# **HE1 Sharpening System**

# 120/220 Volt Operator's Manual



Please read all instructions carefully before operating this machine. You are then ready to sharpen cutlery. Please be careful. This machine produces extremely sharp edges.

04/2013



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Before operating the unit, please read this manual completely, and maintain it for future referral. We thank you for your purchase of a **PRIMEdge HE1** sharpening system. It is designed, and manufactured to give you the best possible endurance and production. Please remember, performance is entirely reliant upon sensible use and careful maintenance.

The model and serial numbers of your **HE1** are located on the underside of your unit. Please record the serial number in the space provided below. Refer to these numbers in any correspondence relating to this product.

Model Number: HE1		
Serial Number:		

### General Safety Instructions for the HE1 Sharpening System

**WARNING:** Read and understand the entire contents of this manual before operating the machine. Always keep the operating instructions handy at place of use.

- 1. MACHINE MAY ONLY BE USED BY PERSONS FAMILIAR WITH ITS HANDLING AND ABLE TO RECOGNIZE POSSIBLE EMERGING DANGER DURING OPERATION.
- 2. DO NOT USE THE MACHINE FOR PURPOSES OTHER THAN THOSE FOR WHICH IT WAS DESIGNED.
- 3. **KEEP GUARDS IN PLACE.** Safety guards must be kept in place and in working order.
- **4.** <u>REDUCE THE RISK OF UNINTENTIONAL STARTING.</u> Make sure the switch is in the "OFF" position before plugging power cord into receptacle. (Depressing the "O" side of the switch denotes the "OFF" position. Depressing the "I" side of the switch denotes the "ON" position.)
- **5. MAINTAIN MACHINE WITH CARE.** Keep machine clean and adjusted properly for the best and safest performance.
- 6. <u>DISCONNECT MACHINE FROM POWER SOURCE BEFORE SERVICING, OR WHEN CHANGING ACCESSORIES.</u>
- 7. <u>USE RECOMMENDED ACCESSORIES</u>. Consult the "Replacement Parts" section of this manual for recommended accessories, grinding wheels and replacement parts. The use of improper accessories may cause damage to the machine or personal injuries and may void warranty.
- **8.** <u>MACHINE DAMAGE.</u> Any part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function safely. Check for proper alignment of moving parts, binding of moving parts, broken parts, and any conditions that may affect operation. Any damaged part should be properly repaired or replaced.
- 9. NEVER LEAVE MACHINE RUNNING UNATTENDED.
- 10. WEAR PROPER APPAREL. Loose clothing, neckties, rings, bracelets, or other jewelry can get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- 11. <u>ALWAYS USE APPROVED SAFETY GLOVES AND SAFETY GLASSES.</u> Safety glasses should have side shields. Gloves should be form fitting. Always wear appropriate hearing protection.
- **12. DO NOT USE IN DANGEROUS ENVIRONMENTS.** Do not use machine in damp or wet locations or expose to water. Keep work area well lit.
- 13. **DO NOT OVERREACH.** Keep proper footing and balance at all times while using this machine.

Copy this page and post in a prominent place near the sharpening station.

# **Symbols and Signs**

Symbol	Description	Symbol	Description
	Read & understand operator's manual before using this machine.		Wear eye protection.
	Warning, Avoid Injury. Do not operate without all guards in place.		Pinch point hazard. Keep hands clear.
<u>^</u>	Hazard warning symbol.		Hand entanglement hazard. Keep hands clear.
4	Electrical hazard.		

# **Machine Label Part Numbers**



Wheel guard warning label.....Part No.HE1-2-408



Electrical hazard label Part No. HZ-480



Ground connection label Part No. HE1-2-415

### **Appropriate Use**

The **PRIMEdge HE1** Professional Cutlery Sharpening System can be used for professional sharpening of hand knives with a plain edge. Other uses beyond its purpose is considered not appropriate. **PRIMEdge, Inc.** is not liable for damages caused hereby. Solely the user carries the risk. Appropriate use also implies following the operating instructions.

### Safety Guide For Grinding Wheel Users

### **Importance of Proper Machine Maintenance**

Grinding is a safe operation if the few basic rules below are followed. These rules are based on material contained in the ANSI B7.1 Safety Code for "Use, Care and Protection of Abrasive Wheels". For your safety, we suggest you benefit from the experience of others and carefully follow these rules.



DO and DON'T

- 1. DO ALWAYS HANDLE AND STORE WHEELS IN A CAREFUL MANNER.
- **2. DO VISUALLY INSPECT** all wheels before mounting for possible damage and ring test vitrified wheels.
- **3. DO CHECK MACHINE SPEED** against the established maximum safe operating speed marked on wheel.
- **4. DO CHECK MOUNTING FLANGES** for equal and correct diameter.
- 5. DO USE MOUNTING SPACERS (PAPER BLOTTERS) when supplied with wheels.
- **6. DO ALWAYS USE A SAFETY GUARD** covering at least one half of the grinding wheel.
- **7. DO ALLOW NEWLY MOUNTED WHEELS** to run at operating speed, with guard in place, for at least one minute before grinding.
- **8. DO ALWAYS WEAR SAFETY GLASSES** or some type of protection when grinding.

- 1. DON'T USE A CRACKED WHEEL OR ONE THAT HAS BEEN DROPPED or has become damaged.
- 2. DON'T FORCE A WHEEL ONTO THE MACHINE OR ALTER THE SIZE OF THE MOUNTING HOLE. If the wheel will not fit the machine, get one that will.
- 3. DON'T EVER EXCEED MAXIMUM OPERATING SPEED established for the wheel.
- 4. DON'T USE MOUNTING FLANGES ON WHICH THE BEARING SURFACES ARE NOT CLEAN, FLAT AND FREE OF BURRS.
- 5. DON'T TIGHTEN THE MOUNTING NUT EXCESSIVELY.
- **6. DON'T GRIND ON THE SIDE OF THE WHEEL.** (See safety code B7.1 for exception.)
- 7. DON'T APPLY LIQUID TO GRINDING WHEELS.

  Wheels must be run dry. Applying any liquid will result in wheel damage.
- 8. DON'T START THE MACHINE UNTIL THE WHEEL GUARD IS IN PLACE.
- 9. DON'T JAM WORK INTO THE WHEEL.
- 10. DON'T STAND DIRECTLY IN FRONT OF A GRINDING WHEEL whenever a grinder is started.
- **11. DON'T FORCE GRINDING** so that the motor slows noticeably or work gets hot.

Copy this page and post in a prominent place near the sharpening station.

These brief general rules cannot cover many questions on special grinding applications. **Additional** and more detailed information is contained in the booklets listed below, all of which are available by emailing or writing to:

#### PRIMEdge, Inc.

1281 Arthur Ave. Elk Grove Village, IL 60007 contact@primedge.com

#### **SAFETY BOOKLETS**

- Mounting Techniques for Cylindrical and Centerless Grinding
- Portable Grinding Machines, Safe and Efficient Operation
- ANSI B7.1 Code for the Use, Care and Protection of Abrasive Wheels
- Safety Recommendations for Grinding Wheel Operation

- Abrasive Machining
- The Grinding Wheel
- Disc Grinding Safe Rules and Methods
- Handling, Storage and Inspection of Grinding Wheels



### **!** WARNING

Grinding generates dust. Most of the dusts generated when grinding are from the material being ground. Excessive dust inhalation may affect breathing function. To avoid breathing impairment always employ dust controls and/or protective measures appropriate to the materials being ground. The name and address of the responsible party is located on the container.

See FEDERAL HAZARD COMMUNICATION STANDARD 29CFR.1910.1200



### WARNING

Improper use may cause grinding wheel breakage and serious injury. Comply with ANSI B7.1 OSHA and safety guide furnished with this package. Don't overspeed, abuse or drop wheel. Always use a guard, personal protective equipment and proper mounting procedures.

### **Specifications**

### **PRIMEdge HE1**

Overall Footprint:  $(L \times W \times H)$ 

13.3" x 12.1" x 7.5" (338mm x 307mm x 190.5mm)

#### Motor:

Pre-wired 120V - 60Hz / 220V - 50Hz 1.3 amp Thermally Protected

Net Weight (approx.):

29lbs. (13kg)

Shipping Weight (approx.):

34.4lbs. (15.6kg)

#### Sound Output Measurement Data:

Measurement procedure: Data taken at 3 feet, 3 inches (1 meter) from the surface of the machine, at a height of 5 feet, 3 inches (1.6 meters) from the floor.

#### **Sound Emission:**

Machine on: 60dB (A) Sharpening knife: 76dB (A) Honing: 72dB (A)

# **Electrical Requirements**

**Power Connection:** 

120v - 60Hz / 220V - 50Hz 1.3amp 1Phase

Unit is connected to power source with an IEC-320-C13 ended cord set.

**WARNING:** To avoid electrical shock, do not touch the metal prongs on the plug when installing or removing the plug from the outlet.

**WARNING:** Failure to properly ground this power tool can cause serious electrical shock. Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician.

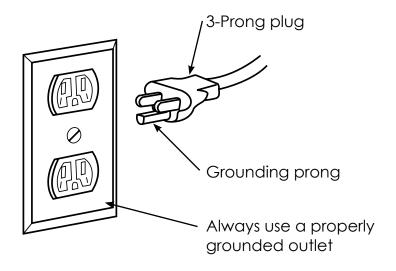


WARNING: DO NOT ALTER PLUG IN ANY MANNER.

CHECK VOLTAGE: Compare electrical data of machine with those of your power supply. Plug machine into outlet only when power switch is in the "OFF" position.

#### Connecting To Power Source Outlet

This machine must be grounded while in use to protect the operator from electrical shock. Plug power cord into a 110V 60Hz / 220V 50Hz outlet properly grounded and protected by a 15 amp circuit breaker. Not all outlets are properly grounded. If you are not sure if your outlet, as pictured (110V model), is properly grounded, have it checked by a qualified electrician.





Remove/Install cord set

Your unit is for use on less than 120 or 220 volts depending on the model. The 110V model has a plug that looks like the one above. This power tool is equipped with a 3-conductor cord and grounding type plug. The ground conductor has a green jacket and is attached to the base plate inside the housing and to the ground prong in the attachment plug at the other end of the cord. This plug requires a mating 3-conductor grounding type outlet as shown. The 220V model has the correct plug for European style outlets.

## **General Operating Instructions**

### **Set-Up Instructions**

**Sharpening** wheels are located on the **left side** of the machine. To set the proper sharpening angle, locate the left side adjusting knob. Turn until wheels are even without overlapping. Then adjust two (2) complete revolutions to give the wheels 1/8" (3mm) overlap.





Sharpening wheels even







Sharpening wheels overlap

**Honing** wheels are located on the **right side** of the machine. To set the proper honing angle, locate the right side adjusting knob. Turn until wheels are even without overlapping. Then adjust four (4) complete revolutions to give the wheels 1/4" (6mm) overlap.





Honing wheels even





Honing wheels overlap

To ensure proper sharpening and honing angles, these operations must be made routinely to keep wheels in the proper position.

### **Sharpening Instructions**

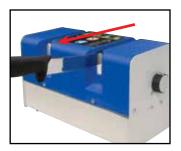
Turn on machine by depressing the "I" side of the rocker switch on the left side of the machine.

**Step 1 - Sharpen Knife:** Start on the **sharpening wheels** side. Position the clean and dry knife blade in the slot above the wheels with the knife handle near the wheels. Lower the knife blade into the wheels, then pull it straight out and lift the handle as the knife point passes over the wheels. Use light pressure on each stroke. Repeat four (4) times or until the knife is sharp. Cool the blade often by dipping it in water or pressing it against a wet towel.



Step 2 - Hone Knife: Slowly pull the knife blade through the honing wheels two (2) times using the same instructions as above. Use light pressure on each stroke.

**NOTICE**: **Light** pressure will produce the best results. Draw the knife toward you while applying light pressure. Let the grinding wheel do its job. Extra pressure will load up the wheels. Loaded wheels will not sharpen your knife. Ensure that your knife blade is clean before you sharpen it. Fat and blood will clog your wheels and prevent them from sharpening properly.



### Maintenance and Care

WARNING: Before beginning any maintenance procedures on the PRIMEdge HE1 Sharpener, move it to a safe, dry work area. Always wear safety glasses and protective clothing while performing maintenance procedures.

Keep entire machine clean at all times.

After repeated use, grinding wheels will get dirty and may alter in shape. A truing stick (available from **PRIMEdge**, **Inc.**, part# HE1-701), can be used to clean and reshape the grinding wheels to suitable condition.

# To utilize a truing stick properly, carefully read and follow the instructions outlined below:

### **General Procedure**

(Always wear eye protection)

- 1. Using the wheel adjusting knob located on the side of the machine, rotate the knob counterclockwise until the wheels have a small space between them.
- 2. Using two hands, one on each end of the truing stick, place the stick between the wheels. With the machine running, carefully lower the truing stick onto the wheels. Hold the stick parallel to the top of the machine. Brace the hand at the back of the machine on the machine cover for stability. Hold the stick firmly, allowing both wheels to move against it evenly.

### **Truing Procedure**

(Always wear eye protection)

There are two basic functions of the truing stick:

- 1. Remove steel particles that have loaded the grinding wheel. (Clean the wheels)
- 2. Re-shape grinding wheels that have become misshaped from use. (True the wheels)

To **clean** the wheels, hold the truing stick firmly. Apply light, even pressure to the wheels until the grinding edge of the wheel has returned to its original color.

To **true** the wheels, hold the truing stick firmly. Hold the truing stick parallel to the top of the machine. Do not follow the worn shape of the wheel, but rather allow the truing stick to re-shape the wheels to their original, parallel form.

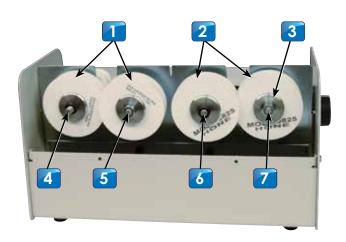


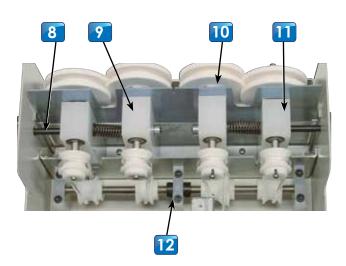
As the truing stick wears, select a clean, straight surface to use.

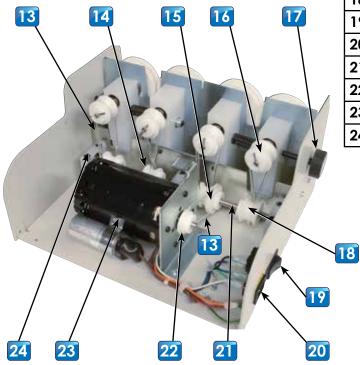
### For Optimum Performance and Wheel Life

- 1. To even out wheel wear, periodically turn the stones back to front.
- 2. Discard stones which are strongly unbalanced and/or when diameters reach 2 <sup>3</sup>/<sub>4</sub>" (70mm).
- 3. Discard and replace the stones in pairs only.

# **HE1 Sharpening System Parts Identification**



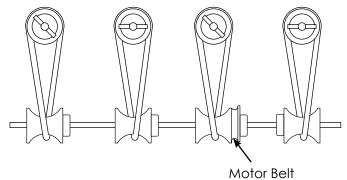




PRIMEdge	)
Part No.	

<ol> <li>Sharpening Wheels</li> <li>Honing Wheels</li> <li>Grind Wheel Flange - M8</li> <li>Grind Shaft Adjustable - Right Hand Threads</li> <li>Grind Shaft Fixed - Left Hand Threads</li> <li>Grind Shaft Fixed - Right Hand Threads</li> <li>Grind Shaft Fixed - Right Hand Threads</li> <li>Grind Shaft Adjustable - Left Hand Threads</li> <li>Grind Shaft Adjustable - Left Hand Threads</li> <li>Wheel Adjustment Shaft</li> <li>Fixed Spindle Housing</li> <li>Grind Wheel Flange - 3/8"</li> <li>Adjustable Spindle Housing</li> <li>Jorethane Belt</li> <li>Output Drive Pulley - Fixed</li> <li>Grind Shaft Pulley</li> <li>Adjustment Knob</li> <li>Grind Shaft Pulley</li> <li>Adjustment Knob</li> <li>Grind Shaft Pulley - Adjustable</li> <li>Power Switch</li> <li>Power Inlet</li> <li>Drive Shaft</li> <li>Drive Shaft Bracket</li> <li>HE1-2-809</li> </ol>			ranno.
<ul> <li>3. Grind Wheel Flange - M8</li> <li>4. Grind Shaft Adjustable - Right Hand Threads</li> <li>5. Grind Shaft Fixed - Left Hand Threads</li> <li>6. Grind Shaft Fixed - Right Hand Threads</li> <li>7. Grind Shaft Adjustable - Left Hand Threads</li> <li>8. Wheel Adjustment Shaft HE1-2-9501</li> <li>8. Wheel Adjustment Shaft HE1-2-500</li> <li>9. Fixed Spindle Housing HE1-2-807</li> <li>10. Grind Wheel Flange - 3/8" HE1-2-508</li> <li>11. Adjustable Spindle Housing HE1-2-808</li> <li>12. 3/8" Shaft Collar HE1-2-114</li> <li>13. Urethane Belt HE1-2-405</li> <li>14. Output Drive Pulley - Fixed HE1-2-404</li> <li>15. Input Drive Pulley HE1-2-404</li> <li>16. Grind Shaft Pulley HE1-2-400</li> <li>17. Adjustment Knob HE1-2-103</li> <li>18. Output Drive Pulley - Adjustable HE1-2-402</li> <li>19. Power Switch HE1-2-205</li> <li>20. Power Inlet HE1-2-506</li> <li>22. Motor Pulley HE1-2-403</li> <li>23. Motor HE1-2-209</li> </ul>	1.	Sharpening Wheels	HE1-7100
<ul> <li>4. Grind Shaft Adjustable - Right Hand Threads</li> <li>5. Grind Shaft Fixed - Left Hand Threads</li> <li>6. Grind Shaft Fixed - Right Hand Threads</li> <li>7. Grind Shaft Adjustable - Left Hand Threads</li> <li>8. Wheel Adjustment Shaft HE1-2-9501</li> <li>9. Fixed Spindle Housing HE1-2-807</li> <li>10. Grind Wheel Flange - 3/8" HE1-2-508</li> <li>11. Adjustable Spindle Housing HE1-2-808</li> <li>12. 3/8" Shaft Collar HE1-2-114</li> <li>13. Urethane Belt HE1-2-405</li> <li>14. Output Drive Pulley - Fixed HE1-2-401</li> <li>15. Input Drive Pulley HE1-2-404</li> <li>16. Grind Shaft Pulley HE1-2-400</li> <li>17. Adjustment Knob HE1-2-103</li> <li>18. Output Drive Pulley - Adjustable HE1-2-402</li> <li>19. Power Switch HE1-2-205</li> <li>20. Power Inlet HE1-2-506</li> <li>22. Motor Pulley HE1-2-403</li> <li>23. Motor HE1-2-209</li> </ul>	2.	Honing Wheels	HE1-7220
Right Hand Threads  5. Grind Shaft Fixed - Left Hand Threads  6. Grind Shaft Fixed - Right Hand Threads  7. Grind Shaft Adjustable - Left Hand Threads  8. Wheel Adjustment Shaft  9. Fixed Spindle Housing  10. Grind Wheel Flange - 3/8"  11. Adjustable Spindle Housing  12. 3/8" Shaft Collar  13. Urethane Belt  14. Output Drive Pulley - Fixed  15. Input Drive Pulley  16. Grind Shaft Pulley  17. Adjustment Knob  18. Output Drive Pulley - Adjustable  19. Power Switch  20. Power Inlet  21. Drive Shaft  22. Motor Pulley  23. Motor  HE1-2-403  HE1-2-403  HE1-2-403  HE1-2-403  HE1-2-403  HE1-2-403  HE1-2-403	3.	Grind Wheel Flange - M8	HE2-509
Left Hand Threads  6. Grind Shaft Fixed - Right Hand Threads  7. Grind Shaft Adjustable - Left Hand Threads  8. Wheel Adjustment Shaft HE1-2-9501  9. Fixed Spindle Housing HE1-2-807  10. Grind Wheel Flange - 3/8" HE1-2-508  11. Adjustable Spindle Housing HE1-2-808  12. 3/8" Shaft Collar HE1-2-114  13. Urethane Belt HE1-2-405  14. Output Drive Pulley - Fixed HE1-2-401  15. Input Drive Pulley HE1-2-404  16. Grind Shaft Pulley HE1-2-400  17. Adjustment Knob HE1-2-103  18. Output Drive Pulley - Adjustable HE1-2-402  19. Power Switch HE1-2-206  20. Power Inlet HE1-2-506  21. Drive Shaft HE1-2-403  23. Motor HE1-2-209	4.		HE1-2-9502
Right Hand Threads  7. Grind Shaft Adjustable - Left Hand Threads  8. Wheel Adjustment Shaft  9. Fixed Spindle Housing  10. Grind Wheel Flange - 3/8"  11. Adjustable Spindle Housing  12. 3/8" Shaft Collar  13. Urethane Belt  14. Output Drive Pulley - Fixed  15. Input Drive Pulley  16. Grind Shaft Pulley  17. Adjustment Knob  18. Output Drive Pulley - Adjustable  19. Power Switch  10. Drive Shaft  11. HE1-2-9501  12. HE1-2-405  13. Urethane Belt  14. Output Drive Pulley - Fixed  15. Input Drive Pulley  16. Grind Shaft Pulley  17. Adjustment Knob  18. Output Drive Pulley - Adjustable  19. Power Switch  10. HE1-2-206  10. Power Inlet  11. HE1-2-205  12. Drive Shaft  12. HE1-2-403  13. Motor  14. HE1-2-209	5.		HE1-2-9503
Left Hand Threads  8. Wheel Adjustment Shaft  9. Fixed Spindle Housing  10. Grind Wheel Flange - 3/8"  11. Adjustable Spindle Housing  12. 3/8" Shaft Collar  13. Urethane Belt  14. Output Drive Pulley - Fixed  15. Input Drive Pulley  16. Grind Shaft Pulley  17. Adjustment Knob  18. Output Drive Pulley - Adjustable  19. Power Switch  20. Power Inlet  21. Drive Shaft  22. Motor Pulley  23. Motor  HE1-2-500  HE1-2-209  HE1-2-209	6.		HE1-2-9504
<ul> <li>9. Fixed Spindle Housing</li> <li>10. Grind Wheel Flange - 3/8"</li> <li>11. Adjustable Spindle Housing</li> <li>12. 3/8" Shaft Collar</li> <li>13. Urethane Belt</li> <li>14. Output Drive Pulley - Fixed</li> <li>15. Input Drive Pulley</li> <li>16. Grind Shaft Pulley</li> <li>17. Adjustment Knob</li> <li>18. Output Drive Pulley - Adjustable</li> <li>19. Power Switch</li> <li>10. Power Inlet</li> <li>11. Drive Shaft</li> <li>12. Motor</li> <li>14. HE1-2-808</li> <li>15. HE1-2-401</li> <li>16. Grind Shaft Pulley</li> <li>17. HE1-2-402</li> <li>18. Output Drive Pulley - Adjustable</li> <li>18. HE1-2-103</li> <li>18. Output Drive Pulley - Adjustable</li> <li>19. Power Switch</li> <li>19. Power Shaft</li> <li>10. HE1-2-205</li> <li>11. Drive Shaft</li> <li>12. Motor Pulley</li> <li>14. HE1-2-209</li> <li>15. HE1-2-209</li> <li>16. Grind Shaft Pulley</li> <li>17. HE1-2-205</li> <li>18. Output Drive Pulley - Adjustable</li> <li>18. HE1-2-205</li> <li>19. Power Inlet</li> <li>19. Power Switch</li> <li>10. HE1-2-205</li> <li>11. Drive Shaft</li> <li>11. HE1-2-205</li> <li>12. Motor Pulley</li> <li>14. HE1-2-209</li> </ul>	7.	,	HE1-2-9501
10. Grind Wheel Flange - 3/8" HE1-2-508 11. Adjustable Spindle Housing HE1-2-808 12. 3/8" Shaft Collar HE1-2-114 13. Urethane Belt HE1-2-405 14. Output Drive Pulley - Fixed HE1-2-401 15. Input Drive Pulley HE1-2-404 16. Grind Shaft Pulley HE1-2-400 17. Adjustment Knob HE1-2-103 18. Output Drive Pulley - Adjustable HE1-2-402 19. Power Switch HE1-2-206 20. Power Inlet HE1-2-506 21. Drive Shaft HE1-2-506 22. Motor Pulley HE1-2-403 23. Motor	8.	Wheel Adjustment Shaft	HE1-2-500
11. Adjustable Spindle Housing 12. 3/8" Shaft Collar 13. Urethane Belt 14. Output Drive Pulley - Fixed 15. Input Drive Pulley 16. Grind Shaft Pulley 17. Adjustment Knob 18. Output Drive Pulley - Adjustable 19. Power Switch 19. Power Inlet 19. Power Inlet 19. Drive Shaft 19. Motor 19. Motor 10. Meti-2-205 10. Motor 10. Meti-2-205 11. Drive Shaft 11. Heti-2-206 12. Motor Pulley 12. Motor 13. Heti-2-209	9.	Fixed Spindle Housing	HE1-2-807
12. 3/8" Shaft Collar  13. Urethane Belt  14. Output Drive Pulley - Fixed  15. Input Drive Pulley  16. Grind Shaft Pulley  17. Adjustment Knob  18. Output Drive Pulley - Adjustable  19. Power Switch  20. Power Inlet  21. Drive Shaft  22. Motor Pulley  HE1-2-103  HE1-2-206  HE1-2-206  HE1-2-205  HE1-2-205  HE1-2-205  HE1-2-205  HE1-2-206	10.	Grind Wheel Flange - 3/8"	HE1-2-508
<ul> <li>13. Urethane Belt</li> <li>14. Output Drive Pulley - Fixed</li> <li>15. Input Drive Pulley</li> <li>16. Grind Shaft Pulley</li> <li>17. Adjustment Knob</li> <li>18. Output Drive Pulley - Adjustable</li> <li>19. Power Switch</li> <li>20. Power Inlet</li> <li>21. Drive Shaft</li> <li>22. Motor Pulley</li> <li>33. Motor</li> <li>4E1-2-405</li> <li>4E1-2-405</li> <li>4E1-2-206</li> <li>4E1-2-206</li> <li>4E1-2-206</li> <li>4E1-2-206</li> <li>4E1-2-206</li> <li>4E1-2-209</li> </ul>	11.	Adjustable Spindle Housing	HE1-2-808
<ul> <li>14. Output Drive Pulley - Fixed</li> <li>15. Input Drive Pulley</li> <li>16. Grind Shaft Pulley</li> <li>17. Adjustment Knob</li> <li>18. Output Drive Pulley - Adjustable</li> <li>19. Power Switch</li> <li>20. Power Inlet</li> <li>21. Drive Shaft</li> <li>22. Motor Pulley</li> <li>33. Motor</li> <li>4E1-2-401</li> <li>4E1-2-402</li> <li>4E1-2-506</li> <li>4E1-2-506</li> <li>4E1-2-209</li> </ul>	12.	3/8" Shaft Collar	HE1-2-114
<ul> <li>15. Input Drive Pulley</li> <li>16. Grind Shaft Pulley</li> <li>17. Adjustment Knob</li> <li>18. Output Drive Pulley - Adjustable</li> <li>19. Power Switch</li> <li>20. Power Inlet</li> <li>21. Drive Shaft</li> <li>22. Motor Pulley</li> <li>33. Motor</li> <li>4E1-2-404</li> <li>4E1-2-405</li> <li>4E1-2-403</li> <li>4E1-2-209</li> </ul>	13.	Urethane Belt	HE1-2-405
16. Grind Shaft Pulley       HE1-2-400         17. Adjustment Knob       HE1-2-103         18. Output Drive Pulley - Adjustable       HE1-2-402         19. Power Switch       HE1-2-206         20. Power Inlet       HE1-2-205         21. Drive Shaft       HE1-2-506         22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	14.	Output Drive Pulley - Fixed	HE1-2-401
17. Adjustment Knob       HE1-2-103         18. Output Drive Pulley - Adjustable       HE1-2-402         19. Power Switch       HE1-2-206         20. Power Inlet       HE1-2-205         21. Drive Shaft       HE1-2-506         22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	15.	Input Drive Pulley	HE1-2-404
18. Output Drive Pulley - Adjustable       HE1-2-402         19. Power Switch       HE1-2-206         20. Power Inlet       HE1-2-205         21. Drive Shaft       HE1-2-506         22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	16.	Grind Shaft Pulley	HE1-2-400
19. Power Switch       HE1-2-206         20. Power Inlet       HE1-2-205         21. Drive Shaft       HE1-2-506         22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	17.	Adjustment Knob	HE1-2-103
20. Power Inlet       HE1-2-205         21. Drive Shaft       HE1-2-506         22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	18.	Output Drive Pulley - Adjustable	HE1-2-402
21. Drive Shaft       HE1-2-506         22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	19.	Power Switch	HE1-2-206
22. Motor Pulley       HE1-2-403         23. Motor       HE1-2-209	20.	Power Inlet	HE1-2-205
23. Motor HE1-2-209	21.	Drive Shaft	HE1-2-506
	22.	Motor Pulley	HE1-2-403
24. Drive Shaft Bracket HE1-2-809	23.	Motor	HE1-2-209
	24.	Drive Shaft Bracket	HE1-2-809

# **Belt Routing**



## **Wheel Guard Removal**



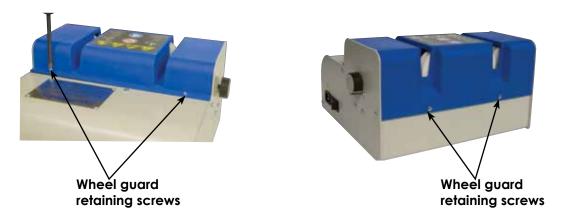
WARNING: DO NOT OPERATE MACHINE WITH WHEEL GUARD REMOVED.

#### To remove wheel guard:

- 1. Ensure that the power cord is unplugged from receptacle.
- 2. Remove the two phillips head screws located at the front of the wheel guard.
- 3. Remove the two phillips head screws located at the back of the wheel guard.
- 4. Lift the wheel guard straight up until it is clear of the grinding wheels.

#### To replace wheel guard:

- 1. Place guard directly over the wheels and set straight down.
- 2. Replace and tighten the four phillips head screws to lock the wheel guard in place.





### Replacement of HE1 Honing Wheels

# **WARNING:**

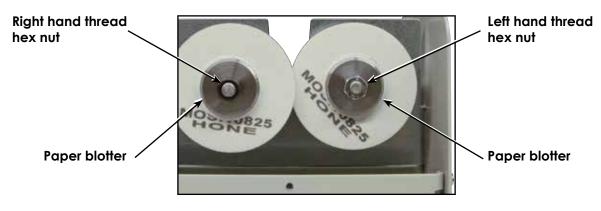
### READ SAFETY INSTRUCTIONS FOR GRINDING WHEELS BEFORE REPLACING.

### To replace **Honing** grinding wheels:

- 1. Ensure that the power cord is unplugged from receptacle.
- 2. Remove wheel guard and set aside. (See wheel guard removal).
- 3. Turn adjusting knob for **Honing** wheels until wheels are separated.
- 4. Hold wheels, remove both hex nuts using an open end or box wrench. Note: The left shaft has a right hand thread hex nut, and is black. The right shaft has a left hand thread hex nut, and is plain.
- 5. Remove two grind wheel flanges and old **Honing** wheels.
- 6. Remove paper blotters.
- 7. Slide new **Honing** wheels onto shafts against back grind wheel flanges.
- 8. Replace paper blotters.

Note: Paper blotters must always be used between the **Honing** wheels and the washers to reduce the risk of damaging the **Honing** wheels when the hex nut is tightened.

- 9. Slide outside grind wheel flanges back onto shafts.
- 10. Secure wheel to left shaft with black right hand thread hex nut.
- 11. Secure wheel to right shaft with plain left hand thread hex nut. (Note: Tighten nuts to 2 ft. lbs. of torque or about 3/4 of a full revolution past being snug).
- 12. If wheels rub against one another, they may be flipped 180 degrees, one at a time, to insure proper alignment. Also, the use of a paper blotter may be used for alignment. (Blotters are provided with replacement wheels).
- 13. Replace wheel guard and plug into receptacle.
- 14. Adjust wheels in accordance with general operating instructions.



**Honing Stones** 

# Replacement of HE1 Sharpening Wheels

# **!** WARNING:

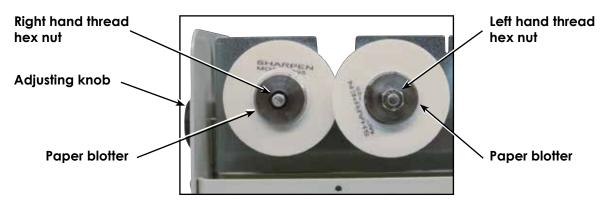
### READ SAFETY INSTRUCTIONS FOR GRINDING WHEELS BEFORE REPLACING.

#### To replace **Sharpening** grinding wheels:

- 1. Ensure that the power cord is unplugged from receptacle.
- 2. Remove wheel guard and set aside. (See wheel guard removal).
- 3. Turn adjusting knob for **Sharpening** wheels until wheels are separated.
- 4. Hold wheels, remove both hex nuts using an open end or box wrench. Note: The left shaft has a right hand thread hex nut, and is black. The right shaft has a left hand thread hex nut, and is plain.
- 5. Remove two flat grind wheel flanges and old **Sharpening** wheels.
- 6. Remove paper blotters.
- 7. Slide new **Sharpening** wheels onto shafts against back grind wheel flanges.
- 8. Replace paper blotters.

Note: Paper blotters must always be used between the **Sharpening** wheels and the grind wheel flanges to reduce the risk of damaging the **Sharpening** wheels when the hex nut is tightened.

- 9. Slide outside grind wheel flanges back onto shafts.
- 10. Secure wheel to left shaft with the black right hand thread hex nut.
- 11. Secure wheel to right shaft with plain left hand thread hex nut. (Note: Tighten nuts to 2 ft. lbs. of torque or about 3/4 of a full revolution past being snug).
- 12. If wheels rub against one another, they may be flipped 180 degrees, one at a time, to insure proper alignment. Also, the use of a paper blotter may be used for alignment. (Blotters are provided with replacement wheels).
- 13. Replace wheel guard and plug into receptacle.
- 14. Adjust wheels in accordance with general operating instructions.



**Sharpening Stones** 

### **Maintenance Schedule**

#### Daily:

• Clean any grinding grit, dust and debris from the machine.

### Monthly or at every 50 hours of use:

Remove grind wheel guard and inspect the following:

- Measure grind wheel diameters. New wheels measure 3" (76mm) in diameter. A wheel has reached the end of its safe life cycle when it measures 2.75" (70mm) in diameter and needs to be replaced. Only replace grind wheels in mated pairs.
- Ensure all grind wheel hex nuts are tight.
- Inspect all belts for abrasions, rips or failure. Discoloration of these belts is normal. The belts begin life clear and will absorb dirt until black. This discoloration will not impair the belt's performance. Any belts that have failed or show excessive wear or rips need to be replaced.
- Inspect pulleys for excessive wear, movement from their original position or failure.
- Ensure all screws and bolts of the grind wheel and drive assemblies are tight.
- Clean any grinding grit, dust and debris from the machine.

#### After 2,000 hours of use:

- Perform 50 hour check.
- Replace all belts.

### Each grind wheel change:

• With grind wheels removed from respective shafts, turn adjustment shaft to move adjustable spindle housing through its total range of motion.

# **Replacement Parts**

When ordering replacement parts, the following information must be stated:

- Part number.
- Quantity.
- Description.
- Machine model/serial number.

# **Parts List**

### **Pulleys**

HE1-2-400	Grind shaft pulley (w/ spring pin)
HE1-2-401	Output drive pulley-fixed (w/ set screw)
HE1-2-402	Output drive pulley-adjustable (w/ set screw)
HE1-2-403	Motor pulley (w/ set screw)
HE1-2-404	Input drive pulley (w/ set screw)

### **Belts**

HE1-2-405	Urethane belt 3/16" dia. x 10.25" long
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### **Fasteners**

HE1-2-100	3/8" shaft E-style retaining ring
HE1-2-102	Compression spring
HE1-2-103	Adjustment knob (5/16" bushing)
HE1-2-104	1/8" spring pin
HE1-2-105	1/4" shaft collar
HE1-2-106	Star washer
HE1-2-107	M4 x 0.7mm pitch x 10mm large set screw
HE1-2-108	M4 x 0.7mm pitch x 10mm large pan head screw (set of 25)
HE1-2-109	M8-1.0mm pitch hex thin nut (RH)
HE1-2-110	M8-1.0mm pitch hex thin nut (LH)
HE1-2-111	Wash Flt 1/4" zinc
HE1-2-112	M6 x 50mm SCHC
HE1-2-114	3/8" shaft collar (w/set screw)
HE1-2-115	8-32 NC x 3/8" screw
HE1-2-116	Pivot fastener set (for adjustable spindle housing)

# **Bearings**

HE1-2-406	1604 DC radial ball bearing
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# Parts List cont.

# Structural

HE1-2-800	Motor mount
HE1-2-801	Side plate (right)
HE1-2-802	Side plate (left)
HE1-2-803	Dust plate
HE1-2-804	Base plate
HE1-2-805	Back cover
HE1-2-806	Spindle channel
HE1-2-807	Spindle housing (Fixed)
HE1-2-808	Spindle housing (adjustable)
HE1-2-809	Drive shaft bracket
HE1-2-810	Spindle channel machined
HE1-2-101	Rubber foot replacement package (w/ metric fasteners)

### **Electrical**

HE1-2-200	Ring terminal (crimp-on ground ring)
HE1-2-201	Crimp-on connector
HE1-2-202	Cable ties
HE1-2-203	0.25 female disconnect
HE1-2-204	Ground wire replacement package
HE1-2-205	Power inlet (.25" terminal)
HE1-2-206	Power switch (SPST with I/O markings)
HE1-2-207	Cordset, NEMA 5/15P-IEC-320 C13, 18/3 SJT, black, 60C, 7'
HE1-2-208	Cable clamp (w/ screw)
HE1-2-209	Motor replacement (w/ connectors)

# Shafting

HE1-2-500	Wheel adjustment shaft
HE1-2-501	Pivot nut
HE1-2-506	Drive shaft

# Guarding

HE1-2-811	Grinding wheel guard replacement package
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### Labels

HE1-2-407	PRIMEdge front label	
HE1-2-408	Wheel guard label	
HE1-2-410	Operator's manual	
HE1-2-415	1-2-415 Protective earth (ground)	
HZ-480	Electrical hazzard symbol	

# Parts List cont.

## **Grinding Wheels/Accessories**

	•
HE1-7100	Sharpening wheel replacement (2 x 100 GR. Wh.)
HE1-7220	Honing wheel replacement (2 x 220 GR. Wh.)
HE1-746	Thinning wheel replacement (2 x 46 GR., Wh., Blot., Spac.)
HE1-700	Dresser wheel
HE1-701	24-S truing stick
HE1-2-508	Grind wheel flange - 3/8"
HE1-2-509	Grind wheel flange - M8

### **Assemblies**

HE1-2-9501	Spindle housing assembly left hand adjustable
HE1-2-9502	Spindle housing assembly right hand adjustable
HE1-2-9503	Spindle housing assembly left hand fixed
HE1-2-9504	Spindle housing assembly right hand fixed
HE1-2-9505	Drive shaft assembly



# Recommended HE1 Spare Parts Package

Qty.	Part No.	Description				
1 PR.	HE1-7100	Grinding wheel replacement set	Michael Park			
1 PR.	HE1-7220	Honing wheel replacement set	Man Constitution of the Co			
1 EA.	HE1-701	Truing stick				
· · · · · · · · · · · · · · · · · · ·						
5 EA.	HE1-2-405	Urethane Belt 3/16" x 10.25				

# PRIMEdge, Inc. 1281 Arthur Avenue

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