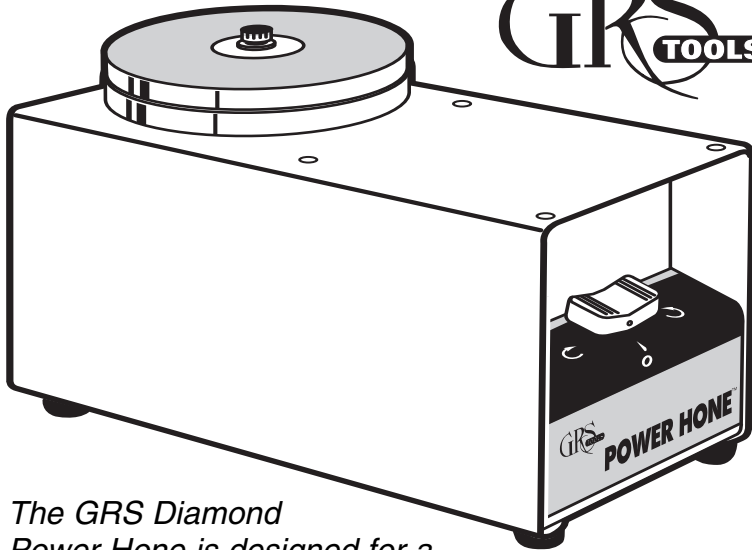


OPERATION AND
MAINTENANCE OF THE



POWER HONE™

MODEL B

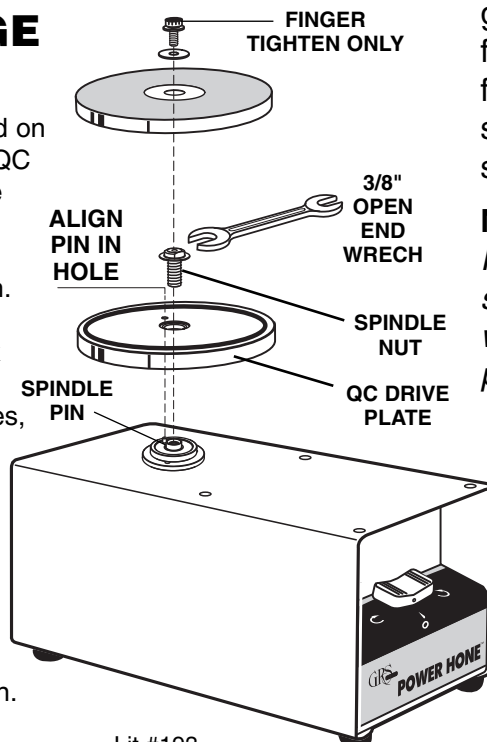


The GRS Diamond Power Hone is designed for a long, useful service life. The spindle is driven by a smooth belt system at 240 RPM. The diamond wheel supplied with your hone provides true diamond performance. This means carbides, hard metals, ceramics, and other exotic materials are all within the capability of your Power Hone. Replacement diamond wheels are available from GRS Tools in several grits for a wide range of applications.

ATTACHING THE QUICK CHANGE DRIVE PLATE

FIRST - Align the pin located on the spindle with hole in the QC Drive Plate. Make sure plate rests fully on spindle. Insert Spindle Nut, tighten snug with a 3/8" open end wrench. (Do NOT over tighten) Plug machine in, turn it on, check to see if plate runs true and does not wobble. If it wobbles, turn off, double check that the pin aligns with the hole in QC plate and is seated properly on spindle.

Place diamond wheel on top of QC plate and insert thumb screw/washer into spindle nut and finger tighten.



Lit #193

TOOL SHARPENING

When using the Power Hone, hold the tool relatively stationary while the rotary motion of the wheel sharpens the tool. Sweep the tool slowly across the working surface of the wheel. This extends wheel life by using the entire cutting face and prevents grooving. The Power Hone is designed mainly for fine tool sharpening and finishing. Use a bench grinder to rough shape tool points, then give them a fine finish on the Power Hone. This will save time and extend diamond wheel life.

Engraving & Jewelry Tools

The Power Hone was originally designed to sharpen engraving and jewelry tools. Sharpening fixtures to hold the gravers to the precision angles required for fine engraving tools are available from GRS Tools. See the "accessories" section or the GRS Tools catalog for the sharpening fixtures that are available.

NOTE:

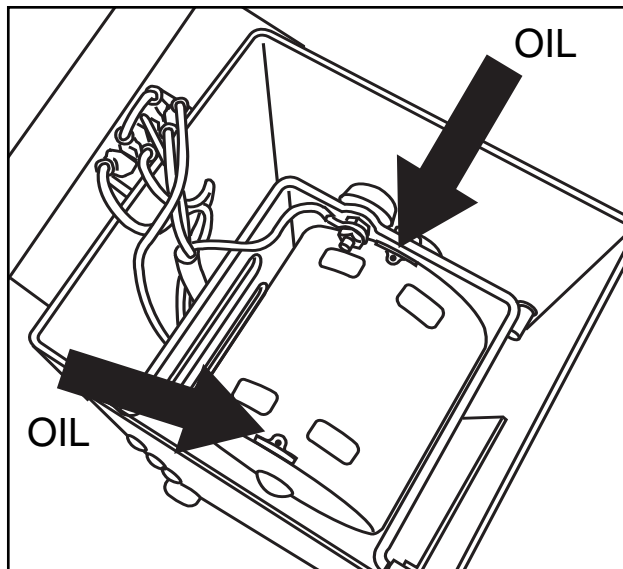
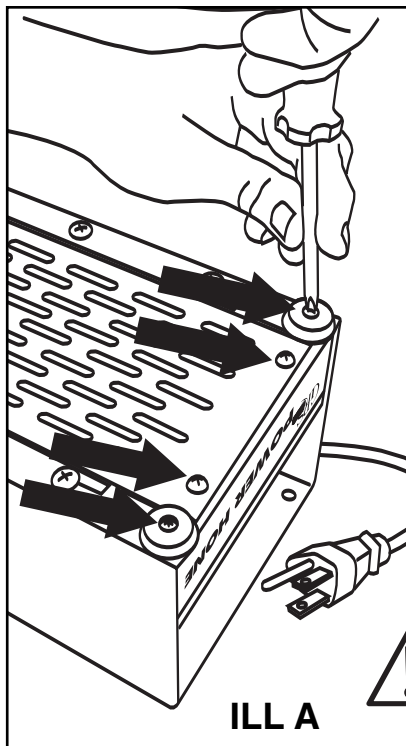
For very delicate work such as heeling small gravers, try using the diamond wheel with the machine turned off. This will prevent removing too much material.

Household & Shop Items

The Power Hone is useful around the house and shop to sharpen items like; scissors, knives, craft tools, hobby tools, chisels, wood and metal lathe tools, etc. With the ceramic lap wheel you can even put an edge on a razor blade.

POWER HONE MAINTENANCE

The GRS Power Hone is virtually maintenance free. For normal service, yearly lubrication is required. For extremely heavy service, the motor should be oiled every 6 months with several drops of SAE 20 non-detergent oil. Oil holes for the two motor bearings are accessible by removing the front switch plate. Turn machine upside down and remove four screws: two holding the front rubber feet and the two between them (See ILL A).



Recommended Oil: SAE 20 weight non-detergent

Always unplug machine before any service is done.

1	011-209	Rubber Foot Assy.	30	002-110	#8 Pltd. Washer
2	011-400	Yellow Common Jumper Assy.	31	002-065	#10-32 X 3/8 RHMS
3	011-401	Red Capacitor Lead Assy.	32	002-069	#10 Pltd. Washer
4	011-402	Blue Capacitor Lead Assy.	33	011-393	Motor Mount Bridge
5	001-976	Bearing Bridge Assy.	34	011-396	Vented Bottom Panel
6	001-975	Spindle Bearing Assy.	35	011-395	Cord End Panel
7	001-977	Hone Body	36	011-394	Switch End Panel
8	002-113	Quick Disconnect Terminal	37	011-398	Spindle Nut
9	022-568	2 Position Switch	38	011-397	Quick Change Drive Plate
10	022-530	115 Volt AC Motor	39	001-115	Motor Pulley 1/8"
11	022-567	Capacitor for Motor	40	011-399	Power Hone Spindle
12	DIAMOND WHEEL (SEE BACK PAGE)		41	011-289	Power Hone Label 115 Volt
13	002-140	Drive Belt	42	011-403	Power Hone I.D. Decal
14	001-641	Double Pulley Assy.	43	002-137	Wire Tie
15	001-533	115 V Power Cord Assy.	44	022-056	Thumbscrew Knob
16	022-576	Plastic 1/4-20 Set Screw	45	002-300	Cord Retainer
17	002-186	Pop Rivet	46	002-279	Nylon Washer
18	002-064	#8-32 X 1/2 SHCS	47	002-780	O-Ring
19	002-084	O-Ring 3/8 X 1/2 X 1/16	48	002-036	Rubber Mounting Foot
20	022-001	#8-32 X 1/2 SHCS	49	002-770	Driv-Lok Pin
21	002-247	Washer	50	022-571	4.5" Cooling Fan
22	002-104	#8-32 Nut	51	011-270	Electrical Warning Label
23	002-289	#8-32 X 3/4 RHMS	230 VOLT UNIT #001-543B		
24	002-063	#8 Lock Washer	10	022-547	230 Volt 50HZ PH Motor
25	002-568	#8-32 X 1/4 RHMS	11	022-578	Capacitor for 230V Motor
26	022-572	10-32 X 1/2 Truss Head	15	004-650	230 V Power Cord Assy.
27	002-108	#8-32 X 3/16 SSS	41	011-290	Power Hone Label 230 Volt
28	002-204	#10-32 Hex Nut	45	002-955	Cord Retainer
29	002-062	#8-32 X 1/2 RHMS			



**UNPLUG THE MACHINE
BEFORE OPENING UNIT:**

REPLACING THE DRIVE BELTS

These drive belts are made of a special elastic material designed for this service. Regular belt inspections are unnecessary. If you were to notice a drag or loss of power while honing, it may be a broken belt. A spare set of belts is a good item to have on hand (part #002-140 - two required).

Below are instructions for belt replacement.

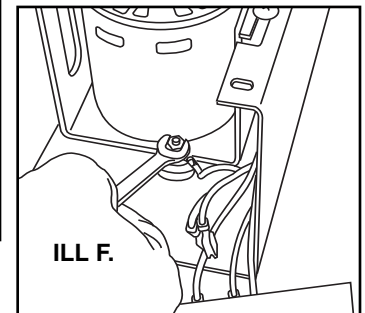
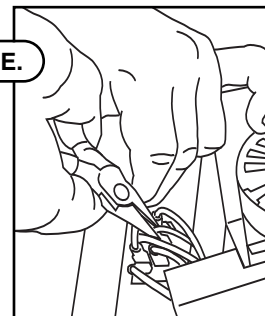
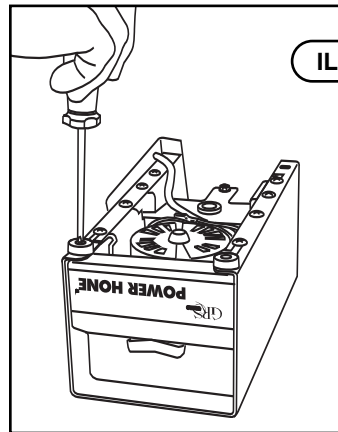
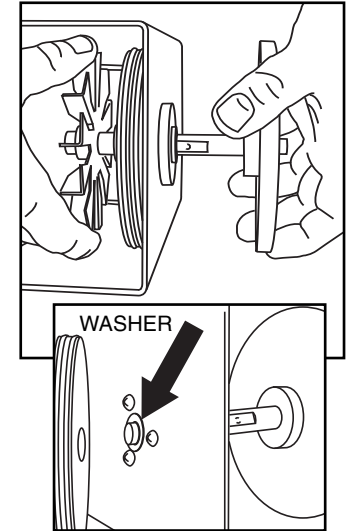
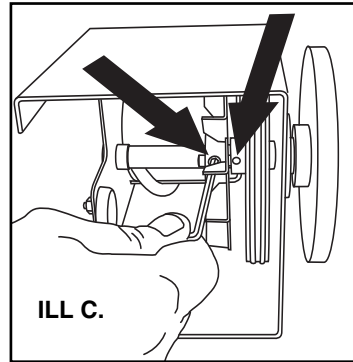
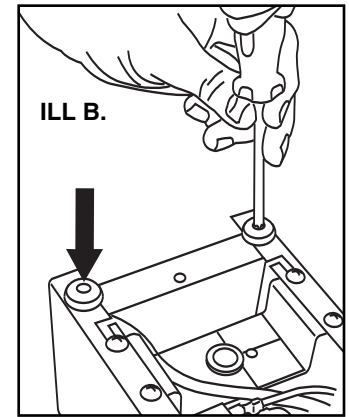
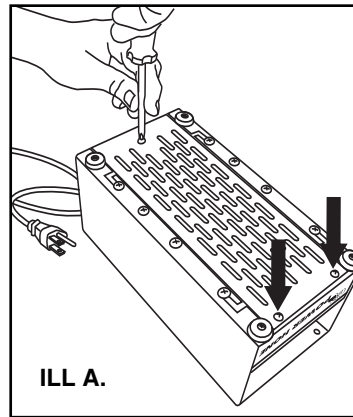
Tools Required:

1/8" & 3/32" Hex Wrench, 3/8" Open End Wrench, #2 Phillips Screwdriver and Needle Nose Pliers.



UNPLUG THE MACHINE BEFORE OPENING UNIT:
Turning the switch off is NOT sufficient.

1. Turn the machine upside down and remove the bottom cover (3 screws) - **ILL A.**
2. Remove rear cover by removing the two rubber feet - **ILL B.**
Note: Power cord will limit cover movement.
3. Lay hone on its side and loosen the set screw for the fan and pulley - **ILL C.**
4. Pull the spindle out of the bearing. Use one hand to counter the sideward pull of the rubber belts. **IMPORTANT:** Make sure to locate and save the nylon washer that is above the pulley assembly - **ILL D.**
5. Remove the front panel by removing the front rubber feet. Disconnect the two center wires on the switch using a pair of needle nose pliers - **ILL E.**
Remove the ground (green/yellow stripe) wire from the motor mount - **ILL F.**
6. Loosen the front two motor mount screws and slide them out of the assembly using the slots cut in the hone body - **ILL G.**
Loosen - **BUT DO NOT REMOVE** the rear motor mount screws. Slide the motor mount out the front of the hone body, guiding the pulley past the threaded standoffs - **ILL H.**

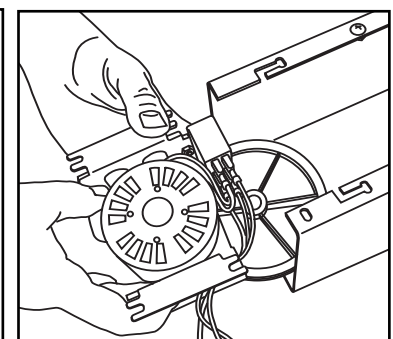
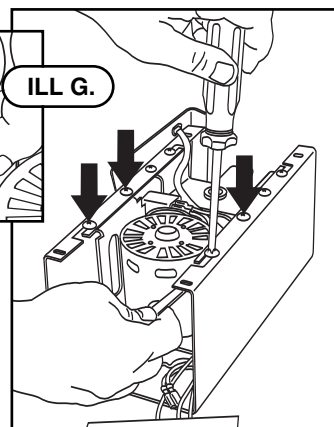
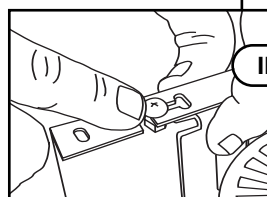
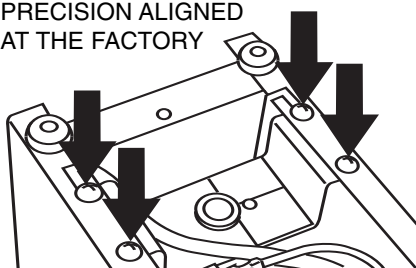


(CONTINUED ON BACK)



**IMPORTANT: DO NOT
LOOSEN THESE BOLTS**

THEY HOLD THE LOWER SPINDLE
BUSHING PLATE THAT IS
PRECISION ALIGNED
AT THE FACTORY

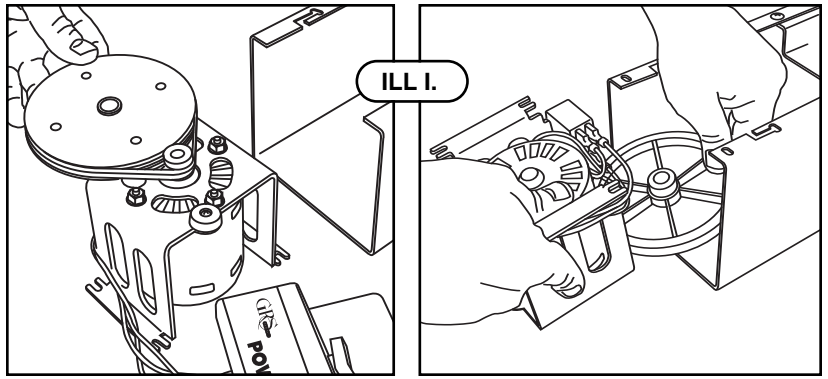


**GRS
TOOLS**

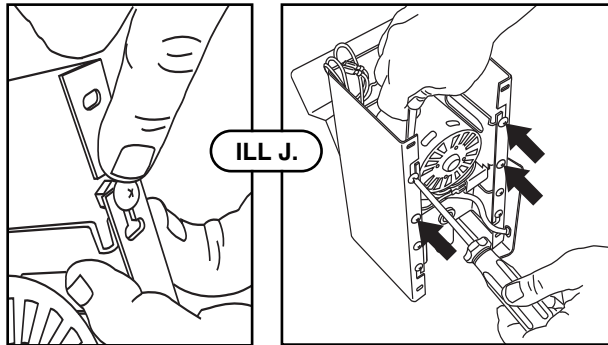
www.GrsTools.com

CONTINUED -

7. Replace belts and slide motor pulley assembly back into the housing, guiding the pulley past the threaded standoffs - **ILL I.**

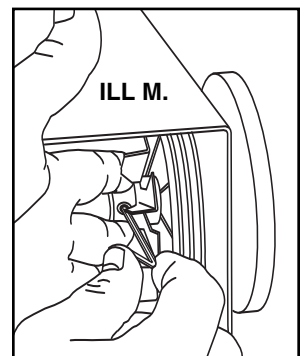
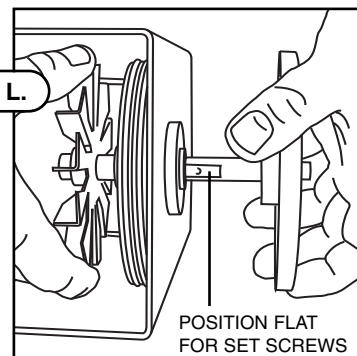
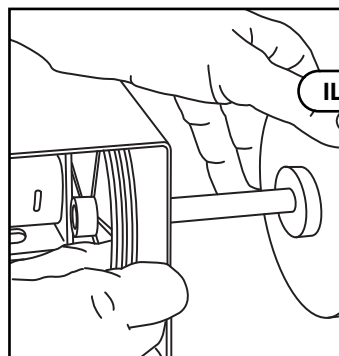
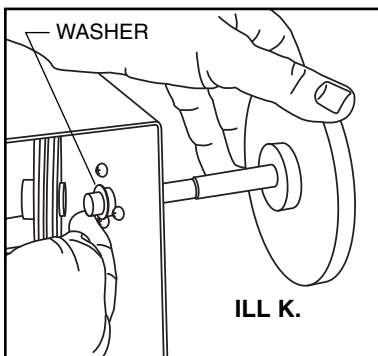


8. Stand the hone on its end and let the motor mount seat all the way onto the rear mounting screws. Snug but do not tighten these screws. Replace the front motor mount screws by sliding them into place through the slots cut in the hone body. Tighten all 4 screws - **ILL J.**

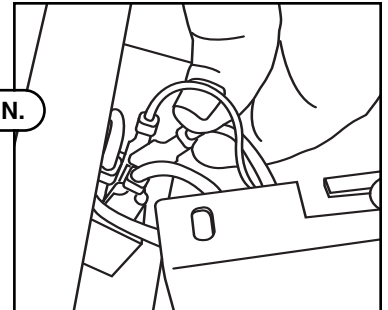
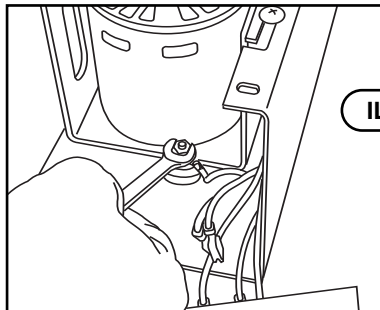


9. Insert the spindle into the bearing far enough that you can place the nylon washer on it from inside the hone body - **ILL K.** Pull the pulley assembly back and slip the spindle into it far enough to allow the fan to be slipped onto the shaft also - **ILL L.**

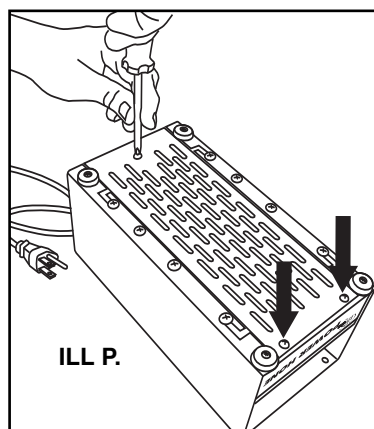
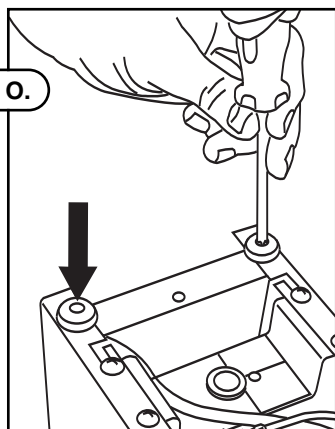
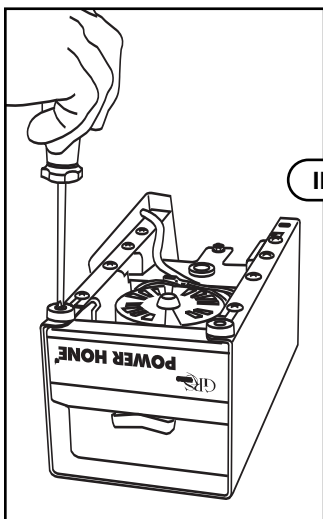
10. Slide the spindle all the way into the hone body. Slide the pulley up and trap the nylon washer between it and the bushing. With gentle pressure remove any end play and tighten the set screw of the pulley onto the flat, milled on the spindle. Slide the fan up to the pulley and tighten it onto the spindle also - **ILL M.**



11. Attach the ground wire to the motor mount and the two wires to the switch center posts - **ILL N.** It will not matter if you turn these wires around.

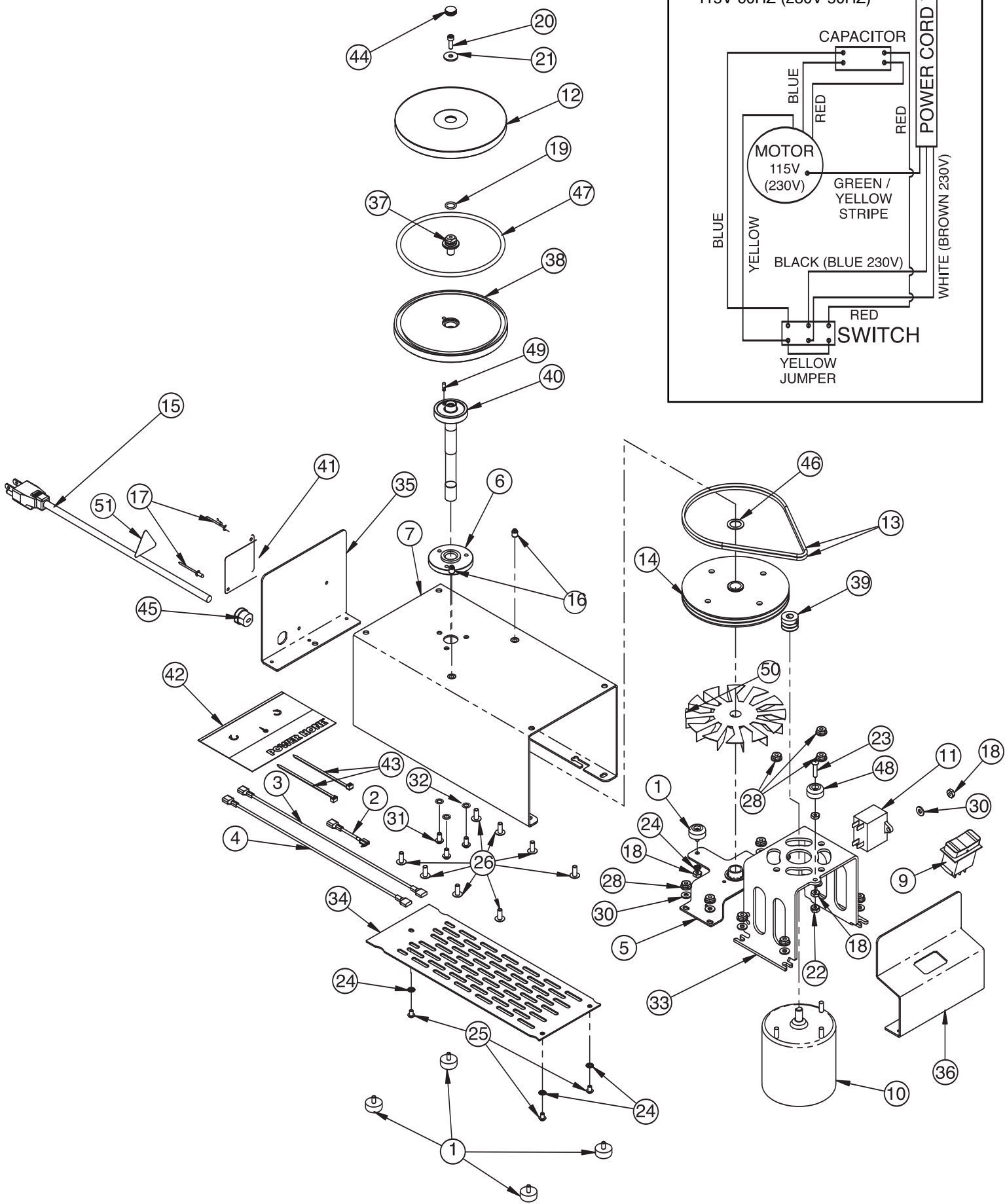
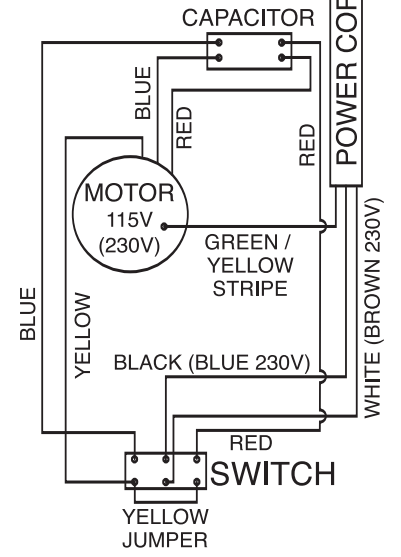


12. Attach the end panels - **ILL O** and the bottom panel - **ILL P.**



WIRING DIAGRAM

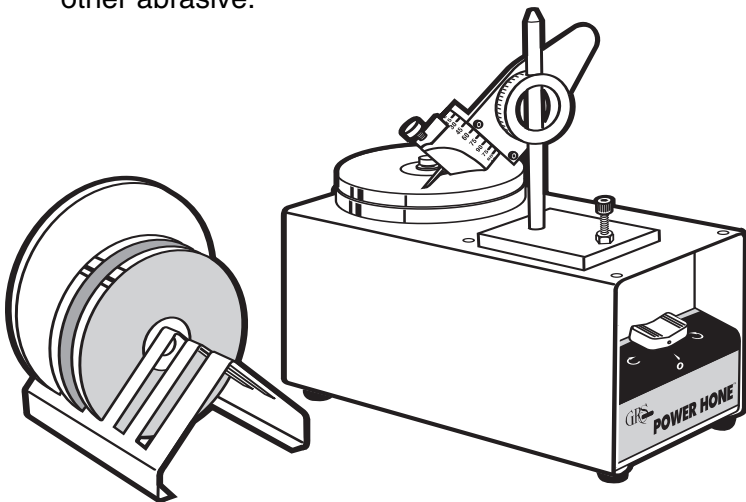
115V 60HZ (230V 50HZ)



DIAMOND WHEEL CARE

Diamond wheels provide long term economy and performance in abrasive service if used correctly. Although the diamond is the hardest material known, the bonding which holds the diamond particles in place can be damaged. Grooving the wheel by gouging the bonding material is the biggest error. The finer the grit, the easier it is to damage the wheel. The user should not be afraid to apply moderate pressure while honing, as the wheels are designed for this. The following tips will provide valuable information on using diamond wheels.

1. Approach the diamond surface carefully with the tool. Apply cutting pressure smoothly. Be especially attentive when first cutting sharp points.
2. Wet the diamond surface with a water soluble wetting agent sprayed on with a spray bottle. Occasional spraying to keep surface wet is all that is required. A wet wheel will cut better, yield superior tool finishes, and resist loading.
3. Remove and clean wheel when dirty. Usually scrubbing with water, mild scouring powder, and a clean cloth is sufficient. Our diamond wheel cleaning sticks, #001-783, are designed for a thorough cleaning. These soft abrasive sticks are consumed while cleaning the wheel. Proper use will extend wheel life. We do NOT normally advise using solvents on wheels. If solvents are used, NEVER dip or soak wheel in a solvent. Only wipe top cutting surface and then immediately wash with soap and water. Keep wheel out of direct sunlight and away from excessive heat.
4. Use the entire face of the wheel for cutting.
5. The 600 grit wheel is recommended for general use. It provides a good finish with an adequate material removal rate. Finer grits are normally for finishing operation after using a coarser wheel or other abrasive.



WHEELS AND ACCESSORIES

002-138	5" Dia. - 260 Grit Diamond Wheel
002-055	5" Dia. - 600 Grit Diamond Wheel
002-139	5" Dia. - 1200 Grit Diamond Wheel
002-415	6" Ceramic Lap Wheel

Make your own abrasive /strop wheel. Simply adhere the desired grit of sandpaper or leather to these blank wheels. Wheels are machined to a perfectly flat surface.

002-537	Blank Wheel for Power Hone - 6"
002-129	Blank Wheel for Power Hone - 5"

002-752	Diamond Spray, 1/4 Micron
002-753	Diamond Spray, 1/2 Micron
002-754	Diamond Spray, 1 Micron
002-755	Diamond Spray, 3 Micron

	Wheel Wetting Agent Concentrate
001-659	Pkg of 3 - makes 1 gal. per pkg
001-660	Pkg of 12

001-783	Wheel Cleaning Sticks
001-694	Wheel Storage Rack
001-838	Quick Wheel Change Adapter
001-958	Power Hone Parts Kit

GRAVER SHARPENING FIXTURES

003-100	Standard Graver Sharpening Fixture
003-570	Dual Angle Sharpening Fixture
003-580	QC Sharpening Fixture

Other wheels available, contact your dealer OR our sales department for complete information.

+49 (0) 711-13271-0

Fax: +49 (0) 711 - 13271-90

Tel: +49 (0) 711 - 13271-0

e-mail: info@boley.de

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GRS
TOOLS

www.boley.de