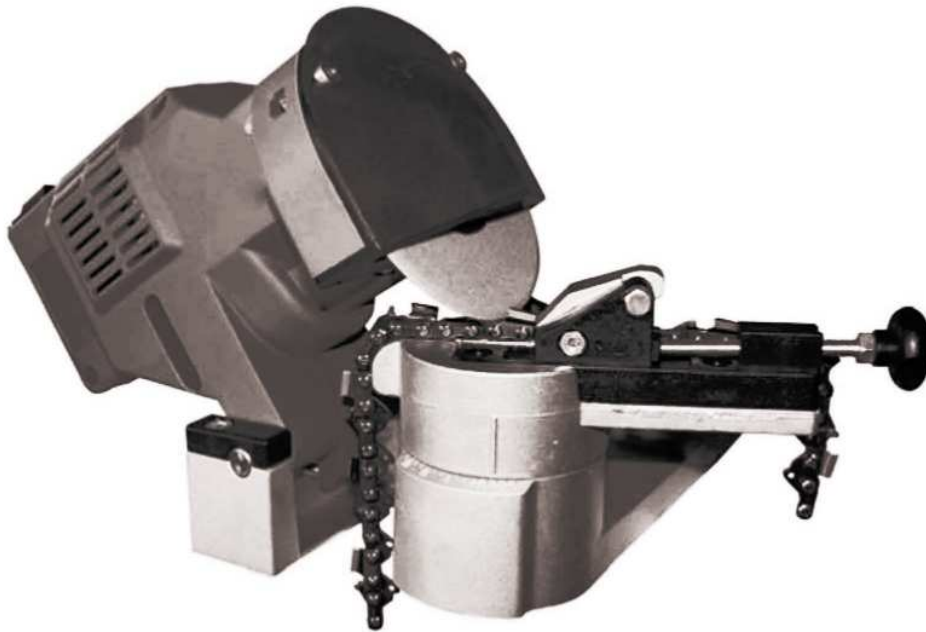




CHAIN SHARPENER



MODEL # CS-BMM

Chain Saw Sharpener
CS-BMM
120V~60Hz
0.8A(2 min ON, 8min OFF)
N0: 5500r/min
Φ3.94"



Conforms to UL STD 987
Certified to CAN/CSA STD No. 71.2-08 Update N0.1

WARNING -For Your Own Safety Read Instruction Manual-Before Operating Grinder

- 1) Wear eye protection.
- 2) Use grinding wheel suitable for speed of grinder (5500/min)
- 3) Risk of injury due to accidental starting. Do not use in an area where children may be present.
- 4) Always use guards and eye protectors
- 5) Do not expose to rain use in damp locations.

AVERTISSEMENT -Pour votre propre sûreté lue manuel d'instruction avant rectifieuse d'opération

- 1) Protection d'oeil d'usage.
- 2) Utilisez la meule appropriée pour la vitesse de la rectifieuse (6300/min)
- 3) Risque de dommages dû à commencer accidentel. N'employez pas dans un secteur où les enfants peuvent être présents.
- 4) Employez toujours les gardes et les protecteurs d'oeil
- 5) N'exposez pas pour pleuvoir ou employer dans des endroits humides.

M841001A

**Read this manual carefully before operating this machine.
Keep the manual in a safe and dry place for future reference.**

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Every effort is made to improve our products continuously. Therefore, technical data and figures are subject to change

1 Technical Data

Voltage:	120V
Frequency:	60Hz
Protection class:	II
Maximum capacity:	0.8A(2 min ON, 8min OFF)
Motor speed:	5500r/min
Grinding wheel (inch):	4"*3/16; hole 7/8
Adjustment angle:	2 x 35°
Weight:	5.5lbs.
Worktable surface area LxWxH(inch)	7-1/2" x 11- 1/4" x 7- 1/2"
Product No:	CS-BMM

2 Safety instruction

1. Replacement Parts

When servicing use only identical replacement parts

2. Polarized Plugs

To reduce the risk of electric shock, this equipment has a polarized plug (one blade wider than the other). This plug will fit in a polarized outlet only one way, if the plug does not fit fully in the outlet, reverse the plug if it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning ti on
3. KEEP WORK AREA CLEAN Cluttered areas and benches invite accidents
4. DO NOT USE IN DANGEROUS ENVIRONMENT Do not use power tools in damp or wet locations, or expose them to rain Keep work area well lighted
5. KEEP CHILDREN AWAY All visitors should be kept safe distance from work area
6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys
7. DO NOT FORCE TOOL it will do the job better and safer at the rate for which it was designed
8. USE RIGHT TOOL Do not force tool or attachment to do a job for which it not designed
9. 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. Table below shows the correct size to use depending on cord length and nameplate ampere rating If in doubt, use the next heavier gage. The smaller the gage number the heavier the cord.

2 Safety instruction

Minimum gage for cord

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft	50 ft	100 ft	150 ft
		240 V	50 ft	100 ft	200 ft	300 ft
More Than	Not More Than	AWG				
0	6		15	15	16	14
6	10		15	16	14	12
10	12		15	16	14	12
12	16		14	12	Not Recommended	

***Only the applicants parts of the Table needed to be included for instance, a 120-V product need not include the 240-V heading.**

10 WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

11 ALWAYS USE SAFETY GLASSES. Also use face or dust mask. If cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

12 SECURE WORK. Use clamps of a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.

13 DO NOT OVERREACH. Keep proper footing and balance at all times.

14 MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instruction for lubricating and changing accessories.

15 DISCONNECT TOOLS before servicing, when changing accessories, such as blades, bits, cutters and the like.

16 REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.

17 USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.

18 NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

19 CHECK DAMAGED PARTS. Before further use of the tool, a guard 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, mouting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

20 DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

21 NEVER LEAVE TOOL RUNNING UNATTENDED TURN POWER OFF. Do not leave tool until it comes to a complete stop.

*Replace cracked wheel immediately

*Always use guards and eye shields

*Do not overtighten wheel nut

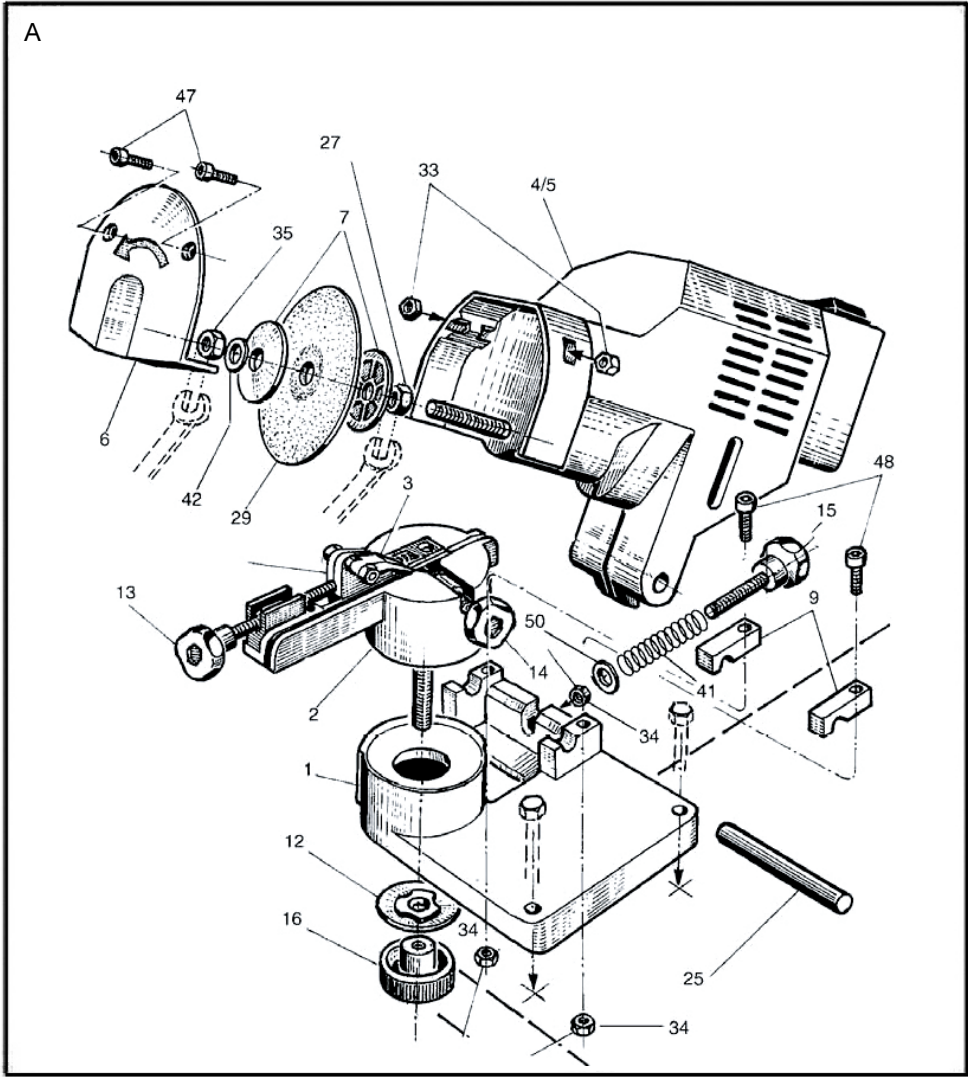
*Use only flanges furnished with the grinder

*Frequently clean grinding dust from beneath grinder

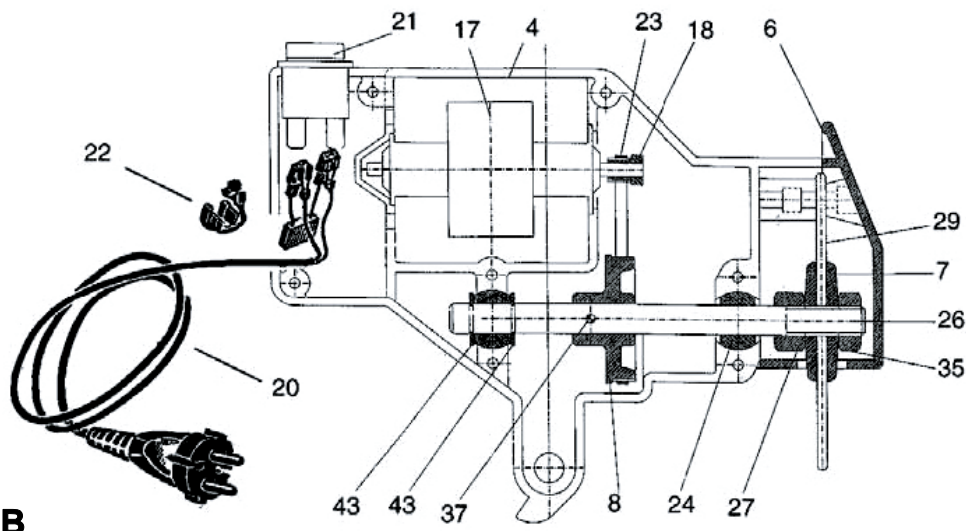
*wear eye protection.

*Using grinding wheel suitable for speed of grinder.

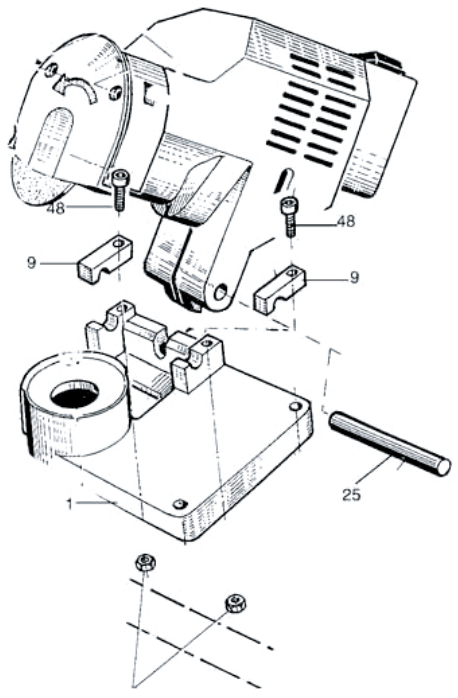
3 Description Of Unit



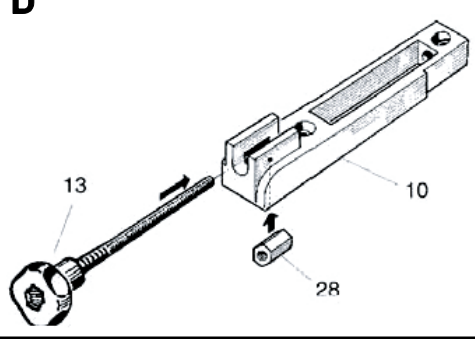
See Page 15 for a complete list of part shown above and on the following pages.



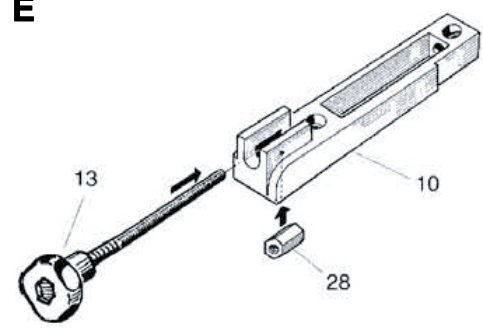
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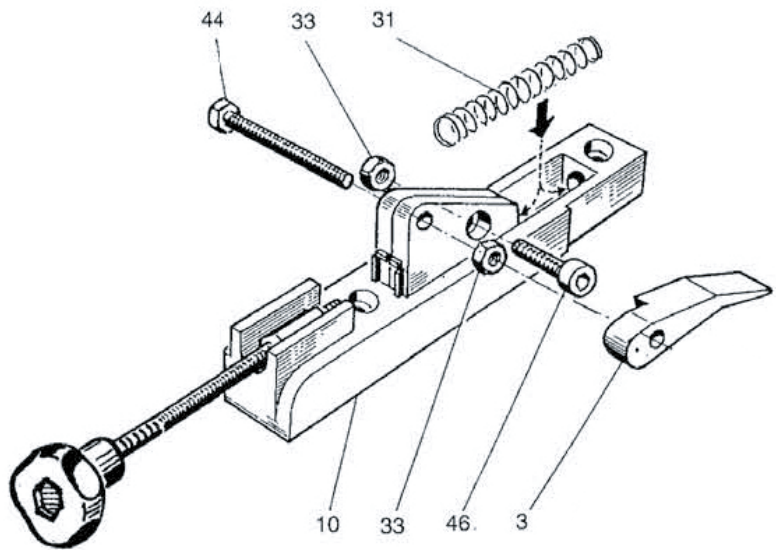
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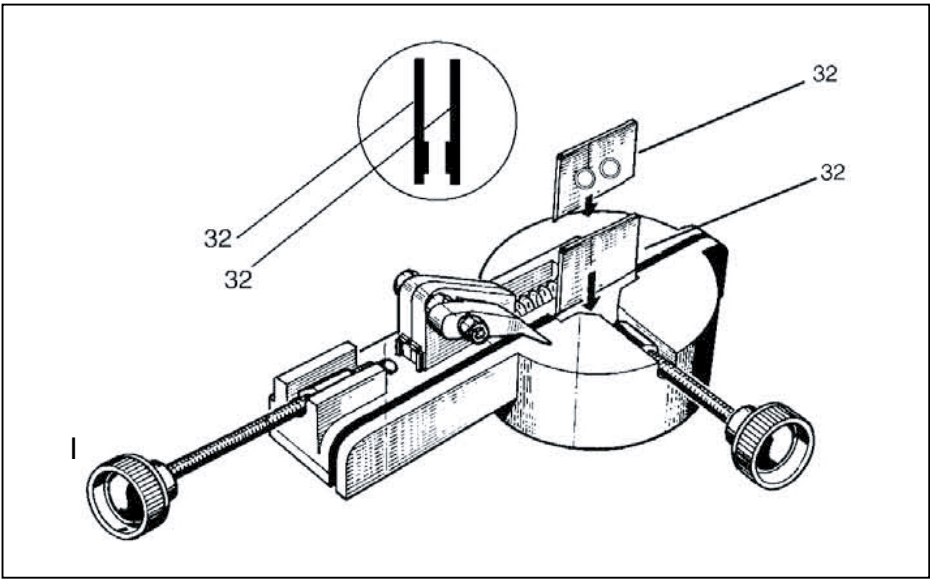
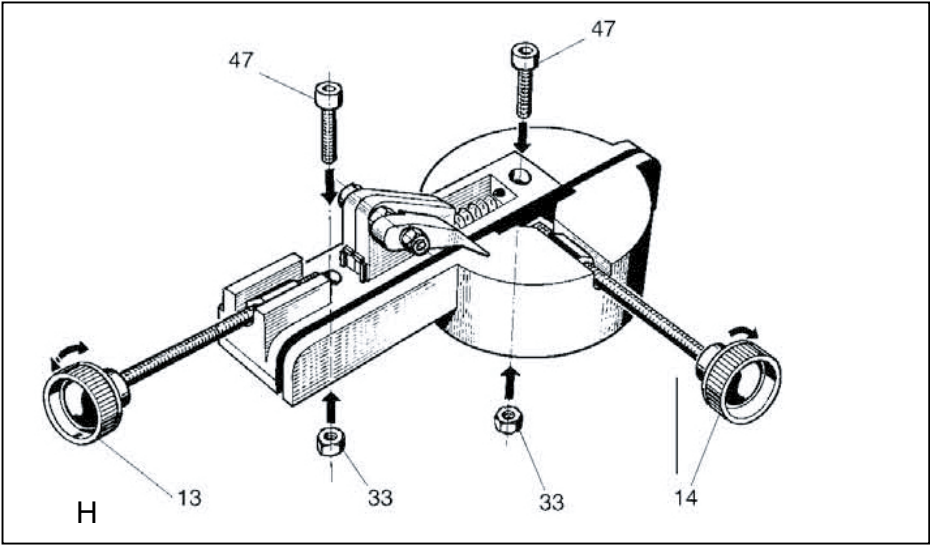
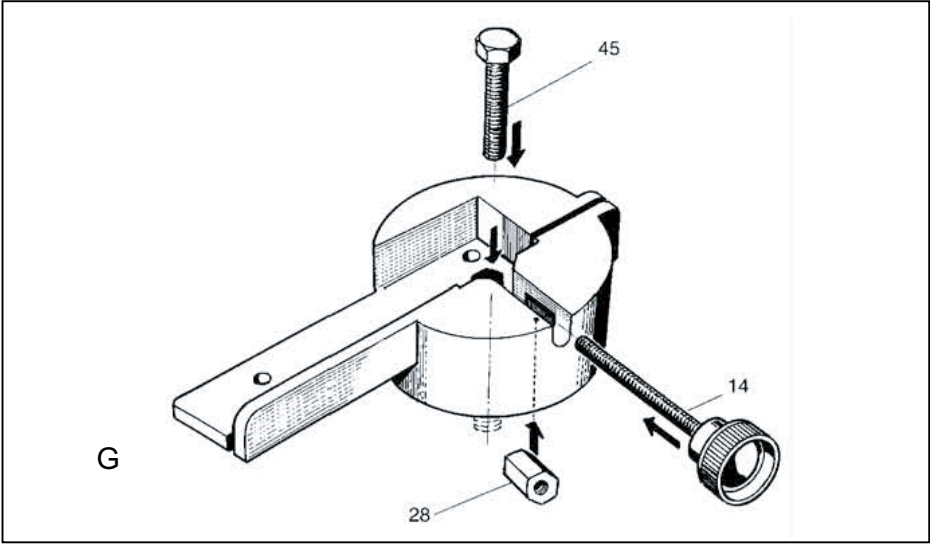
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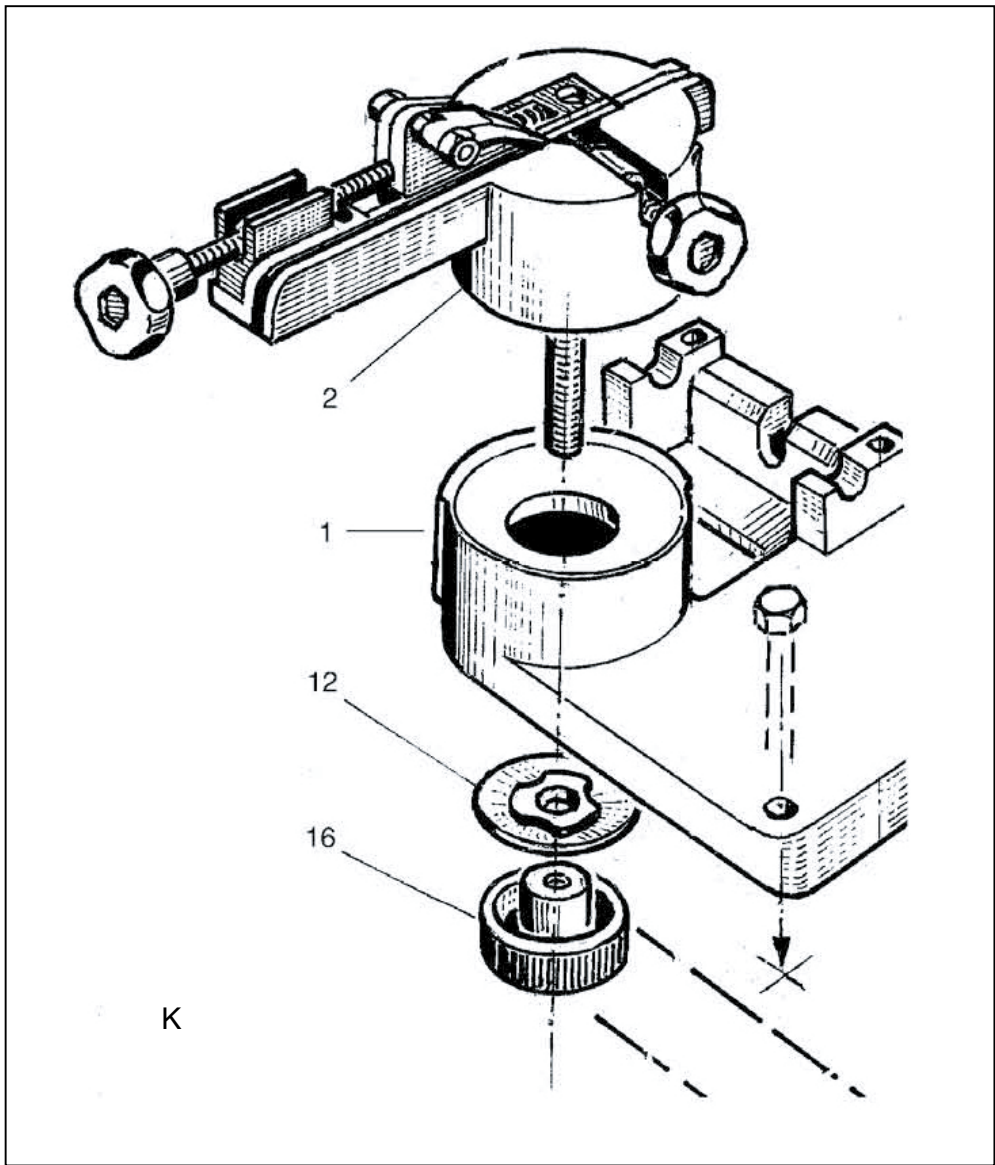
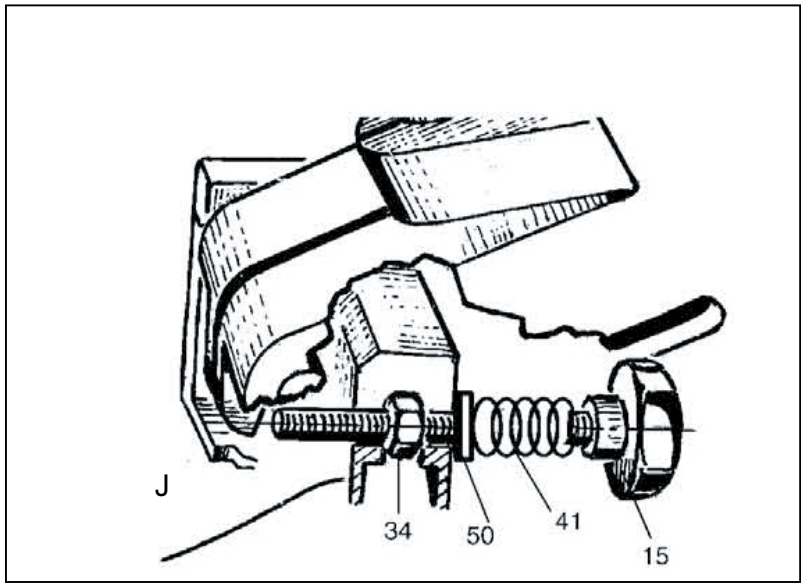


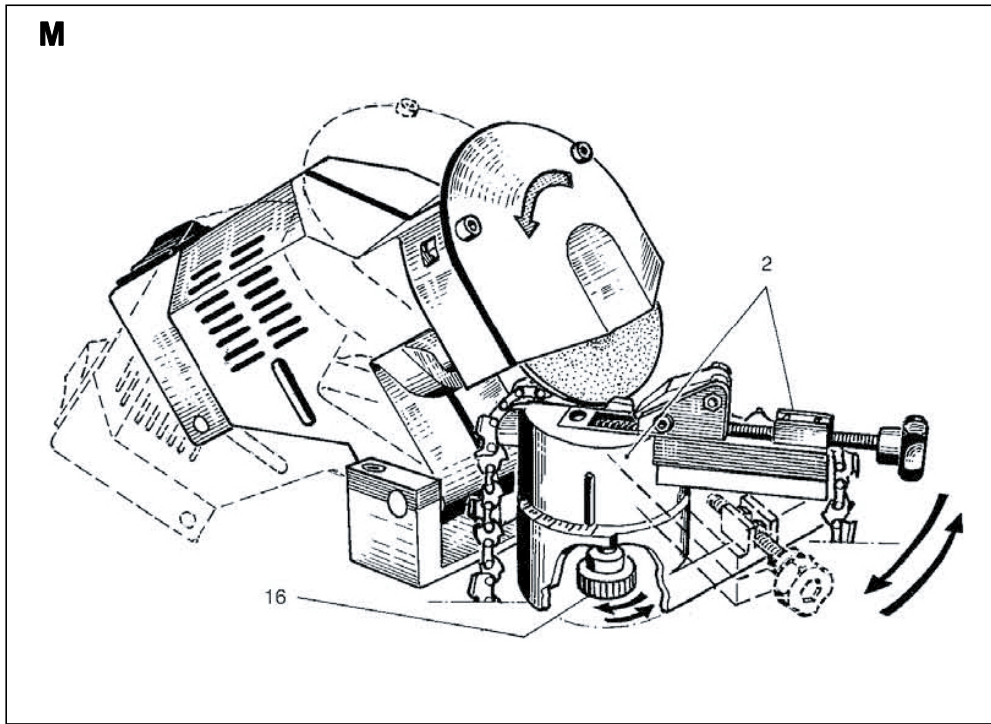
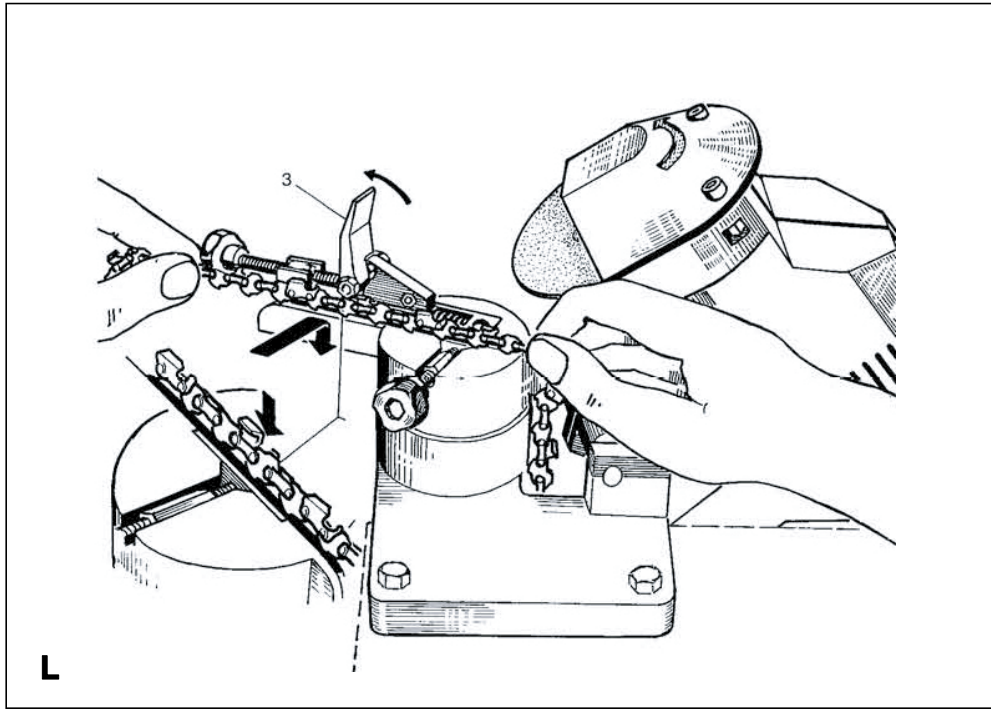
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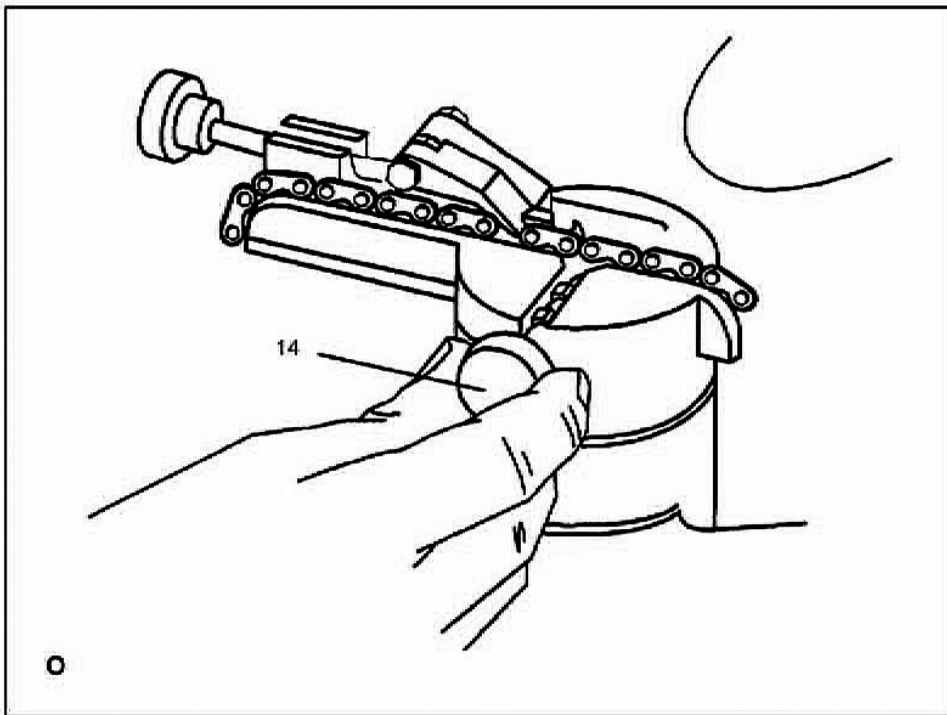
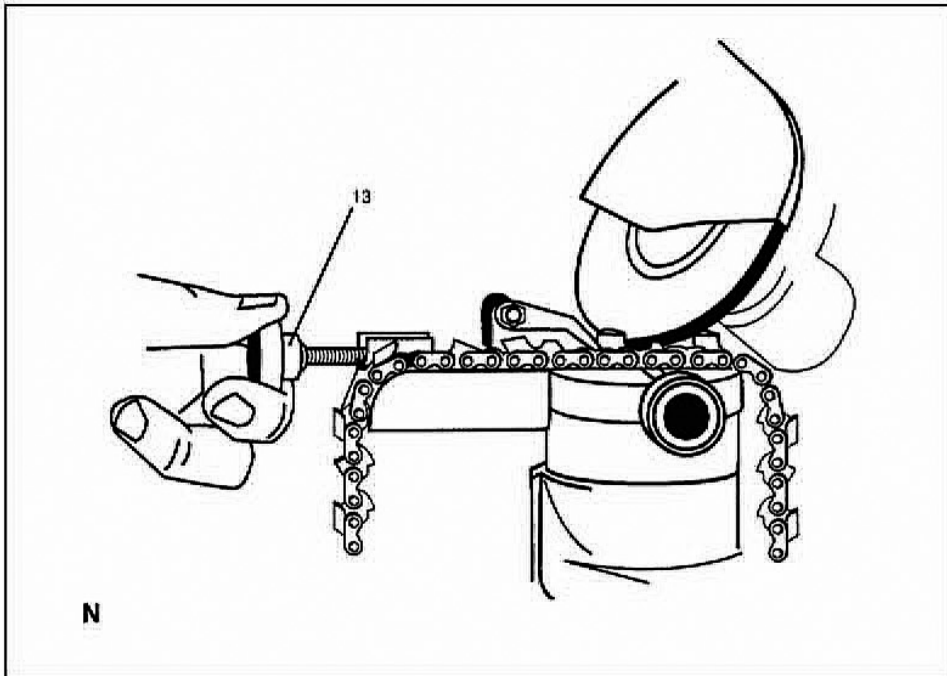


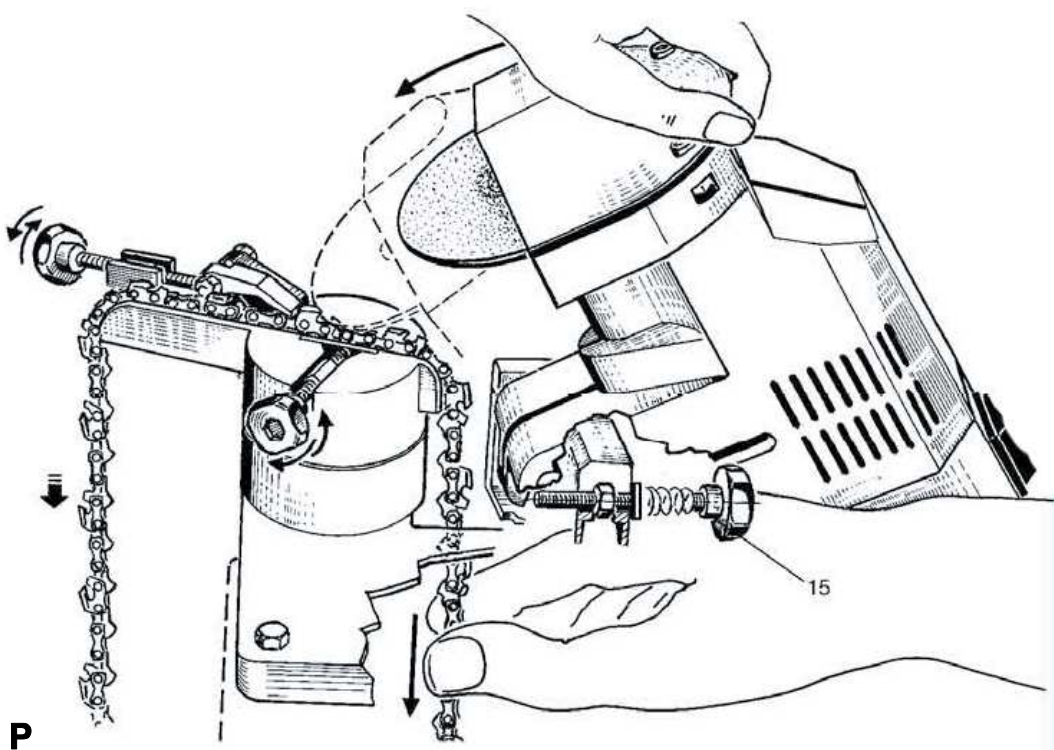
F





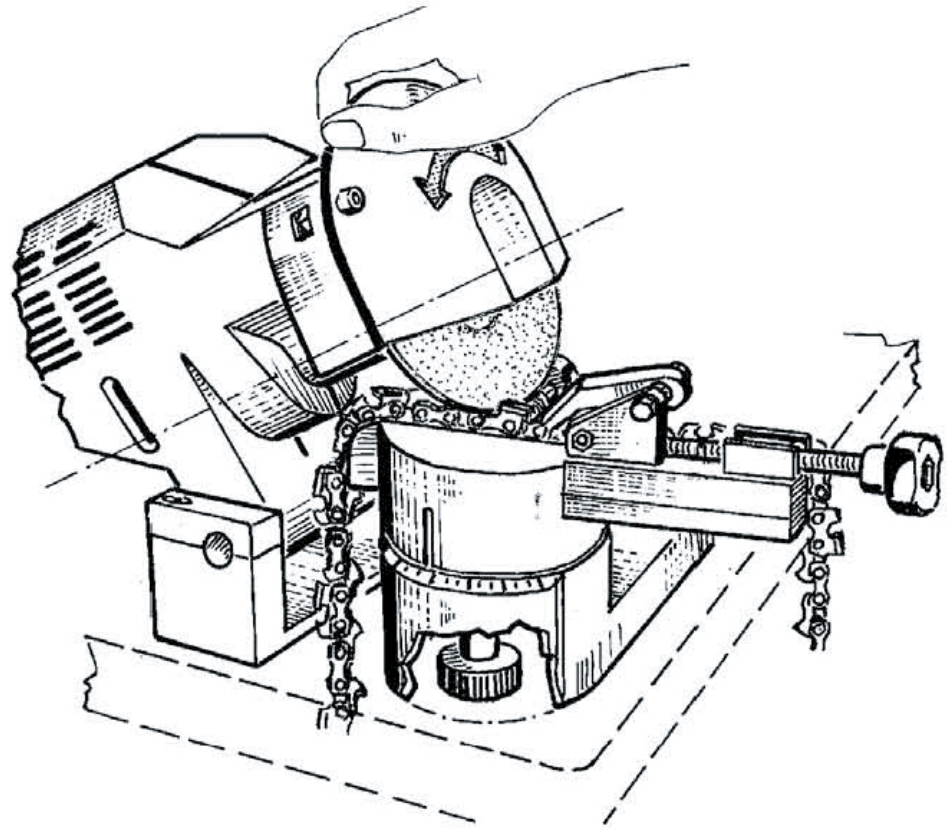


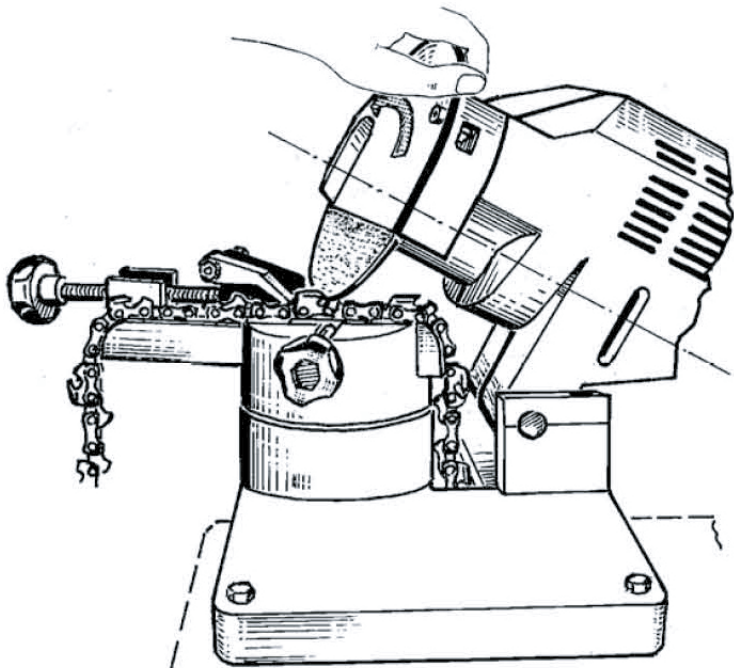




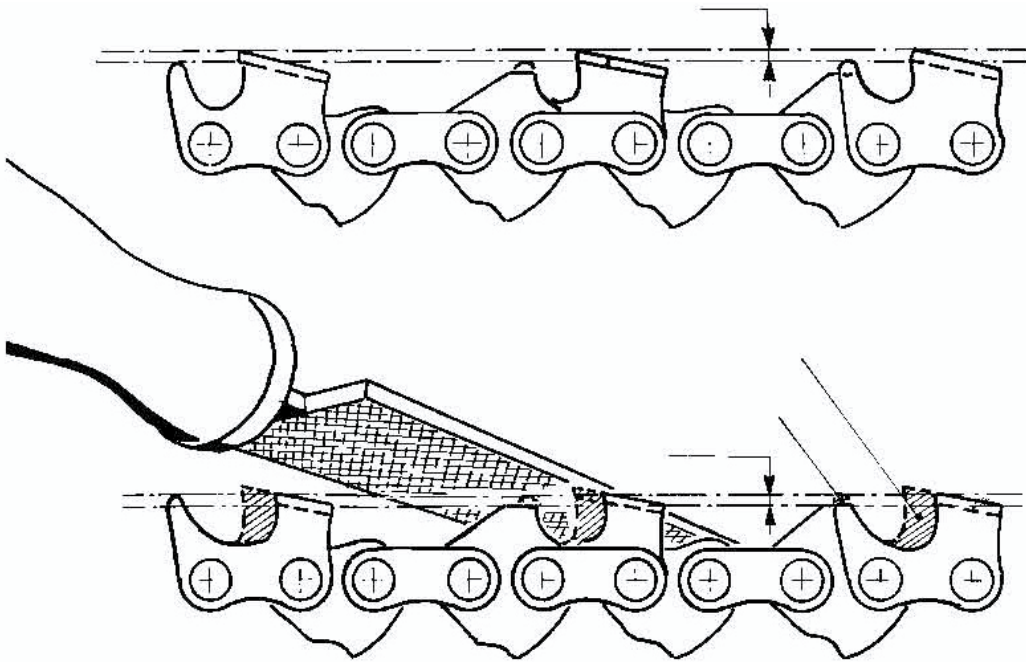
P

Q





R



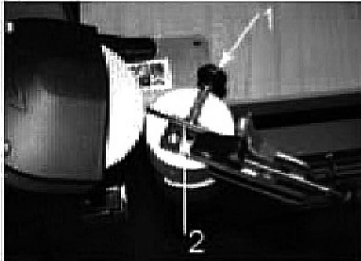
S

4 Operation



Always make the described settings with the unit unplugged.

A



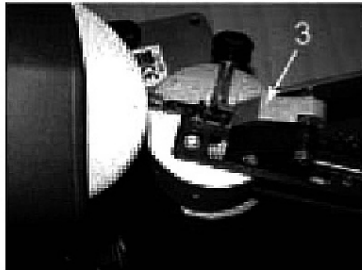
1. Loosen the screw (1) to disconnect the clamping plate (2) and put the chain inside the guide bar (Fig. A).

B



2. To set the grinding angle (Fig. B), loosen the lock screw (#6, Fig. F below) and turn the head (at the top) to 30°.

C



3. Tip the stop (#3 in Fig. C) and draw the tooth to be sharpened against the top.

D

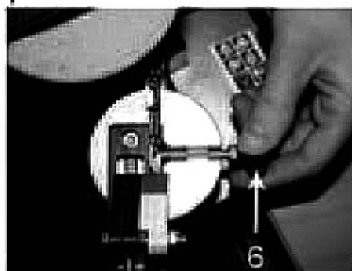


E



4. Push the grinding head (#4 in Fig. D) down gently and set up the link distance by adjusting the set screw (#5 in Fig. E) so that the grinding wheel touches the surface of the tooth to be sharpened.

F



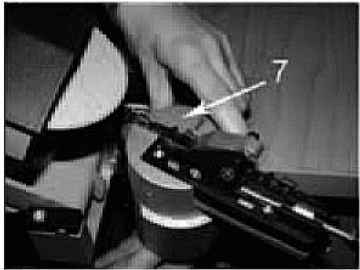
5. Fix the chain in place by tightening the locking screw (#6 in Fig. F).

G



- Sharpen the chain by gentle pressing the wheel on the chain. Repeat steps 5 and 6 on every other link. To be sure that each link is sharpened on this side, it is recommended to make a mark with chalk on the link that was sharpened first. Turn screw (#5, Fig. E) in the direction of the grinding wheel until the sharpening of the front face is completed.

H



- Turn the head (#7, Fig. H) to the required angle on the other side (30°).

I



- Now, without changing the set-up, it is possible to proceed with steps 5 and 6 and to sharpen the remaining teeth on the other side (Fig. I).

J

The data is shown as an example and should be adjusted to your chain.

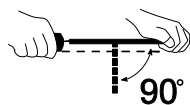
- Depth limiter distance
- Limiting cutting angle



- Stemal angle
- Sharpening angle



- Free retaining angle



- As a rule, the chains are sharpened at an angle of 30 - 35°. Remember to use the correct grinding wheel. On the chains for DIY persons, the wheel used is rather thin (1/8") and on professional chains, the wheel is thicker (3/16", 1/4").

- The depth limiter space should be set up in advance. Otherwise your chain will be sharp but unable to cut. The distance should be checked against the data on your chain and adjusted with a file.

5 Safety Instructions



Caution! As a precaution against electrical shock, the safety instructions below should be followed exactly when using electric tools. Read these regulations and the instruction manual carefully before using the machine to ensure safest operation.

1. Read the instruction manual, follow the safety regulations precisely and keep the operator's manual in a safe, dry place for future reference.
2. Keep your workspace neat; a messy work area may cause personal injury.
3. Secure the machine on a flat, stable surface in a well-lit and properly ventilated area. Make sure there is sufficient space around the machine so sparks and debris caused by grinding do not come in contact with any flammable material. Never use the machine in wet or moist areas, and do not expose machine to rain.
4. Check to see that all parts depicted in the drawings are available.
5. Fix the holder to the worktable before using.
6. Wear appropriate clothing. Do not wear loose-buttoned shirts or jewelry that could get caught in rotating parts. Keep long hair out of the way of the machine with a cap or hairnet.
7. Always wear goggles or safety glasses as well as protective gloves when using this machine.
8. Hazardous noise conditions may occur. Wear ear protection to protect hearing.
9. Keep the unit in a dry, locked place when not in use. Keep the machine away from children and unauthorized people.
10. Check the unit for damage. Before the use of the unit, check to see that it is capable of operation and that the functions of any removable and fixed parts, and safety devices are in perfect working order.
11. Never use the machine for anything other than the assigned jobs and purposes. Use it for sharpening saw chains only.
12. Before using the unit, make sure that servicing sockets are removed.
13. Never remove any parts from the unit.
14. Check all screws and joints to make sure they are tight.
15. Never overload the unit.
16. Make sure you have proper footing and balance at all times.
17. Always unplug the unit before performing maintenance, changing grinding discs or putting it in storage.
18. Mind what you are doing at all times. Be cautious and stop working when you feel tired.
19. Do not pull the power cord to unplug it. Keep the cord away from sources of heat, oil and sharp edges.
20. Switch the unit OFF immediately if defects are found in the cord, plug, switch or safety devices. Turn the unit OFF immediately if you detect smoke or smell burning insulation. Also, switch the unit OFF if it gets too noisy.

6 Use and Useful Tips

1. A protective cover must be installed to work with the grinding wheel.
2. Never operate the machine without the grinding wheel protective cover.
3. Spare grinding wheels should be kept in a dry place and protected against being hit or dropped.
4. Take care to keep the grinding wheel you are using in perfect condition. Check to see that the wheel is not cracked.
5. Grinding wheels of 4" (100mm) maximum diameter may be used up to a wear of 2-3/4" (70mm) minimum dia.
6. The correct rotation direction of the grinding wheel is to the right.
7. Do not use cords, plugs or extension cords that are defective or do not correspond to regulations.
8. Use only a grinding wheel with an RPM speed equal to the idling speed of the machine.
9. The grinding wheel should fit perfectly and turn freely. Never use oval-shaped or vibrating grinding wheels. Replace a wheel if it has been forcefully struck.
10. Worn grinding wheels should be replaced before they touch the support discs.
11. Never shift the chain with your hand before the grinding wheel is completely away from the work area.
12. Never use the machine with a defective power cord. If the cord is damaged or cut during the course of work, do not touch it but simply unplug it. If the power cord is damaged, it should be replaced by a qualified service center.
13. Make sure the power cord is at a sufficient distance from the grinding wheel and the working area.
14. After 3 hours of operation, retighten the screws and retaining nuts.
15. Prior to plugging in the unit, make sure the machine is switched OFF.
16. Before getting down to work, let the unit idle for a few minutes.
17. Do not hold back or try stopping the grinding wheel with your hands or other objects.
18. Do not try to work with other materials such as glass, ceramics, plastic, wood, etc.

7 Grinding Wheel Inspection

1. Check the disc you are about to use for damages prior to installation.
2. Insert a pencil horizontally through the hole and allow the disc to swing freely. Carefully tap the disc edge with another pencil. **The disc should give a clear, high pitch sound.** If the sound is dampened or blank, the disc is defective and **should not be used!** A dull or dampened sound indicates damage by cracks in the disc.
3. Make a visual inspection from the side to see if the wheel vibrates laterally or across.

8 Sharpening Instructions

1. The unit should be securely attached to the workbench.
2. Assemble the unit according to Figs. A through K, pp. 3–6.
3. Place the chain in the guides (Fig. L).
4. Turn the chain bearing (#2, Fig. M) by 30° or 35° on the scale according to the type. Tighten the hand wheel (#16, Fig. M). Place the tooth at the grinding wheel height (Fig. N).
5. Gently tighten the chain on the knob (#14, Fig. O).
6. Set up the grinding depth with screw (#15, Fig. P).
7. Sharpen all teeth of the same type before turning the chain bearing 30° or 35° to the opposite side (Fig. Q and R).
8. Make any changes only when the grinding wheel is NOT spinning.
9. Always remove a very small amount of material and do not sharpen a tooth for too long — this can damage the chain tooth.
10. Depth limiters sharpening (Fig. S).

8 Warranty

Warranty claims as per the warranty certificate attached.

9 Spare Parts



Contact Customer Service: phone 952-945-9058 or fax 952-945-0066 for the following:

- (1) If any missing or broken parts when unpacking, please have original receipt and purchase date
- (2) To purchase additional grinding wheels or spare parts

10. List of Spare Parts

Spare Part No.		Description	Qty
Product No.	Position		
CS-BMM	001	Base plate	1
CS-BMM	002	Upper rolling plate	1
CS-BMM	003	Chain drive	1
CS-BMM	004	Left body	1
CS-BMM	005	Right body	1
CS-BMM	006	Grinding disk enclosure body	1
CS-BMM	007	Flange	2
CS-BMM	008	Big in-phase wheel	1
CS-BMM	009	Shaft board	
CS-BMM	010	Clamping rod	1
CS-BMM		Left shelf	1
CS-BMM		Right shelf	1
CS-BMM	012	Wide board	1
CS-BMM	013	M6x80 screw	1
CS-BMM	014	M6x50 screw	1
CS-BMM	015	M6x50 screw	1
CS-BMM	016	M8 hand wheel	1
CS-BMM	017	Motor assy	1
CS-BMM	018	Small in-phase wheel	1
CS-BMM	020	Plug cord	1
CS-BMM	021	Main switch	1
CS-BMM	022	Cord pin	1
CS-BMM	023	Synchronous belt	1
CS-BMM	024	Powder bearing	2
CS-BMM	025	Rolling axis	1
CS-BMM	026	Axis	1
CS-BMM	027	M10 set nut	1
CS-BMM	028	M6 large nut	2
CS-BMM	029	Grinding wheel	1

CS-BMM	031	Shelf thrust spring	1
CS-BMM	032	Chain support	2
CS-BMM	033	M5 nut	7
CS-BMM	034	M6 nut	7
CS-BMM	035	M10 nut	1
CS-BMM	037	Elastic bolt	1
CS-BMM	041	Spring	1
CS-BMM	043	Baffle circle	2
CS-BMM	044	M5x35 bolt	
CS-BMM	045	M8x40 bolt	1
CS-BMM	046	M5x8 bolt	1
CS-BMM	047	M5x16 bolt	4
CS-BMM	048	M6x16 bolt	2
		M6x80 bolt	1
CS-BMM	050	Flat washer	1