The machine is to be demolished by qualified personnel in compliance with current laws in force in the country in which it is installed. The symbol (on the rating nameplate) points out that the product must not be disposed of with normal household garbage. Contact an authorized shop or your dealer for disposal instructions.

Before you scrap the machine, make it unusable by cutting the power supply cable, for example, and make the parts safe, which could cause a source of danger for children if they should play with the machine.

## WARRANTY AND SERVICE

The warranty validity is that acknowledged in the country of sale. Claims under warranty will only be accepted if they are backed up by the copy of the purchase document (bill or receipt). The guarantee becomes void if:

- The machine has been tampered with;
- The machine has not been used according to this manual;
- Non-original parts, machines or grinding wheels have been fitted on the grinder or other parts that are not authorized by the manufacturer;
- The machine has been powered at a voltage or frequency different from that written in the rating nameplate.

### THE OREGON® CUSTOMER-SATISFACTION POLICY

#### LIMITED WARRANTY

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If you like our products, please tell your friends. If you are not satisfied with our products, for any reason, please tell us. OREGON® wants to provide you with products that perform to your full satisfaction. We welcome you to contact us as shown below.

LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPLACEMENT PARTS, AT THE OPTION OF YOUR OREGON® DISTRIBUTOR AND OREGON®. PLEASE CONTACT YOUR OREGON® DISTRIBUTOR OR US DIRECTLY. OREGON® PRODUCTS ARE NOT WARRANTED AGAINST NORMAL WEAR AND TEAR, USER ABUSE, IMPROPER MAINTENANCE OR IMPROPER REPAIR.

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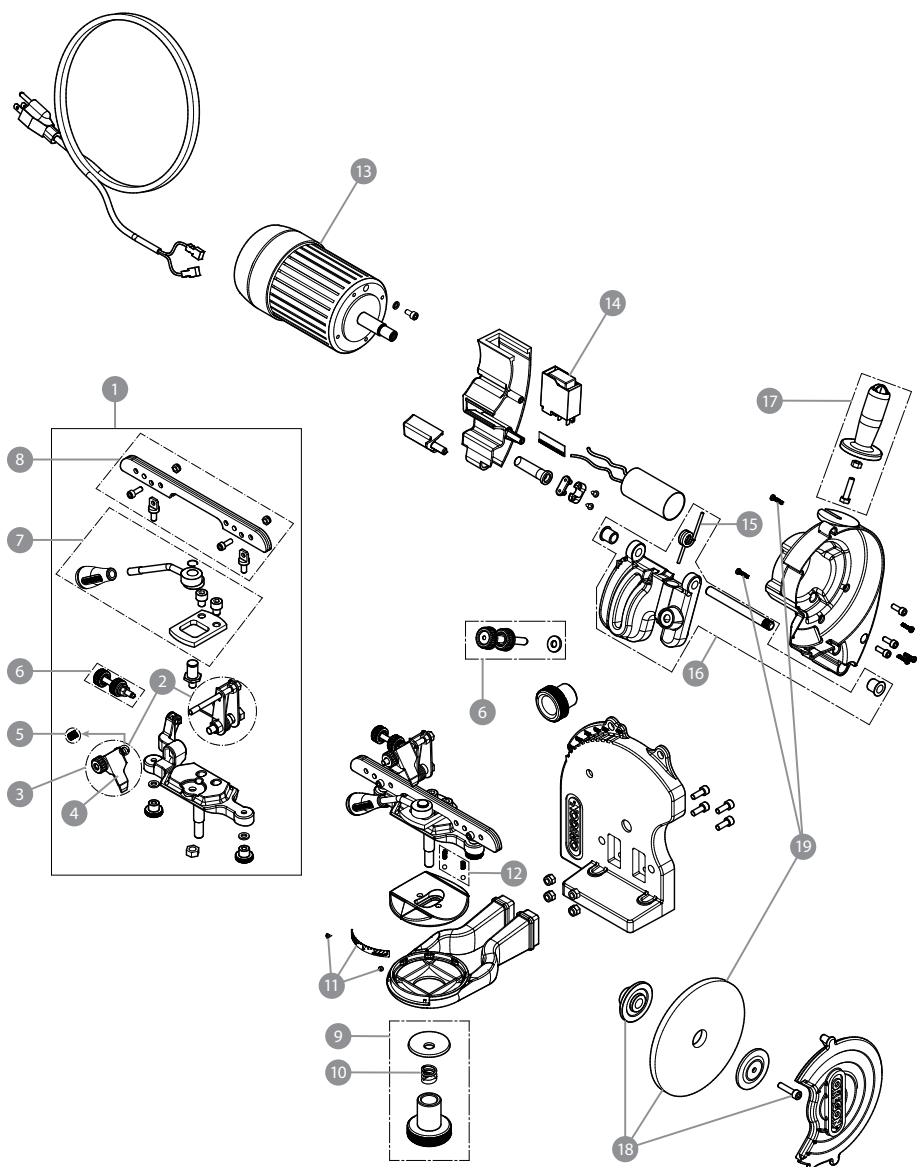
## TROUBLESHOOTING

Turn the machine off by turning the switch to position "0" and unplug the power cable from the mains before you start to work on the machine.

Problem	Probable Cause	Solution
The machine fails to start when you switch on (switch in position "I").	One of the safety devices of the system to which the machine is connected has tripped (fuse, circuit breaker, etc.).	Reset the safety device. If the safety switch trips again, do not use the machine, and contact a Skilled Technician.
	The machine is not plugged into the mains properly.	Unplug and plug in again properly.
The lamp fails to switch on when the switch is turned to position "I".	The lamp has blown.	Replace the lamp.
The wheel is broken or damaged.		Replace wheel.
The machine vibrates abnormally. STOP USING IMMEDIATELY	The grinder is not secured correctly.	Check its attachment and, if necessary, tighten the securing screws correctly.
	The motor unit is not secured correctly to the base unit.	Tighten the related locking handle correctly.
	The vise assembly is not secured correctly to the base unit.	Tighten the related vise adjustment knob correctly.
	The grinding wheel is not fitted correctly in its seat on the hub.	Dismantle the grinding wheel, check its integrity and fit again correctly.

Contact a Skilled Technician if you are still unable to restore the correct operation of the machine following the instructions given in the chart.

## ILLUSTRATED PARTS LIST



NO.	OREGON	DESCRIPTION
1	572119	Complete vise assembly
2	537411	Chain stop vise assembly
3	522688	Chain stop
4	32677	Chain stop (5 pack)
5	32681	Pawl center spring kit (5 pack)
6	572522	Adjustment knobs kit
7	572202	Lever vise assembly chain locking
8	572203	Vise jaws
9	572524	Vise locking kit
10	35590	Spring
11	572525	Scales
12	32678	Spring and ball kit (2 pack)
13	572526	End motor cap
14	109879	Switch
15	572527	Spring arm return
16	572529	Bracket arm support
17	105538	Handle kit
18	537409	Motor flange kit
19	572528	Plastic shield