

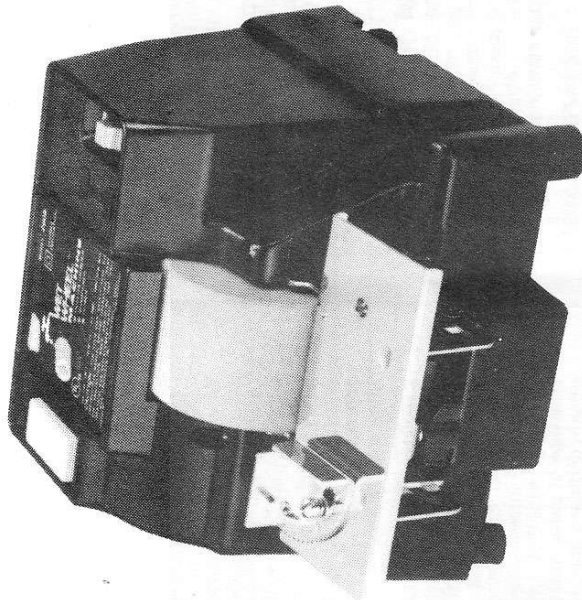


OWNER'S MANUAL MODEL 2908



U.S. PAT. NO. 4607459

☐ DOUBLE INSULATED



FOR ORDERING TOOLS AND ACCESSORIES OR TO SPEAK WITH A
CUSTOMER SERVICE REPRESENTATIVE CALL OUR TOLL FREE NUMBER:

1 - 800 - 462 - 3630

MADE IN U.S.A. BY WEN PRODUCTS, INC., CHICAGO, IL 60631

This page is for your reference. On it you will find various specifications and bits of information concerning your Wet Wheel Machine, how to order replacement parts, and a space for your own personal notes. Keep this booklet in a handy place. See page 15 for the parts list.

MODEL NO..... 2908
RATED AMPERAGE.....0.5A (120 VAC)
RPM.....1200

DATE PURCHASED _____

WHERE PURCHASED _____

DATE CODE ON TOOL _____
(6 digit no. located on bottom of tool.)

NOTES:

REPLACEMENT PARTS

Replacement parts may be ordered from the factory direct. All replacement parts ordered will be shipped C.O.D. based on prices in effect on date of shipment, or you may request prices in advanced and include your check with the order. Be sure to include Model Number, Part Number, and Part Description on all orders for replacement parts.

LIMITED WARRANTY

All WEN tools are thoroughly tested and checked before shipment, and are guaranteed against defective material or workmanship for a period of one full year from date of purchase. Tools used in industrial/commercial or rental applications are not covered by this warranty.

Should trouble develop, return tool prepaid direct to factory. If our inspection shows that the trouble was caused by defective material or workmanship, we will repair or replace without charge and return prepaid. Repairs made necessary by normal wear, abuse or out of warranty will be charged for at our regular repair prices.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Send inquiries and tools requiring service directly to our service center, WEN PRODUCTS, INC., Service Center, 5810 Northwest Hwy., Chicago, IL 60631.

WEN PRODUCTS, INC.
5810 Northwest Hwy., Chicago, Illinois 60631
(312)763-6060 (800)462-3630
FAX (312)763-1158

WARNING

"READ ALL INSTRUCTIONS" Failure to read all the SAFETY RULES listed below and other basic safety precautions, may result in serious personal injury and or risk of fire when operating electric tools.

GENERAL SAFETY RULES

- 1. REPLACEMENT PARTS**
When servicing, use only identical replacement parts.
- 2. KEEP WORK AREA CLEAN**
Cluttered areas and benches invite accidents.
- 3. AVOID DANGEROUS ENVIRONMENT**
Don't use power tools in damp, wet locations. Keep work area well lit. Do not expose to rain. Do not use tool in presence of flammable liquids or gases.
- 4. GUARD AGAINST ELECTRIC SHOCK**
Prevent body contact with grounded surfaces. For example, pipes, radiators, ranges, refrigerator enclosures.
- 5. KEEP CHILDREN AWAY**
Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
- 6. STORE IDLE TOOLS**
When not in use, tools should be stored in dry, high or locked-up place - out of reach of children.
- 7. DON'T FORCE TOOL**
It will do the job better and safer at the rate for which it was designed.
- 8. USE RIGHT TOOL**
Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended - for example - don't use circular saw for cutting tree limbs or logs.
- 9. WEAR PROPER APPAREL**
No loose clothing or jewelry to get caught in moving parts. Rubber gloves and footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- 10. 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.
- 11. DON'T ABUSE CORD**
Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.

- 12. SECURE WORK**
Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
- 13. DON'T OVERREACH**
Keep proper footing and balance at all times.
- 14. MAINTAIN TOOLS WITH CARE**
Keep tools sharp and clean for better and safer performance. Follow instructions for changing accessories. Inspect tool cords periodically, and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
- 15. DISCONNECT TOOLS**
When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
- 16. AVOID ACCIDENTAL STARTING**
Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
- 17. OUTDOOR USE EXTENSION CORDS**
When tool is used outdoors, use only extension cords suitable for use outdoors and so marked with the suffix W-A after cord type.
- 18. STAY ALERT**
Watch what you are doing. common sense. Do not operate tool when you are tired.
- 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, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.

- 20. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.**
Don't leave tool until it comes to a complete stop.
- 21. MAKE WORKSHOP KID PROOF**
with padlocks, master switches, or by removing starter keys.
- 22. THIS TOOL IS INTENDED FOR RESIDENTIAL USE ONLY.**

- 23. REPLACE CRACKED WHEEL IMMEDIATELY.**
- 24. ADJUST DISTANCE BETWEEN WHEEL AND TOOL REST.** Maintain 1/16 inch or less clearance as the diameter of the wheel decreases with use.
- 25. USE ONLY GRINDING WHEELS SUITABLE FOR SPEED OF GRINDER.**

GENERAL RULES



WARNING
Use of accessories not recommended with this tool may create a hazardous condition.

DOUBLE INSULATED - SAFETY PLUS....Double insulation construction and shockproof housings to assure protection from electrical shock! An extra layer of electrical insulation plus the primary insulation system. Even if the primary system fails, the secondary barrier protects you. WEN double insulated tools are dependable, durable - and safe. All WEN tools are thoroughly electrically and mechanically tested at the factory before shipment.

POLARIZED PLUG: Double insulated tools do not require three-wire grounding. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other) and does not require a grounding adapter. This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact a qualified electrician to replace the obsolete outlet. Do not defeat the safety purpose of the polarized plug.

BRUSHES: The highest grade brushes are used and will afford up to 100 hours of operation. With normal use brush replacement will not be necessary.

MOTOR LUBRICATION: The gear chamber bearings and the forward motor bearing have been packed with lubricant at the factory and under intermittent use the lubricant will last almost indefinitely.

CARE OF HOUSINGS: Your WEN sharpener is double insulated and has a durable, impact resistant plastic housing. When cleaning, certain chemicals such as carbon tetrachloride, gasoline, chlorine and ammonia must be avoided to preserve the housing finish. Mild soap and water will handle most of the cleanup.

WIRE GAUGE CHART A.W.G.

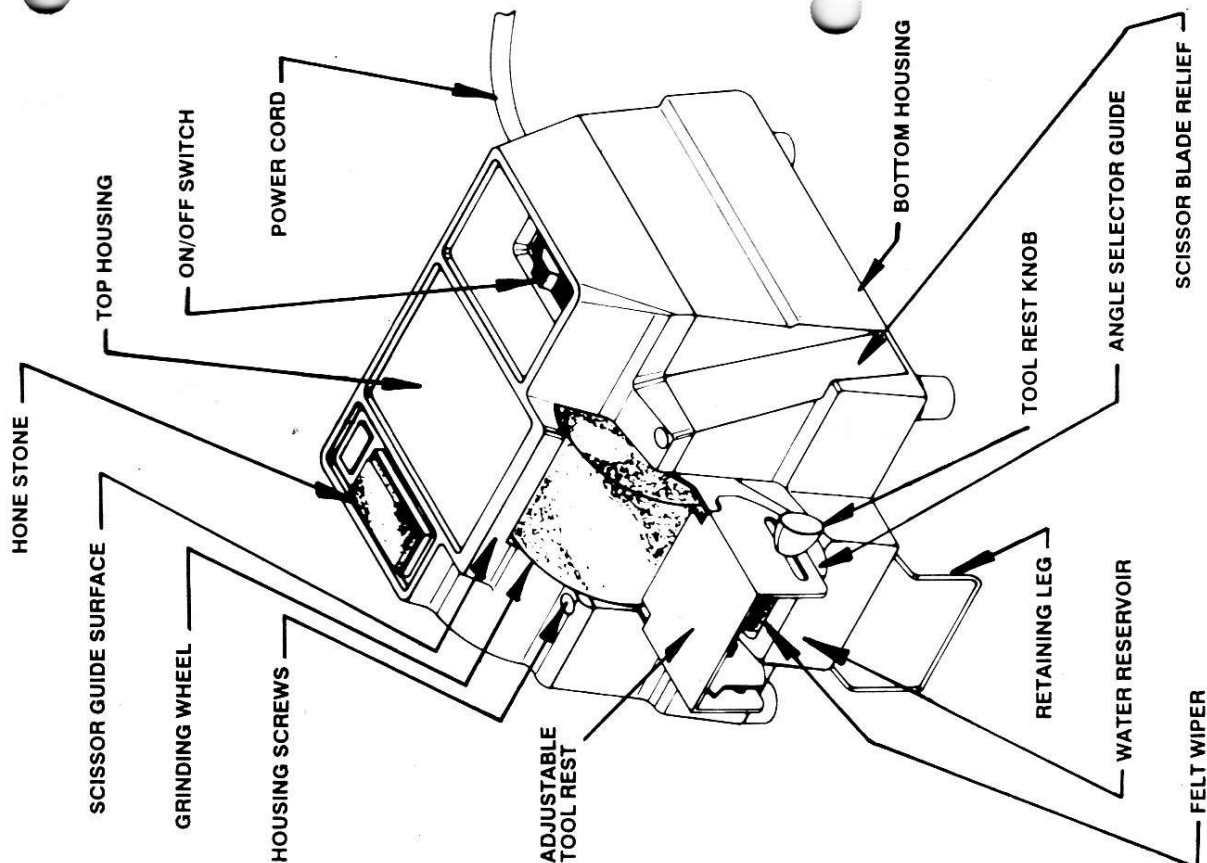
Name Plate Amps.	Cord Length in Feet			
	120V	25	50	100
5-6			18	16
6-8			18	16
8-10			18	14
10-12			16	14
12-14			16	12

EXTENSION CORD:
When using the tool at a considerable distance from power source, an extension cord of adequate size must be used to prevent loss of power and overheating.

Extension cords should be of a type acceptable for outdoor use, marked with suffix W-A following the cord type designation, for example -SJTW-A.

SAVE THESE INSTRUCTIONS.

FEATURES AND ADJUSTMENTS



The unique design of the WEN Wet Wheel Machine incorporates the features most desired in a wet grinding and sharpening machine.

COOLING SYSTEM:

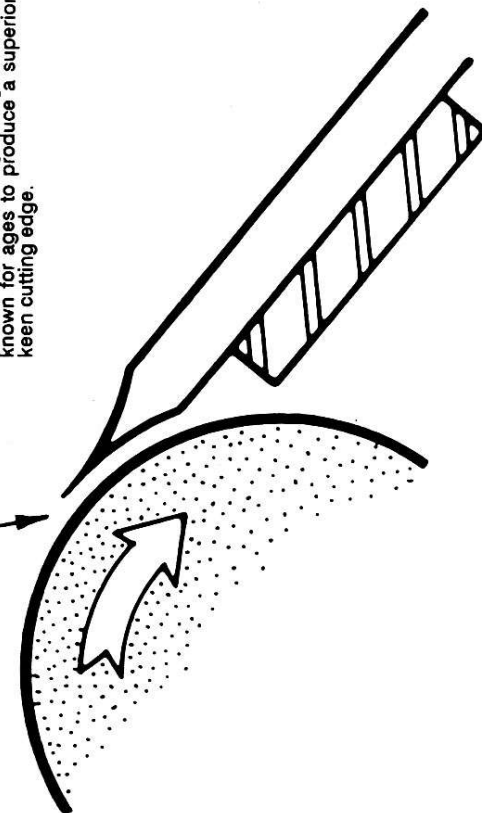
Friction produced in the grinding process generates heat which could ruin the temper of the blade or tool being sharpened. The unique wiper of the WEN Wet Wheel Machine keeps the grinding wheel and cutting edge cool.

The grinding wheel is porous and will absorb the water like a sponge. Centrifugal force keeps the water on the wheel's surface which gives the wheel a wet sheen.

FIGURE 1

CURVATURE OF WHEEL CREATES "HOLLOW GROUND" EDGE

HOLLOW GROUND EDGE:
A sharp tool makes any cutting job easier. Wet hollow grinding has been known for ages to produce a superior, keen cutting edge.



Capillary attraction pulls water from reservoir through wiper which maintains an evenly wet grinding surface. The wiper also wipes the wheel clean of swarf, the gritty residue which grinding produces. Once wheel is soaked and reservoir full of water, the machine will stay wet and cool for hours of use.

Fill with tap water or in areas where the water is extremely hard, use distilled water. Distilled water will reduce the amount of mineral deposits in the wiper (See MAINTENANCE - Care of Wiper.)



Always maintain water level. Do not run the Wet Wheel Machine dry.

PREPARING GRINDING WHEEL FOR SHARPENING

Loosen tool rest knobs and allow tool rest to hang down as shown in Figures 2 and 3.

FIGURE 2

PRY OUT WIPER WITH SCREWDRIVER

- Remove wiper and soak with water. Replace wiper.
- Turn Wet Wheel Machine "ON".

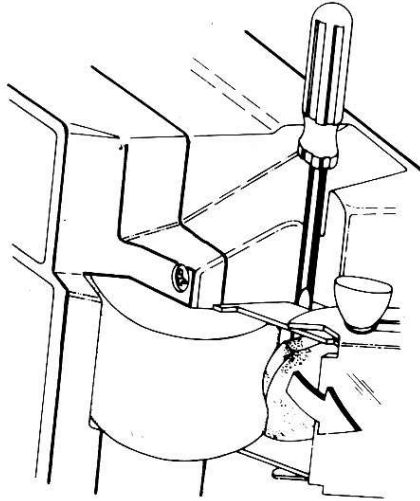


FIGURE 3

POUR WATER ACROSS WHEEL

- Take some water in a container and pour it SLOWLY, directly on the wheel with a back and forth motion.

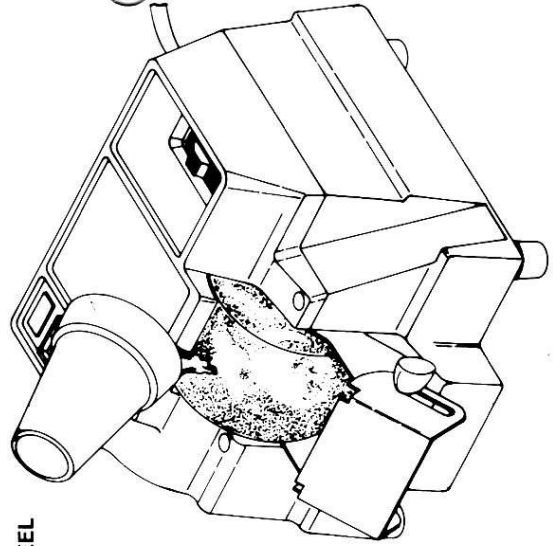
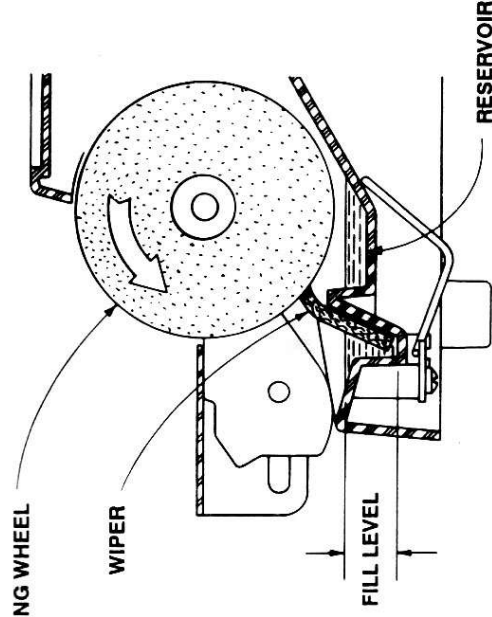


FIGURE 4

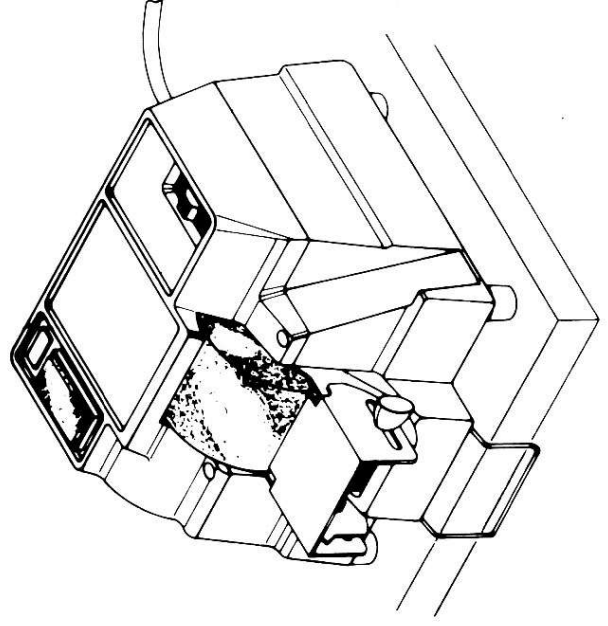


- Continue pouring water on the wheel until water level in reservoir is about 3/4 full. Do not overfill.

FIGURE 5

RETAINING LEG SHOWN EXTENDED

When extended and hooked over a table or bench edge, the retaining leg prevents the Wet Wheel Machine from moving when doing heavy grinding. Folds up and out of the way when not required as shown in Figure 4..



ADJUSTABLE TOOL REST

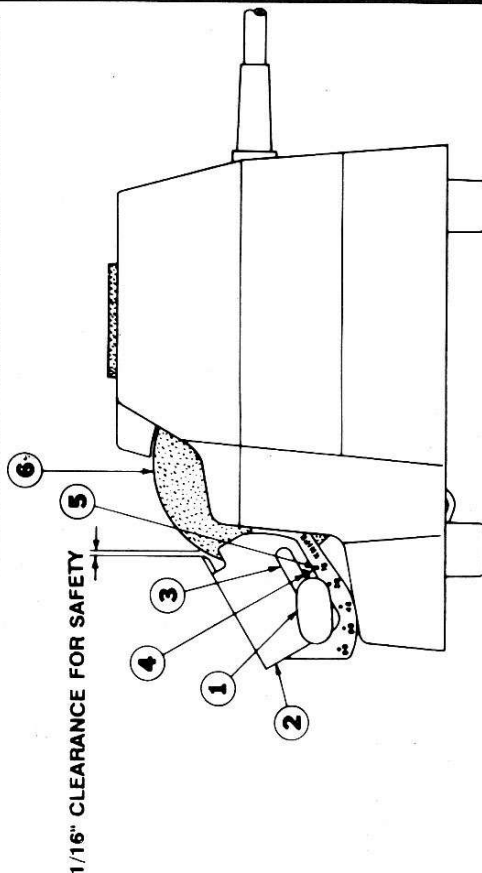
Using the angle selector guide as described below, enables you to accurately position the tool's cutting edge to the grinding wheel at precisely the right angle for each job, and also maintains the proper clearance between the tool rest and grinding wheel.

FIGURE 6

GENERAL SHARPENING

- Make sure machine is turned "OFF" while making adjustments.
- Loosen both tool rest knobs (1). Slide tool rest (2) along the slot (3) until tip of angle selector arrow (4) is just touching the dot (5) of the angle selector guide for the desired angle.
- Be sure you maintain 1/16" clearance between grinding wheel (6) and tool rest (2) for safety.

IMPORTANT! ALWAYS TIGHTEN THE RIGHT KNOB FIRST TO MAINTAIN CORRECT SETTING.

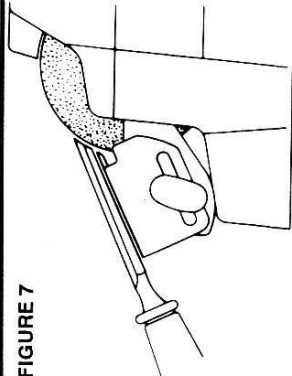


1/16" CLEARANCE FOR SAFETY

VISUAL CHECK (BEFORE OPERATING)

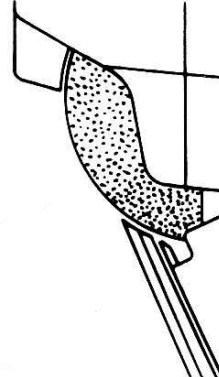
- Place item to be sharpened on tool rest and sight it down from right end as shown in Figures 7 and 8 to see if it is adjusted for the proper angle for that item. Adjust tool as required to match the cutting edge's original angle.
- Securely tighten right tool rest knob first, then the left tool rest knob.

FIGURE 7



VIEW FROM RIGHT SIDE

FIGURE 8



CLOSE UP VIEW OF TOOL BEING SHARPENED

OPERATING INSTRUCTIONS



Before and during the operation of your Wet Wheel Machine, a few basic, but important rules must be observed in order to insure your safety and make your job easier.

Please take time to read these along with the rest of your manual before attempting to operate your tool.

1. Always wear eye protection.
2. Always maintain 1/16" clearance between tool rest and grinding wheel.
3. Check water supply regularly.
4. Add water when necessary.
5. Don't force - Hold the work firmly and gently ease into the grinding wheel.
6. Follow all maintenance instructions as noted on page 14.
7. Turn machine "OFF" before making adjustments.
8. Clean wiper after each use as described in the maintenance section of this manual under "Care of Wiper."

PRACTICE HINTS

1. **Check:** While in "OFF" position, use the "visual check" procedure as described on page 8 for proper sharpening angle.
2. **Practice:** While still in "OFF" position, practice procedures as described in the following instructions.
3. **Deburr:** After you are finished sharpening, there may be a fine burr on the cutting edge. This may be removed by turning the Wet Wheel Machine "OFF" and drawing the cutting edges lengthwise along the grinding wheel. Make sure cutting edges are absolutely smooth and burr-free.

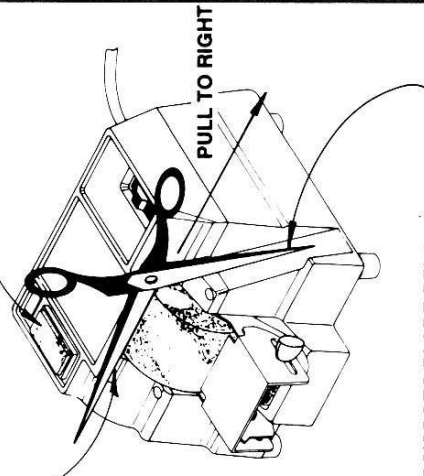
SHARPENING SCISSORS

SCISSORS GUIDE BUILT INTO HOUSING

PUSH AGAINST GUIDE — HONE STONE

Set tool rest at approximately 90° so that tool rest and right knob will not interfere with long scissor blades.

- Open scissors.
- Lay one blade across top of grinding wheel and press it back against scissor guide as shown.
- Gently, but firmly apply pressure on blade into grinding wheel.
- Continue to apply same pressure on blade while slowly drawing blade to the right across grinding wheel to tip of scissors.
- Repeat as required.
- Turn scissors around and repeat above procedure with other blade.
- Turn machine "OFF" and deburr as described above in **PRACTICE HINTS**.



SCISSORS BLADE RELIEF IN HOUSING

SHARPENING KNIVES

- Loosen tool rest knobs.
- Slide tool rest up along built in guide angle.
- Apply pressure at front edge of tool rest.
- Adjust tool rest for 1/16" clearance between tool rest and grinding wheel.
- Maintain pressure at front of tool rest and tighten tool rest knobs.

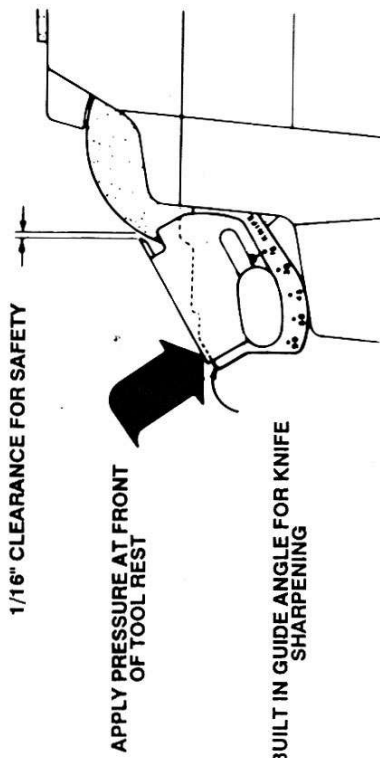


FIGURE 15

- Lay knife blade on tool rest until edge just touches grinding wheel.
- Turn on machine.
- Hold knife handle in right hand, use left hand to apply pressure against tool rest as shown.
- Push into grinding wheel until contact is made. Apply firm, steady pressure into grinding wheel while slowly drawing blade to the right.
- Repeat as required.

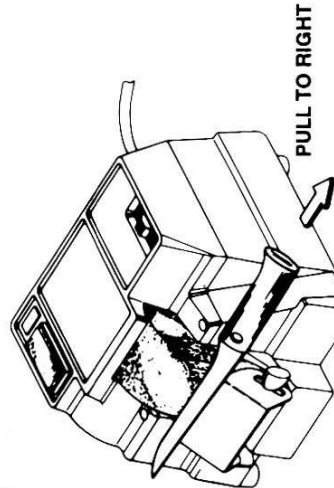


FIGURE 16

FIGURE 17 If blade is curved at the end, rotate knife handle toward you when approaching knife's tip as shown.

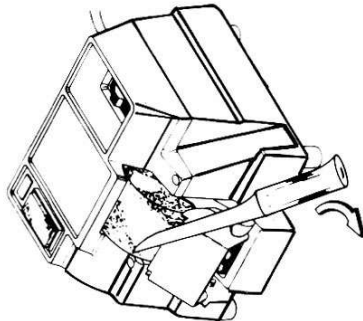


FIGURE 18 Sharpen the other side of the blade the same way as described above except hold knife as shown in Figures 18 and 19.

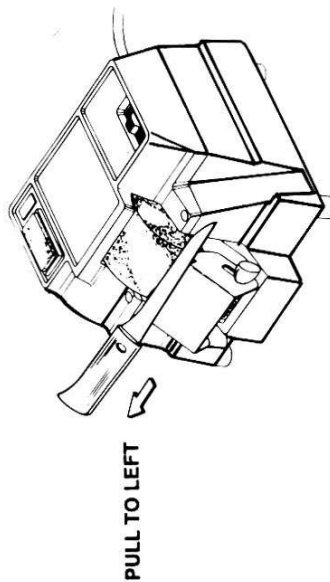
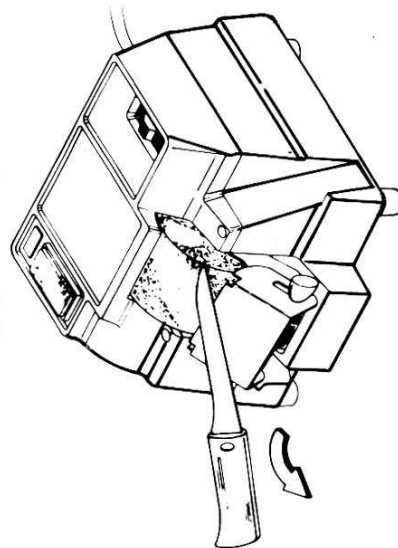
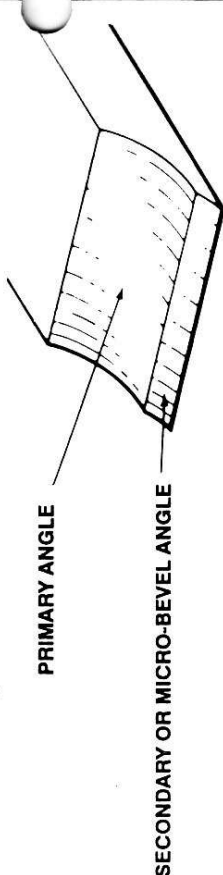


FIGURE 19 Deburr as described on page 9 in PRACTICE HINTS.



SHARPENING TOOLS

FIGURE 20 Micro-Bevel -- some tools, such as chisels and plane blades, require what is called a "micro-bevel" edge to improve tool performance and cutting edge strength.



CHISEL BLADE WITH MICRO-BEVEL EDGE

FIGURE 21 This is accomplished by grinding in a primary angle, 25°-30° for example, then grinding in a secondary angle, 30°-35° for instance, on the tip of the cutting edge.

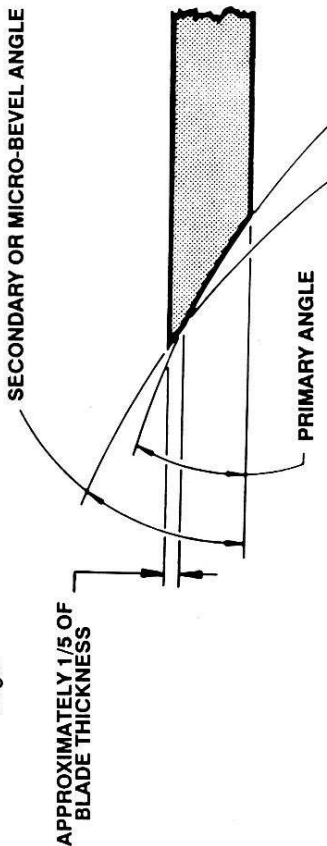
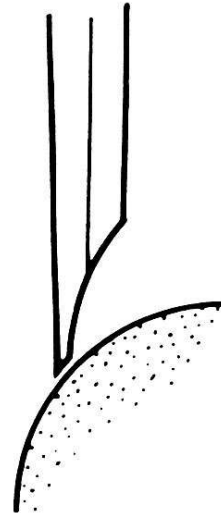


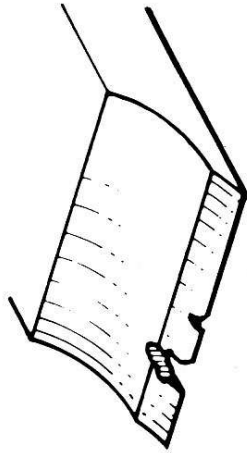
FIGURE 22 In most cases, it is only necessary to touch up the secondary angle to keep edges keen.



TOUCHING UP THE MICRO-BEVEL

FIGURE 23

- Use "visual check" method described on page 8.
- You will only need to grind in both angles if cutting edge becomes badly damaged.
- Move the tool back and forth across grinding wheel to avoid wearing down the wheel unevenly.
- If this occurs, "dress" the wheel as described in the maintenance section of this manual under "Care of Grinding Wheels".



BADLY DAMAGED CUTTING EDGE REQUIRING BOTH PRIMARY AND SECONDARY ANGLES TO BE GROUND.

TOOL REST EXTENSION ATTACHMENT

Your Wet Wheel Machine includes a tool rest extension attachment which can provide a variety of grinding or sharpening adjustments.

- To install the attachment, simply slide it at an upward angle over the tool rest table.
- When the tab retaining the clamping knob comes in contact with the table, rotate the attachment downward making sure that the small pins (on the underside of the attachment) line up with the sides of the table.
- Tighten the clamping knob. Make sure that the attachment is clamped flat on the table.
- The adjustable tool guide protractor enables you to make a square (Fig. 24) or angled (Figs. 25 & 26) cutting edge for chisels, screwdrivers, putty knives, etc.

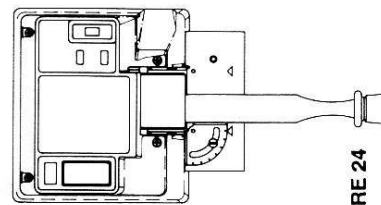
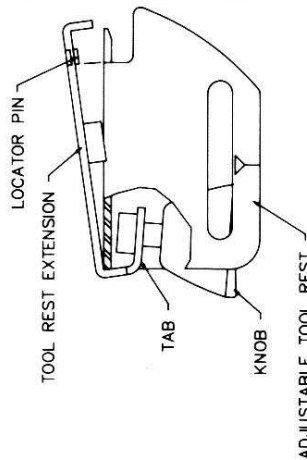


FIGURE 24

SQUARING UP THE TOOL

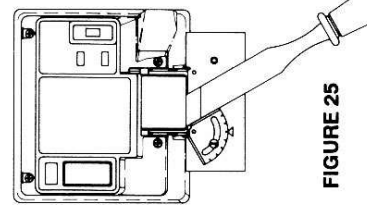


FIGURE 25

MAKING AN ANGLED EDGE

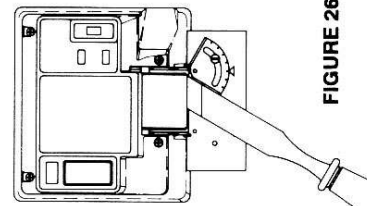
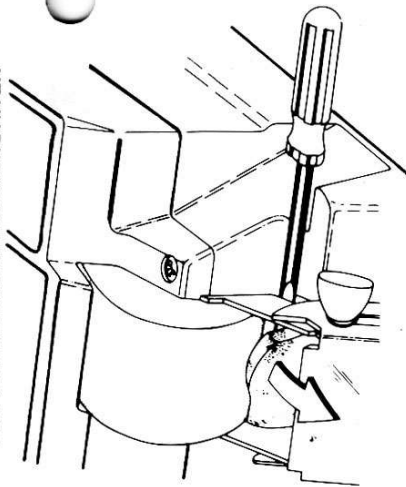


FIGURE 26

MAINTENANCE

FIGURE 27
CARE OF WIPER

PRY OUT WIPER WITH SCREWDRIVER



- Clean wiper after each use to remove the grinding residue or "swarf".
- Loosen tool rest knobs and allow tool rest to drop down out of the way as shown.
- With the aid of a screwdriver, pry the wiper out of the reservoir. To replace the wiper, reverse the procedure.
- Rinse wiper thoroughly under faucet to remove grinding residue.
- Replace wiper when worn out.

CARE OF GRINDING WHEELS

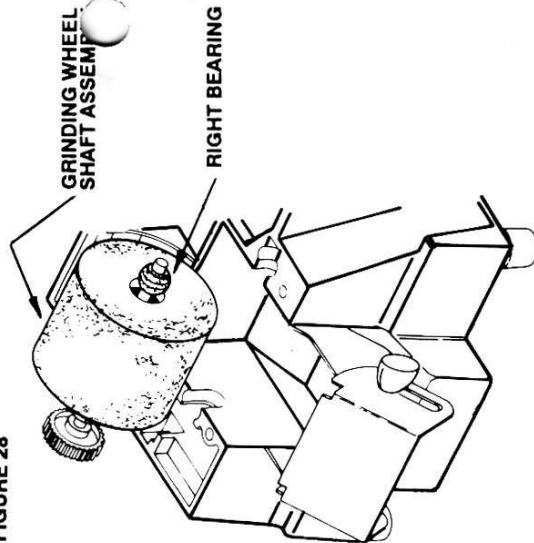
In normal usage, grinding wheels may become grooved, out of true, and become "loaded". Loaded simply means that soft metals or other materials have filled up the pores of the wheel. When this occurs, grinding action is greatly reduced. Grinding of soft metals, such as aluminum, brass, copper, lead and the like, should be avoided as much as possible. When any of the above conditions occur, the wheel may be put in good condition again by "dressing the wheel". Various tools and abrasive sticks are available in most hardware stores for this purpose. To "dress" the wheel, start the Wet Wheel Machine and work the dressing stone back and forth across the wheel until all grooves, etc., are gone. Be sure to use suitable eye protection for this purpose. Dressing stones are available at most hardware stores or may be ordered through Wen Products. See optional equipment in parts list.

IMPORTANT: Clean wiper after dressing wheel.

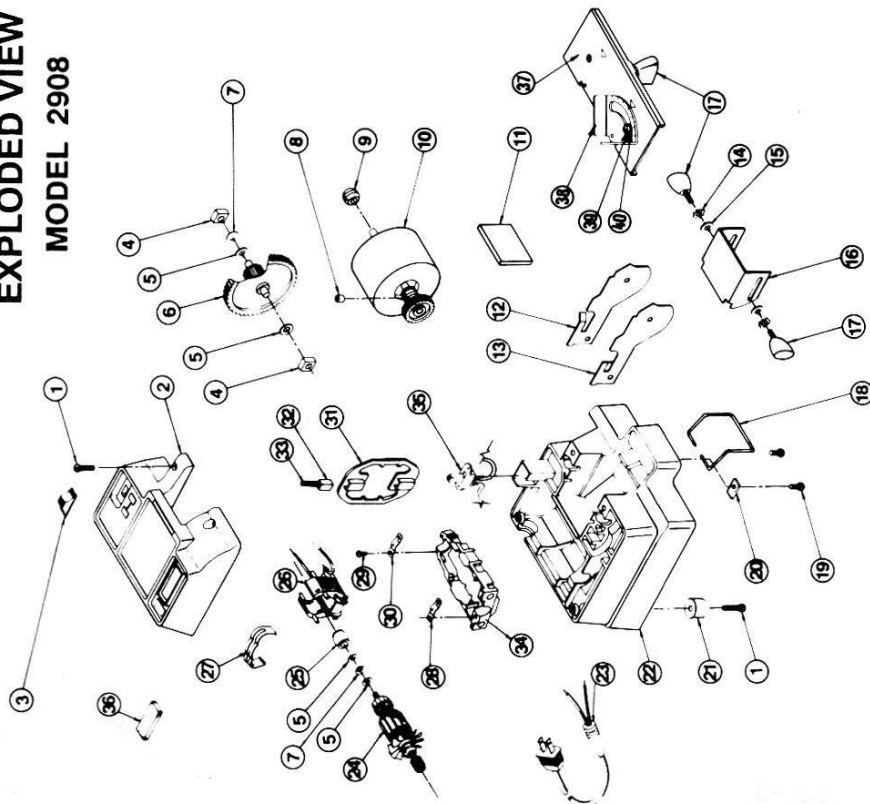
WHEEL REPLACEMENT

- If wheel is cracked, chipped, or becomes worn or excessively grooved, it is necessary to replace it. Order part number 2905B8 "grinding wheel shaft assembly".
- Disconnect Wet Wheel Machine from power source.
- Loosen all four top housing screws and lift off top housing.
- Grasp grinding wheel and lift out whole grinding wheel shaft assembly as shown.
- Remove right bearing and slide on to new grinding wheel shaft assembly.
- Replace grinding wheel shaft assembly in bottom housing.
- Replace top housing and screws.

FIGURE 28



EXPLODED VIEW MODEL 2908



PARTS LIST

NO.	DESCRIPTION	PART NO.	NO.	DESCRIPTION	PART NO.
1.	SCREW (6)	953A17-1	21.	RUBBER FOOT (4)	2801A25
2.	HOUSING - TOP	2905E2	22.	HOUSING - BOTTOM	2905E1
3.	SWITCH CAP	2805A12	23.	CORD	911B4-1
4.	BEARING - INTERMEDIATE	2801A14	24.	ARMATURE & PINION ASSEMBLY	2905B30
5.	WASHER (4)	500A18	25.	SPHERICAL BEARING	2905A21
6.	INTERMEDIATE GEAR & SHAFT ASSEMBLY	2905A8	26.	FIELD ASSEMBLY	2905B31
7.	SPRING WASHER (2)	96A63	27.	FIELD STRAP	700A82
8.	GROMMET (6)	2801A52	28.	BEARING STRAP	700B176
9.	SPHERICAL BEARING	2801A36	29.	SCREW (4)	3700A40
10.	GRINDING WHEEL & SHAFT ASSEMBLY	2905B8	30.	BEARING STRAP	700B176-1
11.	FILTER (WIPER)	2905A15	31.	BRUSHBOARD ASSEMBLY	2905A50
12.	RIGHT TOOL REST BRACKET ASSEMBLY	2905A37	32.	BRUSH	700A193
13.	LEFT TOOL REST BRACKET ASSEMBLY	2905A38	33.	BRUSH SPRING	700A183
14.	EXTERNAL LOCK TOOTH WASHER (2)	90A117	34.	CHASSIS	15CA
15.	WASHER (2)	1030A113	35.	SWITCH	2905A65
16.	TOOL REST	2805A39	36.	HONE STONE	2905A14
17.	KNOB (3)	2900A79	37.	TOOL REST EXTENSION	2905B1
18.	RETAINER LEG	2905B35	38.	TOOL GUIDE PROTRACTOR	2901B32
19.	SCREW (2)	953A17-2	39.	WASHER	2901A43
20.	RETAINER LEG BRACKET (2)	2905A47	40.	SCREW WITH LOCK WASHER	2901A42