HE2 Sharpening System

220 Volt 50 Hz.
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.

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PRIMEdge®
COZZINI CUTTING EDGES
AND SHARPENING SOLUTIONS

Introduction Statement

The **PRIMEdge HE-2** Knife Sharpening System is designed for businesses that have a need to quickly and accurately sharpen hand knives with blades up to 10 inches in length.

A. The **PRIMEdge HE-2** combines two machines in one energy and space-saving unit: a hollow grinder and an edge honer that will thin a knife blade and sharpen the edge in a matter of seconds. Both sides of the blade are thinned and sharpened simultaneously.

B. The **PRIMEdge HE-2** is designed for use in food processing facilities that require sharpening of approximately 100 knives per day. It is also ideal for light-volume resharpening businesses or in retail stores for convenient custom sharpening of knives.

The **PRIMEdge HE-2** is a sturdy, well-constructed machine that will provide you with many years of satisfactory service.

This booklet explains:

- Installation and set-up instructions
- Correct usage of the machine
- Detailed maintenance and repair procedures
- Cleaning, lubrication and oiling procedures

Important: This manual comes with an instructional video that will give you step-by-step directions for all operational and maintenance procedures. Please review this video before setting up the machine.

O.S.H.A. As part of its obligation and commitment to each of its customers,

PRIMEdge, Inc. has taken every step available to make the **PRIMEdge HE-2** Knife Sharpening System as free as possible from any recognized hazards which may cause harm or injury to anyone who may operate this unit. At any time and for any reason this machine is being worked on, the main electrical disconnect switch should be in the "**Off**" position and the proper O.S.H.A. lock-out procedures should be followed. Every effort has been made to comply with the applicable sections of the occupational safety and health standards published by the U.S. Department of Labor.

Warranty. The seller warrants the **PRIMEdge HE-2** Knife Sharpening System parts of its own manufacture against defects in workmanship or material for 90 days from the customer's invoice date.

The seller's obligation is limited solely to the replacement of defective parts, which are to be returned to the seller's plant FOB.

The seller shall not be liable for any damage to the machine caused by misuse or abuse.

Machine parts that are not manufactured by the seller shall carry the warranty of the manufacturer thereof. Deterioration of parts caused by misuse or abuse, or improper operation of the machine, does not constitute defects.

This warranty of machine merchantability and fitness constitutes the only warranty made by the seller.

Use of any parts on this machine that are not approved by the seller as authorized replacement parts shall void all warranties and guarantees.

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Declaration of compliance-CE

The company **PRIMEdge, Inc.**
with its world headquarters at 1281 Arthur Avenue, Elk Grove Village, IL. U.S.A. states that

- **The machine: Hollow Grinder and Honer/Edger model HE2**
- **HE2 Serial Number: ???**
- **Manufactured in: ????**

as described in the documentation, is in accordance with

Machinery Directive 2006/42/EC
EMC Directive 2004/108/EC

This declaration of compliance is only related to the machines above and therefore it cannot be extended to other machines with which it is integrated. If the machine is modified without PRIMEdge Inc. consent, this declaration shall cease to apply.

PRIMEdge also forbids the use of the machine, to which this declaration refers, in a way different from the one prescribed in the Use and Maintenance Manual to avoid endangering people's safety.

In addition, PRIMEdge, Inc. rejects any responsibility for accidents to persons or property resulting from tampering with the machine by third parties or from lack of maintenance or repair.

Use of the HE2 Sharpening System Manual

This manual is intended for the owner and all users of the HE2 Sharpening system and should be considered as an integral part of the delivery and must be kept for future reference until the final disposal of the HE2 Sharpening system.

- **Before operating the HE2 Sharpening System, read the entire instruction manual and carefully follow the indications given in this document.**
- **Keep this manual and any attachments or updates in a place accessible to all personnel in charge of the plant.**
- **The user must make sure that the staff and qualified technicians have read and understood the contents of this manual.**
- **Do not tear, remove or modify for any reason any parts of the manual.**
- **All users of the HE2 Sharpening System must have access to this manual.**

Set-Up Instructions

Important: This manual comes with an instructional video that will give you step-by-step directions for all operational and maintenance procedures. Review this video before setting up the machine.

Installation of the **PRIMEdge HE-2** Knife Sharpening System is quick and easy. Follow these instructions for setting up the machine.

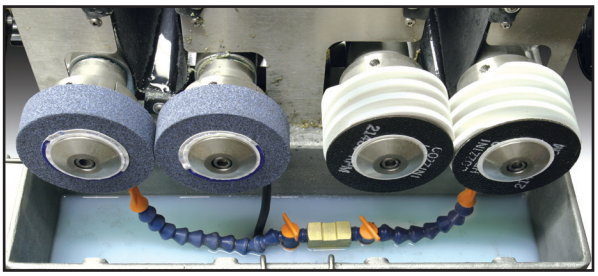
Installation

Choose a spot where the machine will be placed. It can sit on a counter top or tabletop, or it can be placed on a wheeled cart for easy relocation. It should be placed close to a 220V power supply.

Remove the machine from the carton and place it where the knife sharpening operations will be performed.

Unlatch the cover. Remove the cover completely. A limit switch will be activated when the cover is raised so that the machine cannot be operated without the protective cover in place.

Recirculating Pump and Coolant



Pour 1 3/4 gallons (6.6 l) of water into the coolant reservoir and add 8 oz. (237 ml) of White Sol coolant fluid.

Unpack the recirculating pump and place it in the hanger. Secure the pump in the hanger with the plastic tie strap. The hanger keeps the pump off the bottom of the coolant reservoir to prevent the grinding grit from being picked up and recycled by the pump.

Place the pump and hanger in the coolant reservoir. Hang it over the front lip and position the hanger at the center of the reservoir.

Position the flexible coolant pipes underneath the center of each pair of spindle shafts. The pump should be plugged into the receptacle on the left side of the electrical box labeled "Pump". This receptacle is controlled by the pump On/Off switch.

Wheel Installation

Open both pairs of spindles by turning the hand wheels on both sides of the machine to the left (counter-clockwise) to the stop position.

The hollow grinder wheels and spiral-threaded honing wheels are extremely fragile, so care should be taken when removing them from the shipping carton.

Remove the retaining bolts and flanges from the four spindles.

Enclosed with each set of wheels you will find a set of paper blotters. Place one blotter on the spindle and position it against the drive collar. With a pair of scissors notch out the paper blotter so that you can see the drive pin.

Installing the Hollow Grinder Wheels

Lubricate the spindle shafts, then slide a paper blotter onto each shaft. Slide the hollow grinder wheels onto the spindles with the locating hole facing toward the back. Snug the wheels against the drive collar so the drive pins are fully inside the locating holes.

The paper label on the hollow grinder wheel acts as a paper blotter. Slide the retaining flange onto the spindle with the concave side facing the hollow grinder wheel. Insert the retaining bolts into the ends of the spindles and tighten with the supplied $^{5}/_{16}$" Allen wrench.

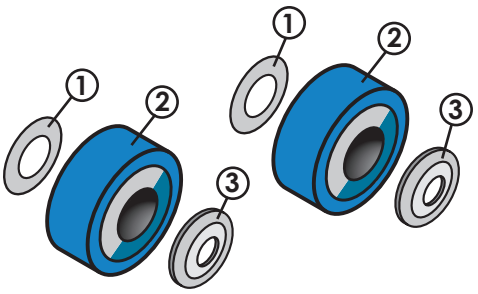
Installing the Spiral Honing Wheels

Lubricate the spindle shafts, then slide a paper blotter onto each shaft. Slide the honing wheel marked "left" onto the left spindle. Slide the wheel marked "right" onto the right spindle. Snug the wheels against the drive collar with the pins inside the locating holes. The side of the wheels with "left" and "right" printed on them must face toward you.

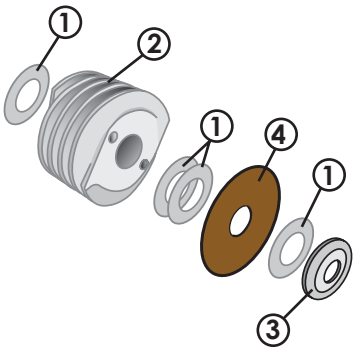
Place 2 paper blotters then a guard disc on the left wheel spindle shaft. Next place one paper blotter then finaly the retaining flange on the spindle shaft. Insert the retaining bolt into the end of the spindle and tighten the retaining bolt with the $^{5}/_{16}$" Allen wrench. A paper blotter should always be placed between the wheel and any metal surface to act as a cushion against the wheel.

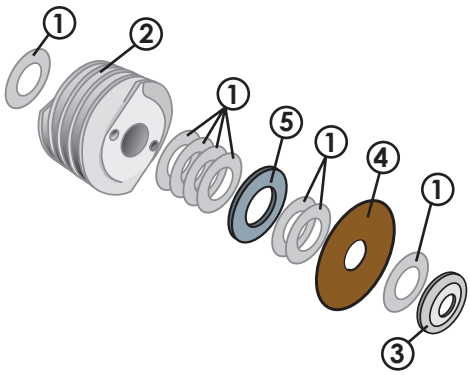
Place 4 paper blotters, the metal spacer, 2 more paper blotters, the guard disc then 1 more paper blotter on the right spindle shaft. Insert the flange onto the right spindle against the right spiral wheel. Insert the retaining bolt into the end of the spindle and begin to tighten the retaining bolt. ***DO NOT FULLY TIGHTEN THE BOLT AT THIS TIME.*** *The spiral wheels must be aligned (timed) before tightening the bolt*. The metal spacer separates the guard discs to prevent them from rubbing against one another when they are overlapped.

Order of Installation for Hollow Grinder and Spiral Honing Wheels



Both hollow grinder wheels are installed the same way



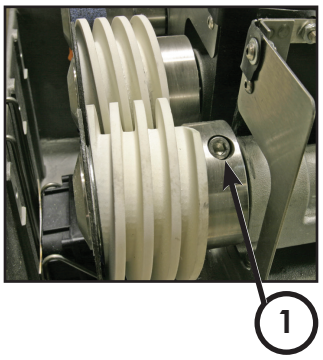


Hollow Grinder Wheels		
No.	**Description**	**PRIMEdge #**
1	Paper Blotter	**HZS-400**
2	Hollow Grinding Wheel	**HE2-760**
3	Retaining Flange	**HZS-509**

Left Spiral Honing Wheel		
No.	**Description**	**PRIMEdge #**
1	Paper Blotter	**HZS-400**
2	Spiral Honing Wheel	**HE2-7320**
3	Retaining Flange	**HZS-509**
4	Guard Disc	**HE4-729**

Right Spiral Honing Wheel		
No.	**Description**	**PRIMEdge #**
1	Paper Blotter	**HZS-400**
2	Spiral Honing Wheel	**HE2-7320**
3	Retaining Flange	**HZS-509**
4	Guard Disc	**HE4-729**
5	Spacer	**HE4-100**

Timing the Spiral Honing Wheels



Use the 1/4" Allen T wrench to loosen the socket head bolt ① that secures the right wheel drive collar to the spindle. When the bolt is loosened, the right wheel should turn freely on the spindle.

Bring the honing wheels close together and rotate the right wheel by hand until the threads of both wheels are aligned in alternating positions.

Turn the hand wheel on the right side of the machine to the right (clockwise) to close and overlap the wheels about 3/16".

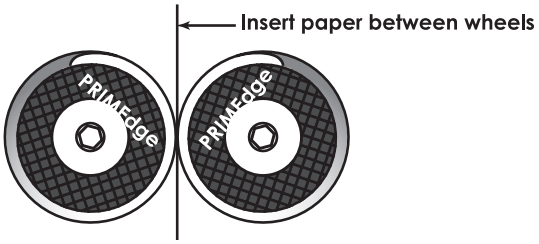
Rotate the right wheel to achieve equal clearance between threads.

Locate the locking bolt ① which is recessed on the side of the drive collar and tighten the bolt securely.

Tighten the right wheel retaining bolt securely and recheck the wheel alignment to be sure the threads have adequate clearance. The threads should not rub against each other when the machine is running.

Setting the Cutting Edge Angle

The spiral honing wheels overlap must be set to produce a 35° cutting edge angle.



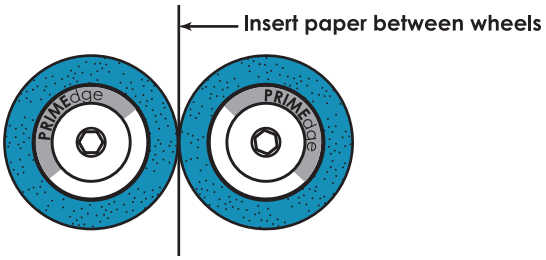
With the spiral honing wheels opened slightly, hold a piece of paper between the wheels. Turn the hand wheel on the right side of the machine clockwise to close the spiral wheels until the paper is clamped between them. Slowly open the spiral wheels until the paper can be pulled out with slight resistance.

Turn the spiral wheel hand wheel 3 full turns to the right (clockwise). The spiral wheels will be overlapped correctly to form a 35° cutting angle.

Tighten the lock nut on the hand wheel.

Positioning the Hollow Grinder Wheels

Hold a piece of paper between the opened hollow grinder wheels. Turn the hand wheel on the left side of the machine clockwise to close the grinder wheels until the paper is clamped tightly and cannot be pulled out. Slowly turn the hand wheel counter-clockwise to open the grinder wheels until the paper can be removed with minimal friction or resistance.



⚠ The grinder wheels should not be touching each other. Tighten the locking nut on the hand wheel. The hollow grinder wheels are now ready for use.

After hollow grinding a number of knives, the wheels will wear and require adjusting. Close the grinder wheels slightly in order to compensate for the wear. Do not jam the grinder wheels together while they are running. Turn the hand wheel slowly with the machine **turned off** when adjusting the grinder wheels to avoid damaging the wheels.

Replace the cover. Be sure the cover fits evenly on all sides of the machine. Tighten the finger latches.

Plug the power cord into its receptacle and press the "System" "on-off" switch to the "**I**" (Green) position. Press the "on-off" switch to the "**I**" (Green) position for the coolant pump and you are ready to hollow grind and edge hone your knives.

⚠ **Note:** Always remove the plug from the power source receptacle when you are working on the machine with the cover removed.

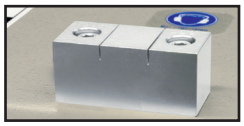
A safety limit switch is activated when the cover is raised to prevent accidental grinder wheel start-up and possible injury.

Complete safety precaution is exercised by removing the power plug.

Operation

⚠ Important: Always wear safety glasses or goggles to protect your eyes and appropriate hearing protection when operating the machine. There should be adequate lighting over the machine. If necessary, install a lamp for better vision.

Determining Blade Thickness



GO-NO GO gauge

The knife blade must be thin enough at the edge to fit comfortably between the spiral honing wheels for sharpening. Use the GO-NO GO gauge to determine the thickness of each knife blade near its edge.

The .018 slot on the GO-NO GO gauge is used to measure boning knives, kitchen knives and pocket knives. The .022 slot is used to measure heavier bladed knives such as chef's knives and hunting knives.

The blade must drop into the appropriate gauge slot $^{1}/_{8}$". If it does not, then it is too thick to sharpen and must be hollow ground first.

Hollow Grinding the Knife Blade

The blade is evenly thinned as it is ground between the hollow grinder wheels. Hold the knife handle firmly, keeping the blade in a straight, upright position between the wheels to ensure even grinding on each side.

Start at the tip of the blade and move the knife forward between the wheels up to the heel of the knife, being careful not to touch the handle against the wheels. Immediately reverse this motion, pulling the knife toward you between the hollow grinder wheels, moving from the heel to the tip.

Apply medium pressure as you guide the blade between the wheels in a continuous forward and reverse motion. It is important to keep the knife moving in order to avoid scorching or burning the blade.

Hollow grind the blade until it has reached the correct thickness, which you can check by measuring the blade in the GO-NO GO gauge as indicated above.

Sharpening the Final Edge on the Knife Blade

Sharpen the knife blade edge by passing the blade between the spiral honing wheels, using the same motions that you used in the hollow grinding operation. The spiral threads of the wheels are overlapped a specific amount to form the correct cutting edge.

It takes only a few passes back and forth to produce a razor-sharp edge. A blade can be completely sharpened from tip to heel in a few seconds. The HE-2 will accommodate knife blades up to 14 inches long (355.6 mm).

Maintenance

The procedures for replacing major parts and assemblies are explained on the following pages. Machine cleaning, lubrication, wheel dressing, and changing the coolant fluid are explained as well. Refer to the schematic drawings in the back of the manual for detailed information and refer to the parts list for ordering replacement parts.

Wheel Dressing

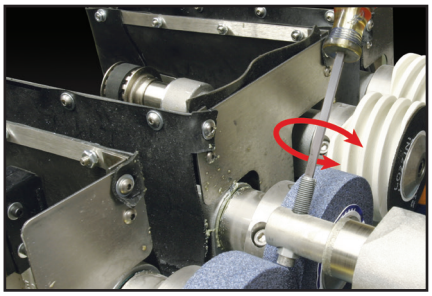
The wheels require dressing when they become out of round. At this time, the wheels will feel rough and bumpy. The wheel dressing device is used to true both the hollow grinding and the spiral honing wheels.

Remove the cover. Open the spiral and grinder wheels. When dressing the wheels they must be in the fully open position.

Measure the diameters of each pair of hollow grinder or honing wheels to be sure they are similar in diameter. If one wheel of a pair is smaller, the larger diameter wheel must be dressed until it is equal in size to the smaller wheel. If the wheels have different diameters, the grinding or honing bevels will be uneven.

Attach the dresser assembly to the front of the machine by sliding the threaded knob studs through its holes. Be sure the dresser assembly bracket is seated evenly. Tighten the knobs.

Adjusting the Dressing Diamond



With the cover removed, fully open the wheels to be dressed. Move the lever to the right, which will point the diamond toward the right wheel. Use a screwdriver to adjust the diamond until it slightly touches the right wheel.

Move the lever to the left to point the diamond toward the left wheel. Close the wheels until the diamond slightly touches the left wheel. Replace the cover.

Dressing the Hollow Grinder and Spiral Honing Wheels

The dressing is done with the machine running and the coolant fluid flowing on the wheels.

With the diamond dresser assembly retracted, move the direction lever to the right and hold it firmly in place.

Slowly turn the hand wheel to the left (counter-clockwise) to engage the dresser diamond with the right wheel. Take a very light cut (approximately $^{1}/_{1000}$ of an inch). Continue turning the hand wheel slowly until the wheel has been fully dressed.

Retract the diamond fully by turning the hand wheel to the right (clockwise).

Dressing the Hollow Grinder and Spiral Honing Wheels cont...

Move the direction lever to the left and hold it firmly in place.

Slowly turn the hand wheel to the left (counter-clockwise) to dress the left wheel. Continue until the wheel has been fully dressed. Retract the diamond fully by turning the hand wheel to the right (clockwise).

If another dressing pass is needed, adjust the diamond assembly $^{1}/_{20}$ of a turn clockwise and repeat the above procedure. The diamond assembly should be tight enough so it cannot be turned with your finger. Adjust the tightness by turning the socket screw in the end of the shaft to the right with an Allen wrench.

After dressing the spiral wheels, check the diameter of the guard discs: the discs should be $^{1}/_{16}$" smaller than the wheel radius. The guard discs must be kept smaller than the wheels to allow clearance for sharpening the heel portion of the blade. Dress the guard discs down with the diamond dresser, being careful not to touch the wheels or damage the threads.

Changing the Coolant Fluid

The coolant fluid should be changed weekly, or more often, if necessary. Remove the cover to gain full access to the coolant reservoir.

Move the machine forward until the coolant reservoir extends a few inches off the table. Place a bucket under the reservoir drain plug.

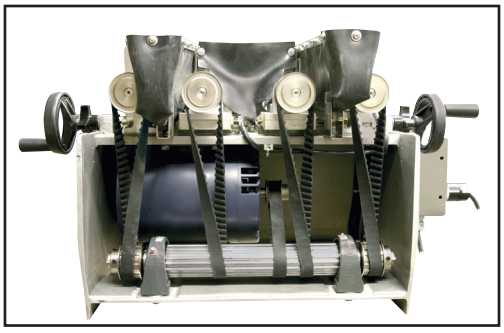
Remove the drain plug with a $^{5}/_{8}$" wrench and let the dirty coolant run out into the bucket. Clean the grit residue out of the reservoir.

Replace and securely tighten the drain plug.

Pour $1^{3}/_{4}$ gallons (6.6 l) of clean water into the reservoir and add 8 oz. (237 ml) of White Sol coolant.

Position the flexible pipes under the center of each pair of wheels. Replace the cover and fasten the finger latches.

Changing the Timing Belts and the Motor Drive Belt



Open the hollow grinder and spiral honing wheels to the full open position.

Unplug the machine from the power source.

Unlatch the cover finger latches. Remove the cover and set it aside.

Turn the machine around so that the back is facing you.

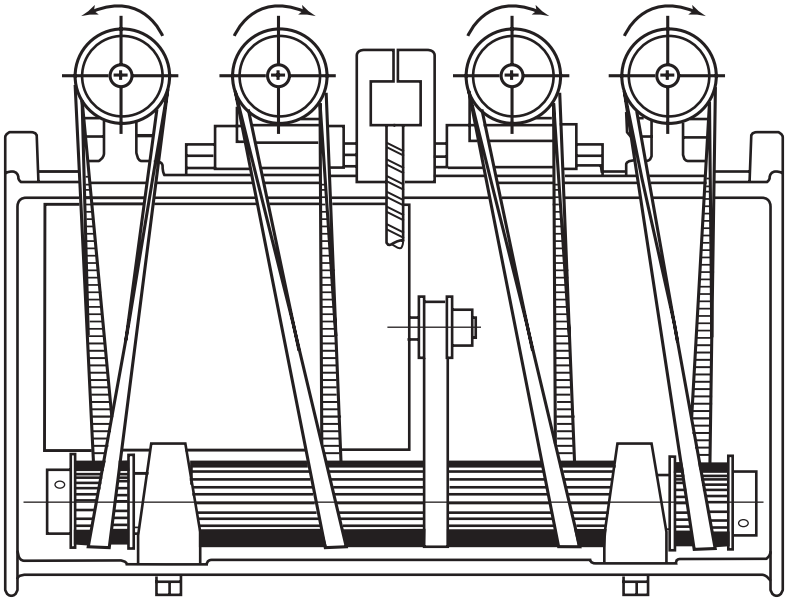
Slide the machine toward you until the back extends a few inches off the table.

Use a $^{9}/_{16}$" wrench to loosen and remove the bolts that secure the pillow blocks in place. The position of the pillow blocks are marked on the base, and the pillow blocks must be replaced in their original positions. Remove all metal spacers upon which the pillow blocks rest.

Remove the timing belts from the upper pulleys and slide the belts over and off the drive roller and lower pulleys. The motor belt can be removed using the same procedure.

Belt Installation

Install the new belts with the twist in the belts as shown in the diagram below. Be sure the twist is correct.



When the timing belts and the motor belt are positioned correctly on the upper and lower pulleys, set the pillow blocks in the marked locations. Replace the bolts and spacers. It may be necessary to add spacers under the pillow blocks to achieve the correct belt tension. The spacers act as shims which can be added or removed to increase or decrease tension in the timing belts.

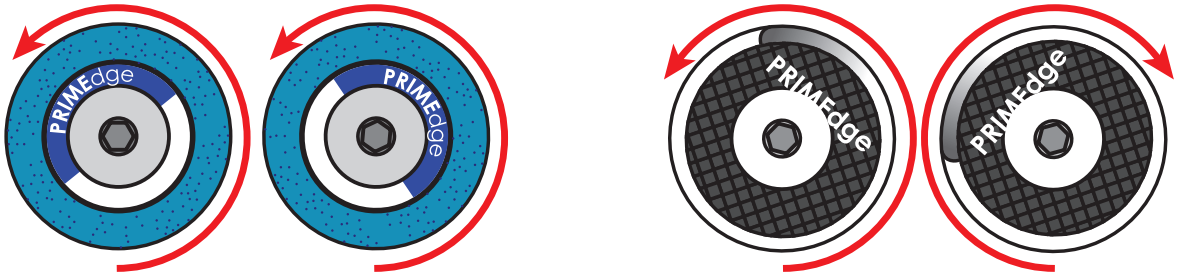
Check the belt twists to be sure they are correct.

Tighten the pillow block bolts securely with a $^{9}/_{16}$" wrench.

Pull downward on the outside honing wheel belt to check the rotation of the spiral wheels.

Pull downward on the outside hollow grinder wheel belt to check the wheel rotation.

Note: When the machine is running, the hollow grinder wheels should each turn in the same direction, and the spiral honing wheels should turn in opposite directions, as shown in the diagram below.



Adjust the grinding and honing wheels to their grinding and sharpening positions. Check the alignment of the spiral wheel threads. If they are not in alignment, they must be timed (see "Timing the Spiral Honing Wheels" on page 6).

Replacing the Spindle Bearings

Call **PRIMEdge**'s headquarters toll-free at **+1-877-322-EDGE** (3343) for service assistance.

Replacing the Pillow Blocks, Bearings and Drive Roller

Remove the cover and set it aside.

Turn the machine around so the back is facing you.

Slide the machine toward you until the back extends about 4 inches off the table.

Use a $^{9}/_{16}$" wrench to loosen the four bolts on the underside of the machine that secure the pillow blocks. Remove the bolts and metal washers.

Remove the timing belts from the upper pulleys and remove the motor drive belt. Slide the belts over and off of the drive roller and lower pulleys.

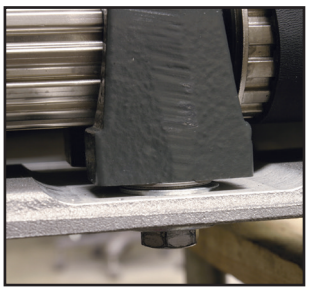
Remove the drive roller with the pillow blocks and cogged pulleys attached and place them on a table.

Loosen the set screws that secure the cogged pulleys to the shaft and remove the pulleys. Loosen the set screws that fasten the pillow blocks to the shaft and remove the pillow blocks.

Replace the pillow blocks and bearing assemblies.

Slide the pillow blocks onto the shaft with the bearing set screws. Slide the cogged pulleys onto the shaft and tighten the set screws. Replace the drive roller assembly in the machine.

Replace the timing belts and motor drive belt on the pulleys and drive roller. Stretch the timing belts over the upper pulleys.



Be sure the belt twist is correct.

Check the tightness of the set screws in the pillow block bearings.

Check the tightness of the set screws in the cogged pulleys.

Line up the pillow blocks in the correct location. Replace the bolts and washers and tighten them securely.

Pull downward on the outside belts to check the wheel rotation. Time the spiral wheels. (See "Timing the Spiral Honing Wheels" on page 6.)

Replacing the Motor

Call **PRIMEdge**'s headquarters toll-free at **+1-877-322-EDGE** (3343) for service assistance.

Lubrication and Oiling

There are six grease fittings to be lubricated. There is one grease fitting on each pillow block and two fittings on each slide assembly. Put two pumps of waterproof grease in each fitting as needed.

It is recommended that light mineral oil be sprayed or wiped onto the metal parts, such as the spindles and drive collars, each time the machine is cleaned. The oil will prevent rust and corrosion build-up on the metal parts. The oil will also make cleaning and parts replacement easier. It is especially important to spray oil in the areas that have direct contact with water.

Oil should be applied weekly to the feed screws on the hand wheel.

Daily Machine Cleaning

It is important that the machine be cleaned after each day's use.

Raise the cover and wipe down the area around the grinding and honing wheels.

Clean the grinding grit from the machine and spray light mineral oil on all the metal surfaces in the grinding area.

Check the position of the coolant pipes under the wheels.

Replace the cover and wipe down the outside of the machine.

Weekly Machine Cleaning

Remove the cover completely.

Clean behind the grinding and honing area where the motor and drive pulleys are located. Drain and clean the grit from the coolant reservoir. Replace the coolant mixture.

Spray mineral oil on metal parts.

Replace the cover and wipe down the outside of the machine.

Weekly Inspection and Maintenance

With the cover removed, inspect the belts for tension wear and cracks. Make necessary machine adjustments.

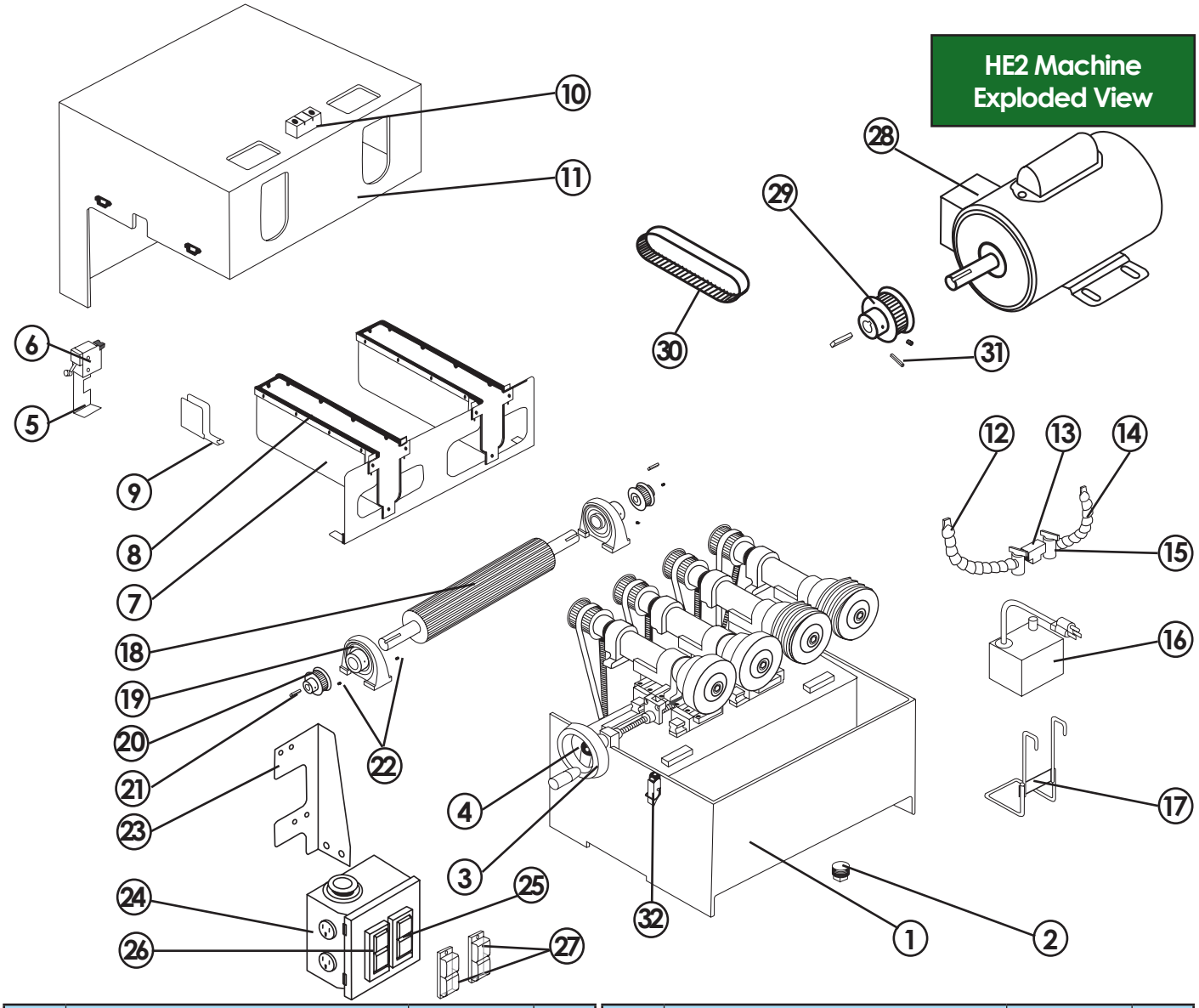
It is recommended that the belts be replaced when they become worn or stretched, or when fatigue cracks begin to appear on the belt edges.

Be sure the pulleys and pillow block bearings are secure. Check the tightness of the set screws.

Check the right and left slide assemblies to make sure they are clean and operate correctly. Oil the feed screws on both sides of the machine.

Replace the cover and wipe down the outside of the machine.

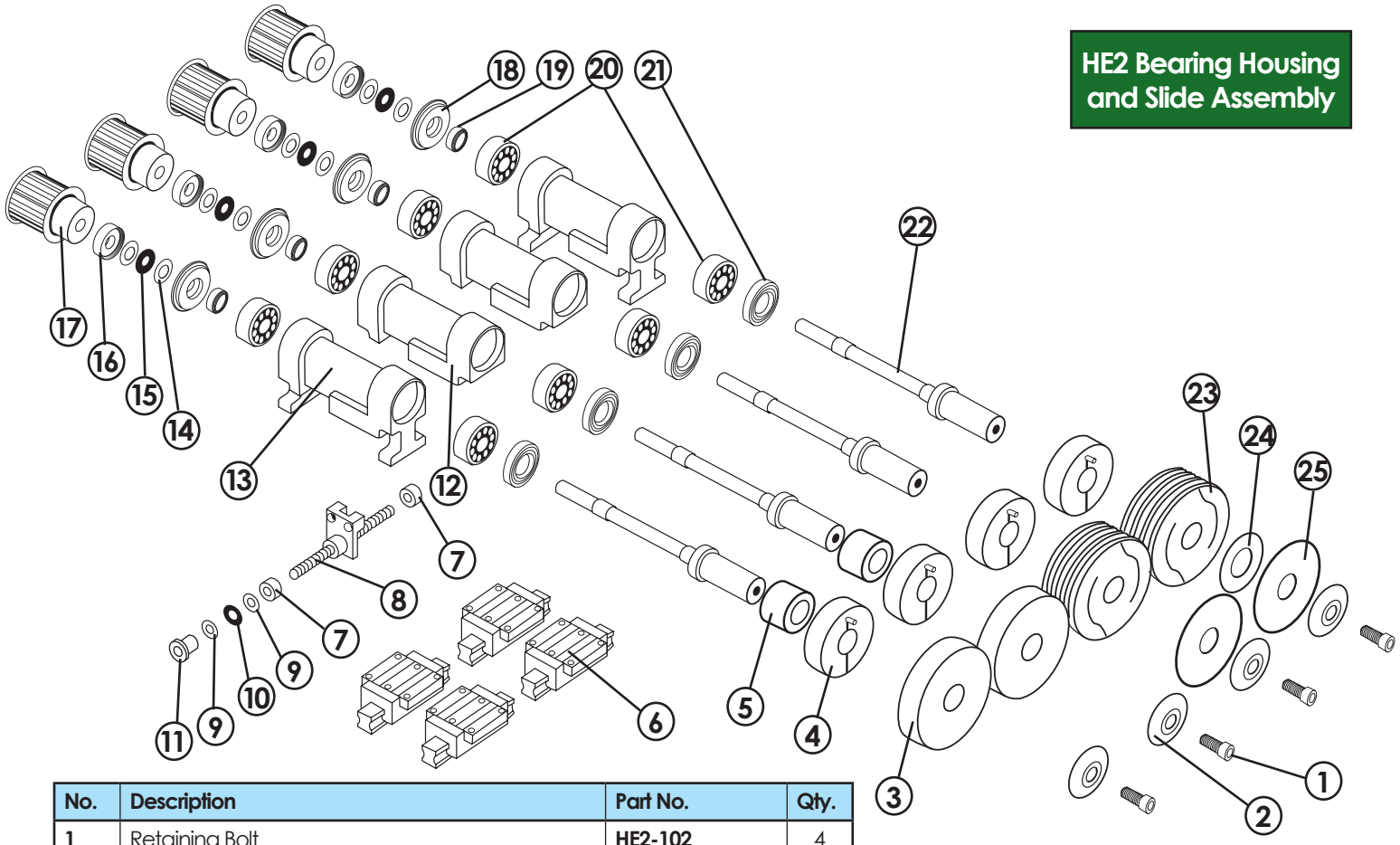
HE2 Machine Exploded View



No.	Description	Part No.	Qty.
1	Base	**HE2-501**	1
2	Drain Plug	**HE2-105**	1
3	4" Hand wheel	**HE2-410**	2
4	Lock Knob	**HE2-409**	2
5	Safety Limit Switch Bracket	**HE2-802**	1
6	Safety Limit Switch	**HZS-205**	1
7	Drain Trough	**HE2-511**	2
8	Drain Trough Bracket	**HE2-803**	2
9	Drain Trough Guard	**HE2-806**	2
10	GO-NO GO Gauge	**HZ-500**	1
11	Main Cover	**HE2-506**	1
12	Spray Nozzle	**HZ-427**	2
13	1/4" ntp "T" Pipe	**HE2-424**	1
14	Loc Line Hose Segment	**HZ-400**	10"
15	In Line Valve	**HZ-428**	2
16	Coolant Pump (220 V)	**HE2-437**	1
17	Coolant Pump Bracket	**HE2-518**	1

No.	Description	Part No.	Qty.
18	Drive Roller	**HE2-512**	1
19	Roller Pillow Bearing	**HE2-404**	2
20	Drive Pulley	**HE2-532**	2
21	3/16" Square x 2" Large Key	**HE2-109**	2
22	Set Screw	**HZS-118**	2
23	Electrical Box Bracket	**HZS-513**	1
24	Electrical Assembly	**HZS-9205**	1
25	Motor On/Off Switch (220 V)	**HZS-232**	1
26	Pump On/Off Switch	**HZS-234**	1
27	Switch Cover	**HZS-230**	2
28	Motor (220 V)	**HE2-201**	1
29	Motor Pulley (2009 and Later)	**HE2-533**	1
	Motor Pulley (2008 and Earlier)	**HE2-530**	1
30	Drive Belt (2009 and Later)	**HE2-415-1**	1
	Drive Belt (2008 and Earlier)	**HE2-415**	1
31	1/8" Diameter x 7/8" Roll Pin	**HZ-119**	1
32	Finger Latch	**HE7-418**	4

HE2 Bearing Housing and Slide Assembly



No.	Description	Part No.	Qty.
1	Retaining Bolt	HE2-102	4
2	Retaining Flange	HZS-509	4
3	Hollow Grinder Wheels	HE2-760	1 Pr.
4	Drive Collar	HE2-509	4
5	Spacer	HE2-510	2
6	Slide Block and Rail	HE2-401	4
7	Slide Lock Collar	HE2-406	4
8	Slide Drive Shaft	HE2-507	2
9	Slide Thrust Bearing Race	HZ-408	4
10	Slide Thrust Bearing	HE2-407	2
11	Guide Bushing	HE2-414	2
12	Adjustable Bearing Housing	HE2-508	2
13	Stationary Bearing Housing	HE2-502	2
14	Thrust Bearing Race	HE2-408	8
15	Thrust Bearing	HE2-402	4
16	Thrust Bearing Cap	HE2-531	4
17	Driven Pulley	HE2-440	4
18	Bearing Housing Rear Cap	HE2-504	4
19	Rear Seal	HE2-417	4
20	Spindle Bearings	HE2-411	8
21	Front Seal	HE2-412	4
22	Bearing Housing Shaft	HE2-503	4
23	Spiral Honing Wheel	HE2-7320	1Pr.
24	Spacer	HE4-100	1
25	Guard Disc	HE4-729	2

Replacement Parts and Supplies	
Drive Belt (2009 and later)	HE2-415-1
Drive Belt (2008 and earlier)	HE2-415
Driven Belt (4 required)	HE2-416 (1 Belt)
Diamond Dresser	HE2-701
60-Grit Straight Wheels	HE2-760
320-Grit Spiral Wheels	HE2-7320
White Sol Coolant	HZ-397
Grease Fitting Caps	HZ-470

Optional Equipment	
Cart	HZS-449
Casters 3" Swivel	HZS-471
Casters 3" Locking	HZS-472

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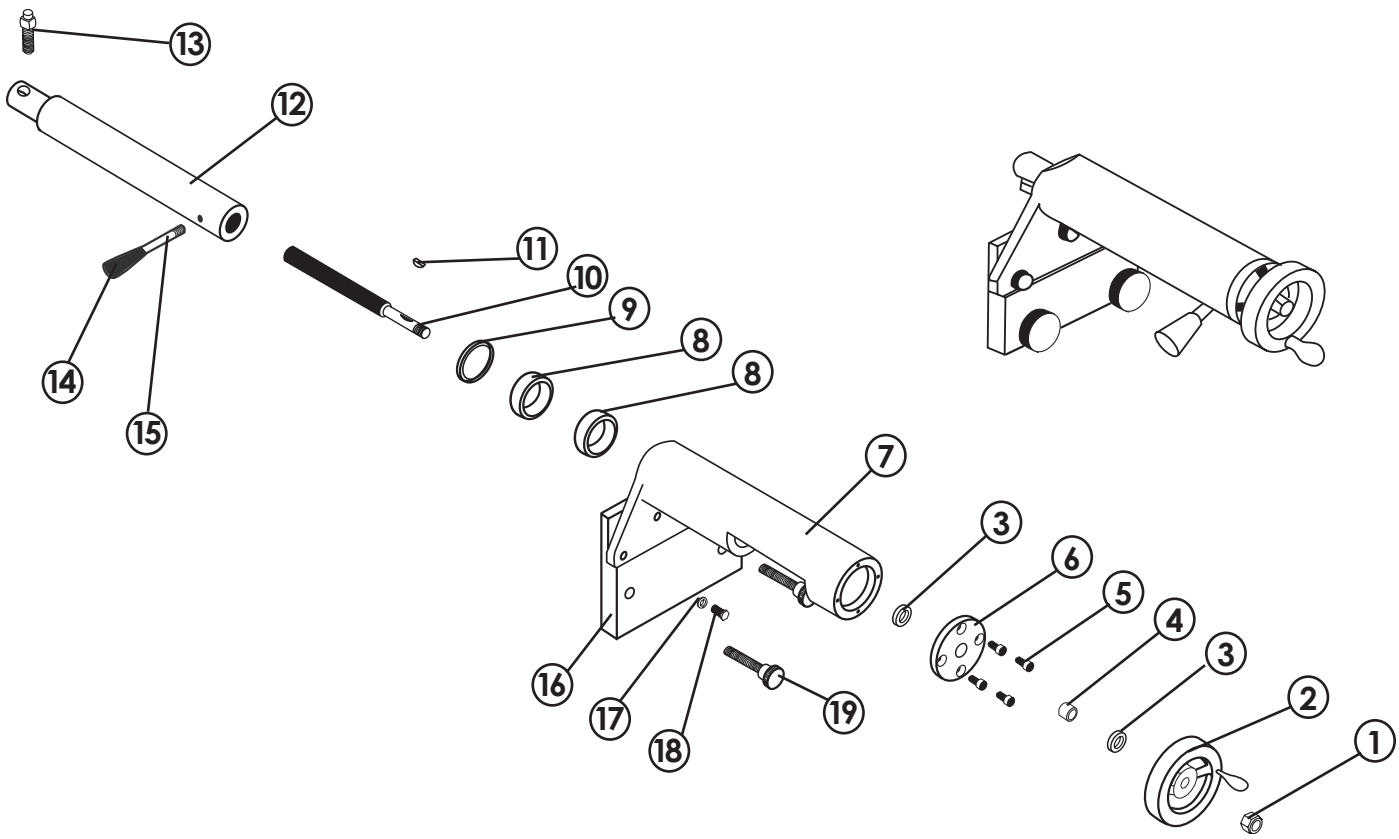
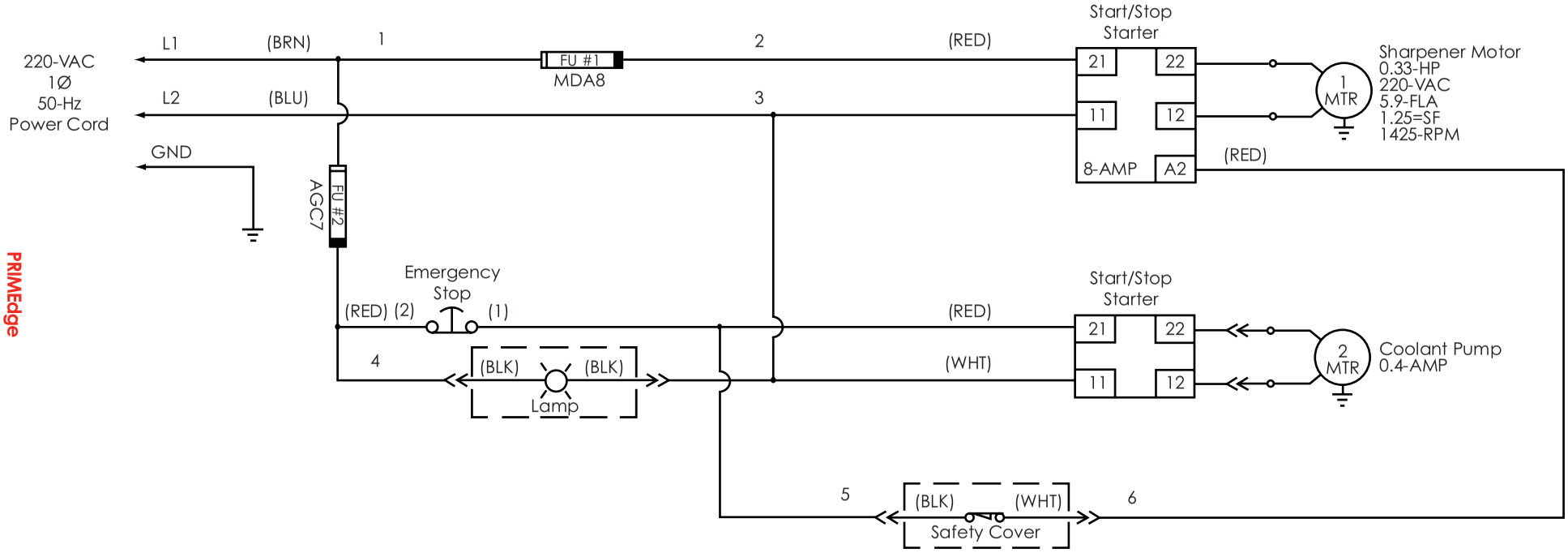
HE2 Dresser Exploded View



No.	Description	Part No.	Qty.
1	3/8" x 24 Nylon Lock Nut	**HZS-152**	1
2	Hand Wheel With Woodruff Keyway	**HZS-451**	1
3	Thrust Washer 3/4" O.D. x 3/8" I.D., Bronze	**HZS-151**	2
4	Bronze Bushing	**HZS-460**	1
5	#10-32 x 3/8" SHCS. Black	**HE7-102**	4
6	Dresser Rear Cap	**HE2-520**	1
7	Dresser Housing	**HE2-514**	1
8	Bronze Bushing/Dresser Housing	**HZS-461**	2
9	Dresser Seal	**HZS-454**	1
10	Dresser Feed Screw	**HZS-529**	1
11	#2 Woodruff Keyway	**HZS-153**	1
12	Dresser Shaft	**HE2-515**	1
13	Diamond Dresser	**HE2-701**	1
14	Dresser Guide Handle Knob	**HE2-419**	1
15	Dresser Guide Handle	**HE2-517**	1
16	Dresser Locating Block	**HE2-516**	1
17	5/16" Lock Washer Zinc Plated	**HZS-156**	3
18	5/16"-18 x 1" HHCS Zinc Plated	**HZ-104**	3
19	Dresser Mounting Screw	**HE2-418**	2

HE2 Knife Sharpening System

HE2-220V 1P, 50Hz



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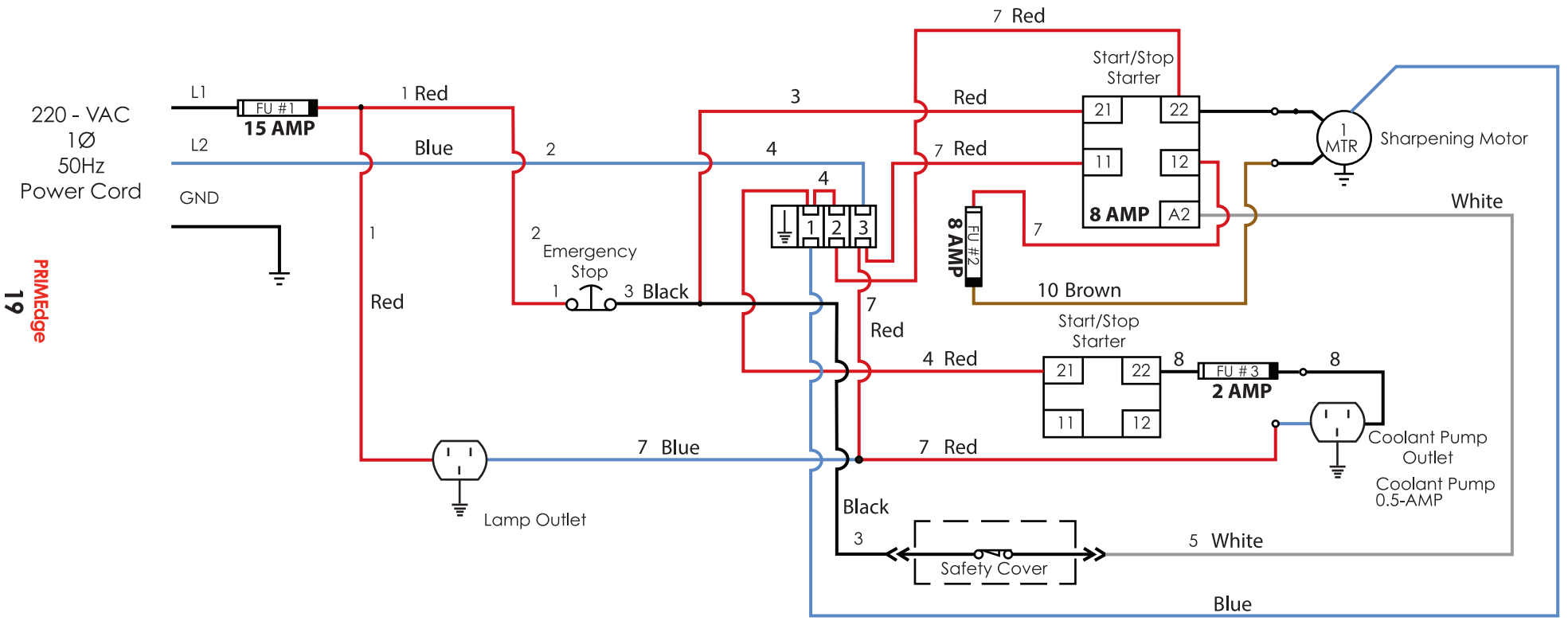
HE2 Sharpening System

HE2-220V 1P, 50Hz

Wiring Diagram for Machines Built After 04/01/2014



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Maintenance Frequency Schedule

The recommended maintenance procedures are important in helping to keep your **PRIMEdge HE2** in good operating condition. Your **HE2** represents a sizable investment and following the recommended maintenance schedule will give you many years of satisfactory use.

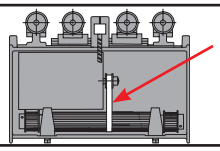
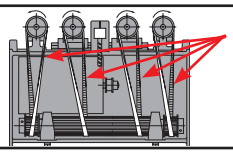
Item	Daily	Weekly	Monthly	Quarterly	Semi-Annually	As Required
Dress Wheels						▼
Change Coolant Fluid		▼				
Check Timing Belts		▼				
Change Timing Belts					▼	
Lubricate Wheel Crank						▼
Lubricate Slide Mechanism						▼
Lubricate Dresser Hand Wheel						▼
Lubricate Belt Pulleys						▼
Replace Spindle Bearings						▼
Replace Idler Pulley						▼
Replace Timing Pulleys						▼
Clean Outside Of Machine	▼					
Replace Diamond Dresser Screw						▼
Lubricate Casters & Caster Locks On Stand						▼

Trouble-Shooting

Problem	Causes and Remedies
Knife bounces on wheels when grinding	• Wheels are worn out of round and require dressing — Dress wheels. • Too much pressure applied when grinding, causing unevenness of wheel surface— Lighten up on pressure.
Coolant pump not pumping coolant	• Coolant pump clogged with grit — Remove the pump from the tank and pump clear water through it. Drain coolant tank and clean out grit. Clean coolant tank more often.
Honing wheels jump time and break	• Timing belt has stretched or broken, causing the wheels to jump time — Inspect timing belt more often and adjust tension as required. Replace timing belt every 6 months. Inspect wheel pulleys and be certain that they are tight on the shafts.
Using too many grinding wheels	• Dressing wheels too often — Only dress when required. • Putting too much pressure on knives when grinding— Lighten up on pressure. • Crushing wheels when dressing — Take less cut when dressing (.001" is maximum cut).
Motor overheating	• Running motor continuously for too long of a period — Give the motor a rest every hour for 5 to 10 minutes. • Putting too much pressure on knives when hollow grinding, causing excessive stress on the motor — Lighten up on pressure.

Recommended
HE2 Spare Parts

HE2 Knife Sharpening System

Qty.	Part No.	Description	
1 EA.	**HE2-415-1**	Drive belt 3/4 wide	
4 EA.	**HE2-416**	Driven belt	
1 EA.	**HE2-701**	Diamond dresser	
1 PR.	**HE2-760**	4" 60 grit straight stones/pair	
1 PR.	**HE2-7320**	320 grit spiral stones/pair	
1 GA.	**HZ-397-1**	Gallon of White Sol Coolant	

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