

# HOLE CUTTER SHARPENER

## ASSEMBLY & SERVICE MANUAL



### **WARNING**

You must thoroughly read and understand this manual before operating the equipment, paying particular attention to the **Warning & Safety** instructions.

# SAFETY INSTRUCTIONS

**Safety Awareness Symbols** are inserted into this manual to alert you to possible **Safety Hazards**. Whenever you see these symbols, follow their instructions.



The **Warning Symbol** identifies special instructions or procedures which, if not correctly followed, could result in personal injury.



The **Caution Symbol** identifies special instruction or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE WRENCHES AND OTHER TOOLS.**
3. **KEEP WORK AREA CLEAN.**
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use hole cutter sharpener in damp or wet locations. Machine is for indoor use only. Keep work area well lit.
5. **KEEP ALL VISITORS AWAY.** All visitors should keep a safe distance from work area.
6. **MAKE WORK AREA CHILD-PROOF** with padlocks or master switches.
7. **DON'T FORCE THE HOLE CUTTER SHARPENER.** It will do the job better and safer if used as specified in this manual.
8. **USE THE RIGHT TOOL.** Don't force the hole cutter sharpener or an attachment to do a job for which it was not designed.
9. **WEAR PROPER APPAREL.** Wear no loose clothing, gloves, neckties, or jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
10. **ALWAYS USE SAFETY GLASSES.**
11. **SECURE YOUR WORK.** Securely grip the hole cutter as prescribed in the operators manual.
12. **DO NOT OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN HOLE CUTTER SHARPENER WITH CARE.** Follow instructions in Service Manual for lubrication and preventive maintenance.
14. **DISCONNECT POWER BEFORE SERVICING.**
15. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is OFF before plugging in the hole cutter sharpener.
16. **USE RECOMMENDED ACCESSORIES.** Consult the manual for recommended accessories. Using improper accessories may cause risk of personal injury.
17. **CHECK DAMAGED PARTS.** A guard or other part that is damaged or will not perform its intended function, should be properly repaired or replaced.
18. **NEVER LEAVE HOLE CUTTER SHARPENER RUNNING UNATTENDED. TURN POWER OFF.** Do not leave hole cutter sharpener until it comes to a complete stop.
19. **KNOW YOUR EQUIPMENT.** Read this manual carefully. Learn its application and limitations as well as specified potential hazards.
20. **KEEP ALL SAFETY DECALS CLEAN AND LEGIBLE.** If safety decals become damaged or illegible for any reason, replace immediately. Refer to replacement parts illustrations in Service Manual for the proper location and part numbers of safety decals.
21. **DO NOT OPERATE THE HOLE CUTTER SHARPENER WHEN UNDER THE** influence of drugs, alcohol, or medication.

# SAFETY INSTRUCTIONS



This machine is intended for grinding cup hole cutters ONLY. Any use other than this may cause personal injury and void the warranty.

To assure the quality and safety of your machine and to maintain the warranty, you **MUST** use original equipment manufactures replacement parts and have any repair work done by a qualified professional.

ALL operators of this equipment must be thoroughly trained **BEFORE** operating the equipment.

Do not use compressed air to clean grinding dust from the machine. This dust can cause personal injury as well as damage to the grinder.



## SPECIFICATIONS

Grinding Disc	- - - - -	Special 40 Grit
Hole Cutter Sizes		4.25" (108 mm) Outside Diameter
Sharpens Hole Cutter	- - - - -	Styles: Plain, 3 Scallop, 4 Scallop
Grinding Disc Available		4.0" (102 mm) Diameter for 3 Scallop Design 3.5" (89 mm) Diameter for 4 Scallop Design
Motor	- - - - -	.50 HP totally enclosed intermittent duty, with sealed ball bearings.
Dimensions		15-1/4" (38.7 cm.) High x 12-1/2" (31.8 cm) Wide x 21-1/2" (54.6 cm) Long
Shipping Weight	- - - - -	50 lbs (22.7kg).
Sound Level		DbA when operating.

## UNPACK CARTON

Remove all items from the carton and sort out on a table. When removing the unit, remove carefully, holding onto the base of the unit. Do not lift unit by grasping the plastic cover.

Check all items against the exploded view drawing in the back of the manual to insure that all items were shipped properly. Double check the carton for miscellaneous items before disposing of the carton. Inspect all items for shipping damage as they are removed from the shipping containers. If you find any damage, notify the carrier's claims agent and do not proceed with unpacking until the damage has been inspected by the agent. Refer also to the "Shipping and Receiving Instructions" packed with the unit.

## ASSEMBLY

Place unit on the floor with the hole in the cover facing towards you. (See FIG. 1)

Lift up the hinged cover (see FIG. 2) and remove the 5/16-18 socket head cap screw from the end of the motor shaft by using the 1/4 (.250) Allen wrench provided in the storage hole located at the bottom of the cutter guide support.

Mount either the 3.5" diameter or 4.0" diameter grinding disc assembly by aligning the flats on the motor shaft to the grinding disc flats. Slide on the disc until it bottoms out on the internal locking hub located inside the grinding disc bore.

**NOTE:** When operating the hole cutter sharpener the socket head cap screw is self tightening.



FIG. 1

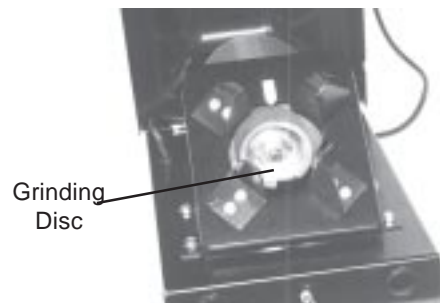


FIG. 2

Start the 5/16-28 socket head cap screw using the 1/4 (.250) Allen wrench and a 1/2" (.500) open end wrench on the motor shaft to keep it from rotating. Next screw in the disc locking screw and torque to 20 in. lbs. Replace the Allen wrench in its storage hole and close and tighten the cover.



**Do not over torque the locking screw. This will put undue stress on the internal hub locating shoulder and could cause it to crack or could deform the wheel hub mounting bolt hole.**

# WIRING INSTRUCTIONS

## IMPORTANT GROUNDING INSTRUCTIONS

In case of malfunction or breakdown, grounding reduces the risk of electrical shock by providing a path of least resistance for electrical current.

This Grinder has an electrical cord with an equipment grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded according to all local or other appropriate electrical codes and ordinances.

Before plugging in the Grinder, make sure it will be connected to a supply circuit protected by a properly-sized circuit breaker or fuse. 15 amp minimum for 115V application. See Fig.3



**Do not modify the plug provided with the machine; if it will not fit the outlet have a proper outlet and circuit installed by a qualified electrician. Always provide a proper electrical ground for your machine. An improper connection can cause a dangerous electrical shock. If you are unsure of the proper electrical grounding procedure, contact a qualified electrician.**

## 115 Volt Model Only.

Plug the power cord into standard grounded receptacle as shown:



FIG. 3

## ELECTRICAL REQUIREMENTS

### 115 V AC (AS BUILT)

The unit has been prewired at the factory to 115V and is to be plugged into a standard 115V, 15 amp, grounded circuit only. Plug the unit into the proper circuit at this time. (See FIG 4A)

### 220 V AC CONVERSION

To convert this unit to operate on a 220V circuit rewire the unit as shown in the diagram. (See FIG. 4B) Cut the plug off the cord and replace it with the appropriate plug for your locality. For plug and circuit breaker sizing, see motor nameplate ratings. Use only a qualified electrician.

When connecting the 220V in the motor, loosen the two screws at the rear of motor and remove the cover. Unhook the rubber gasket from one screw to permit access. Connect wiring per 220 volt diagram and position gasket with cover plate. Then retighten screws.

**CAUTION:** Make sure all gaskets are tightly and properly sealed.

Check for proper motor rotation as viewed from the front of the unit. The correct rotation is counterclockwise. Looking at the shaft end of the motor.



Contact your service representative if rotation is incorrect.

## ELECTRICAL WIRING DIAGRAMS

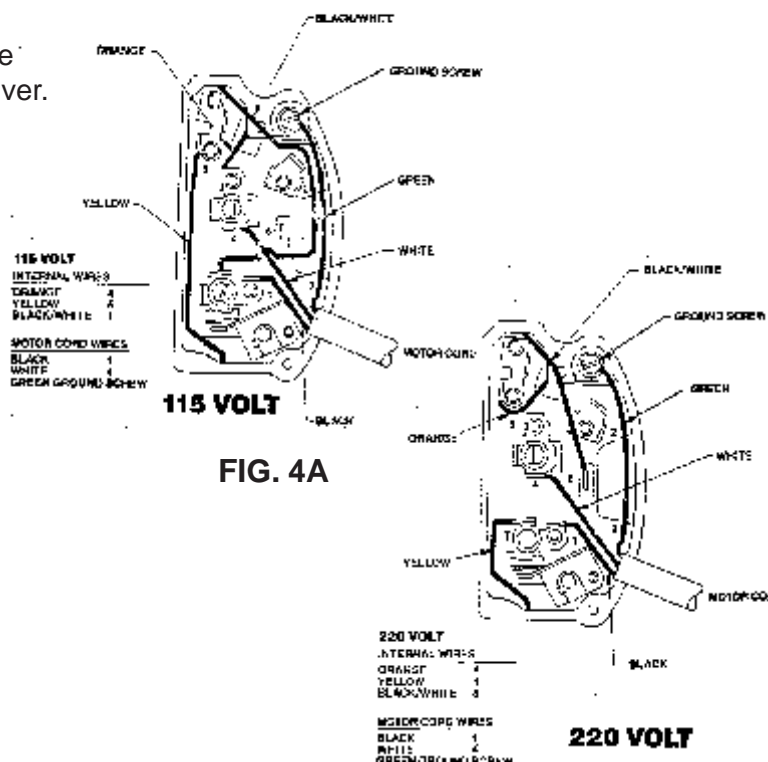


FIG. 4B

# MAINTENANCE - LUBRICATION - TROUBLESHOOTING

**LOOSE GUIDES** - If guides loosen or are too tight against the side of the shell, adjust each guide so it is approximately .015 (1/64:) away from the edge of the shell. Retighten each guide when the adjustment is complete. (See FIG. 14) Cup is to be centered in hole opening within .06 (1/16"). See FIG. 5 and 8

**INADEQUATE STOCK REMOVAL** - If stock removal is not aggressive enough, the grinding disc is worn out. Either replace or rotate disc per the instructions below.

**SWITCH REPLACEMENT** - If the ON/OFF switch needs replacing, follow the wiring diagram in FIG. 6 and replace switch.

**LUBRICATION** - The motor bearings are factor sealed and require no further lubrication. No other lubrication is required.

**GRINDING DISC REPLACEMENT** - Unplug unit from power source. The grinding disc assembly is made up of a unit that is fully replaceable. To remove an old disc lift up the hinged cover (see FIG. 2). Remove the 5/16-18 socket head cap screw from the end of the motor shaft by using the 1/4 (.250) Allen wrench provided in the storage hole located at the bottom of the cup guide support. See FIG. 7

Mount either the 3.50 diameter of 4.00 diameter grinding disc assembly by aligning the flats on the motor shaft to the grinding disc flats. Slide on the disc until it bottoms out on the internal locking hub located inside the grinding disc bore.

Start the 5/16-18 socket head cap screw using the 1/4 (.250) Allen wrench and a 1/2" (.500) open end wrench on the motor shaft to keep it from rotating. Next screw in the disc locking screw and torque to 20 in. lbs. Replace the Allen wrench in its storage hole and close and tighten the cover.

**!** Do not over torque the locking screw. This will put undue stress on internal hub locating shoulder and could cause it to crack or could deform the wheel hub mounting bold hole.

**NOTE:** When operating the hole cutter sharpener the socket head cap screw is self tightening.

**GRINDING DISC ROTATION** - Through use, the cutters will wear a groove in the grinding disc. The disc is reversible so it permits two grinding paths per disc to be worn in before replacement of the grinding disc is required. To reverse the disc, follow the disc replacement procedures above.

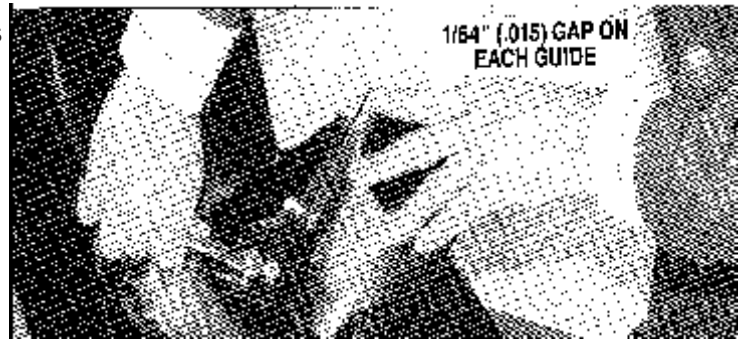


FIG. 5

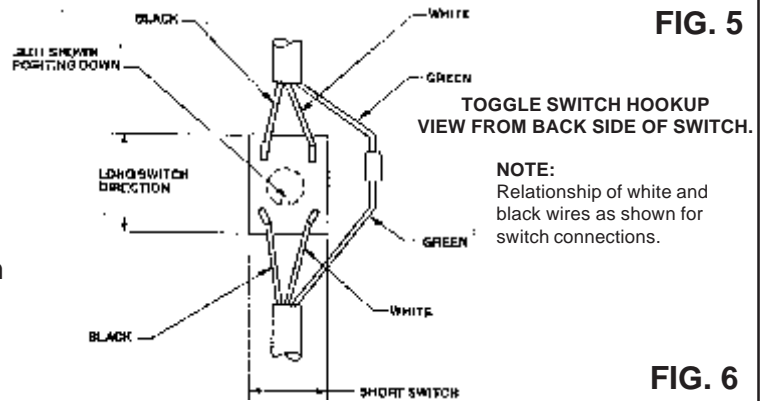


FIG. 6



**Always disconnect power when performing maintenance procedures on your grinder.**

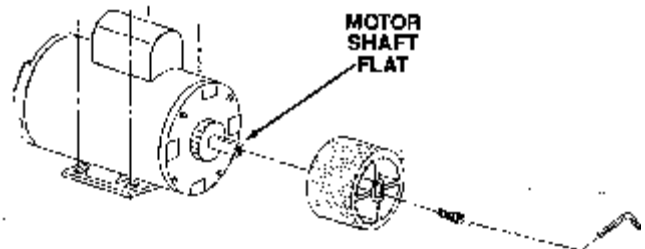


FIG. 7

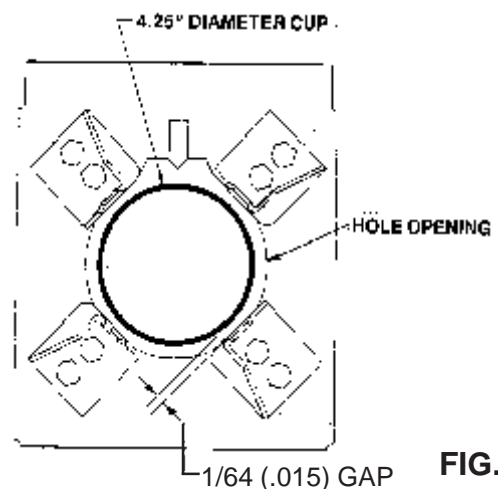
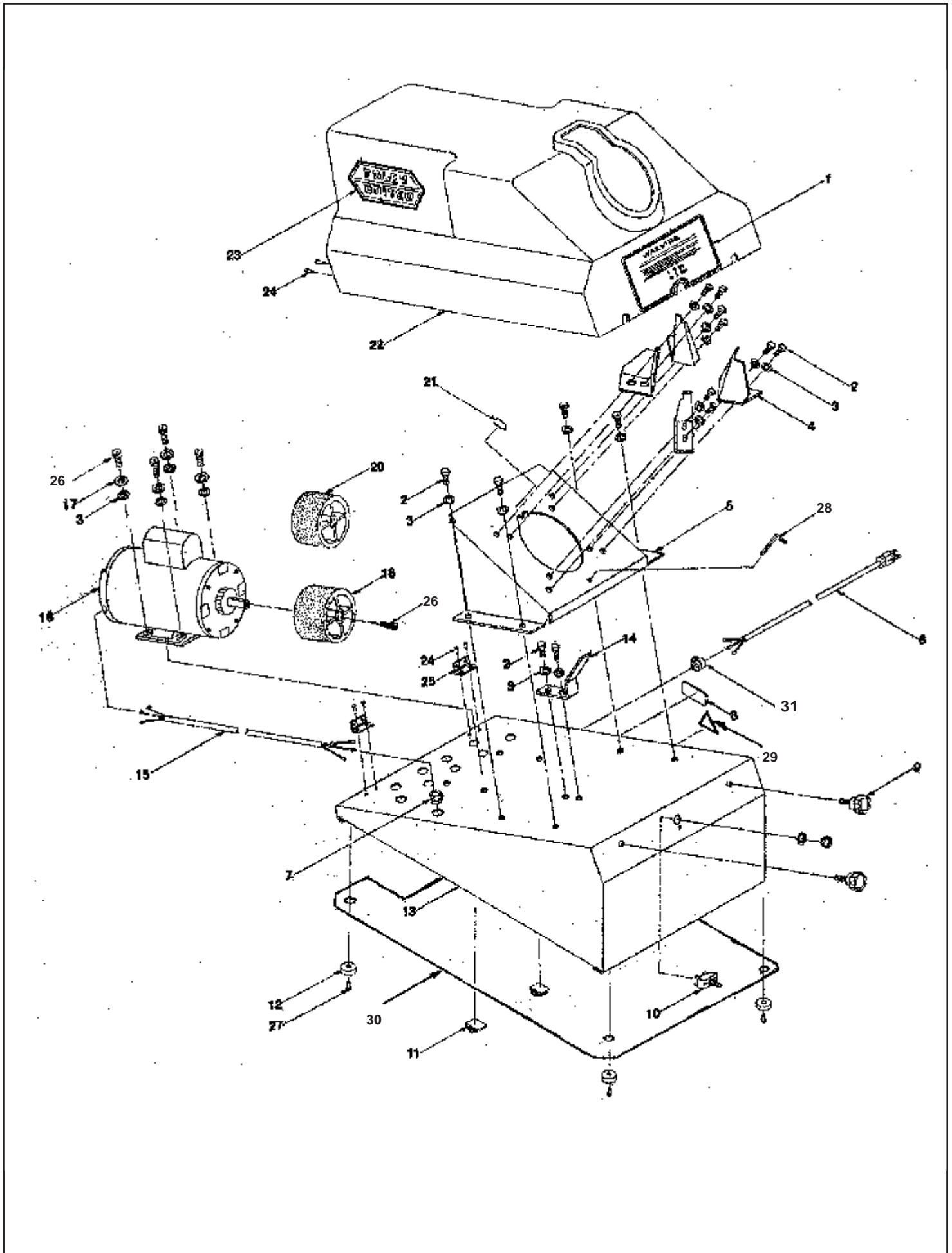


FIG. 8

EQUAL SPACE OF CUP TO OPENING .015"

# EXPLODED VIEW FOR 3860901 HOLE CUTTER SHARPENER



## PARTS LIST FOR 3860901 HOLE CUTTER SHARPENER

DIAGRAM NO.	PART NO.	DESCRIPTION
1	3708507	Decal - Switch and Safety
2	B310801	Hex Cap Screw 5/16-18 NC x 1/2" Long
3	K310201	External Tooth Lockwasher 5/16"
4	3869003	Cup Formed Guide
5	3869505	Support Cup Guide
6	3689081	Main Power Cord
7	3707273	Strain Relief
8	3708604	Warning Decal
9	3709756	Knob
10	3707070	Toggle Double-pole Switch
11	3707281	Wire Hold Down
12	3709767	Rubber Support
13	3869504	Weldment Base
14	3869007	Cup Plunger Stop Plate
15	3707166	Motor to Switch Cord
16	3707055	1/2 HP Motor
17	K310001	5/16" Flat Washer
18	3869513	3.5 Dia. Grinding Disc Assembly (Optional)
19		
20	3869512	4.0 Dia. Grinding Disc Assembly (Optional)
21	3869015	Pointer Decal
22	3869006	Sharpener Swing Cover
23	3709926	Foley United Decal
24	3708466	.188 Dia. Pop Rivet
25	3708136	Hinge
26	B310811	5/16-18 NC x 1/2 Long Socket cap Screw
27	3708465	.188 Dia. Pop Rivet
28	R000865	1/4 (.250) Hex Allen Key
29	3708448	Electrical Warning Decal
30	3869019	Bottom Panel
31	3707048	Strain Relief - Liquid Tight
---	3707163	Ground Decal (Not Shown)
---	3707164	Ground Lug (Not Shown)
---	B250816	1/4-20 x 1/2 Button Head Socket Cap Screw (Not Shown)
---	J257000	1/4-20 Locknut - Jam (Not Shown)
---	R000536	1/4 Internal Tooth Lock Washer (Not Shown)

