

Automatic Sharpener

**(Safety, Operation, Limitations,
Maintenance & Parts Manual)**

AGA

rev. S.00



Safety is our #1 concern! Read and understand all safety information and instructions before operating, setting up or maintaining this machine.

Form #141

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SECTION 1 SAFETY



This symbol calls your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions. This symbol accompanies a signal word. The word **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. **WARNING** suggests a potentially hazardous situation which, if not avoided, could result in death or serious injury. **CAUTION** refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury to persons or equipment. Read all safety instructions before operating this equipment and observe all safety warnings!



Warning stripes are placed on areas where a single decal would be insufficient. To avoid serious injury, keep out of the path of any equipment marked with warning stripes.

Read and observe all safety instructions before operating this equipment! Also read any additional manufacturer's manuals and observe any applicable safety instructions including dangers, warnings, and cautions.

Always be sure that all safety decals are clean and readable. Replace all damaged safety decals to prevent personal injury or damage to the equipment. Contact your local distributor, or call your Customer Service Representative to order more decals.

IMPORTANT! Always properly dispose of all by-products, including debris, coolant, oil, and filters.



DANGER! Make sure all guards and covers are in place and secured before operating the sharpener. Failure to do so may result in serious injury.



WARNING! Always wear gloves and eye protection when handling bandsaw blades. Changing blades is safest when done by one person! Keep all other persons away from area when coiling, carrying or changing a blade. Failure to do so may result in serious injury.

WARNING! Always wear eye protection when operating the sharpener. Failure to do so may result in serious injury.

WARNING! NEVER dress the wear area of the grinding wheel by using the dressing stone on the side surface of the wheel. Doing so could cause the wheel to explode, resulting in personal injury and/or machine damage.

WARNING! Always check the grinding wheel for cracks or chips before using it. NEVER use a cracked or chipped wheel. Doing so may result in severe personal injury and/or machine damage.



CAUTION! Remove the grinding wheel while transporting the Sharpener to prevent cracking or damage due to jarring or bumping of the unit.

CAUTION! Do not run the pump until it is under water. Dry operation will damage the pump!

CAUTION! Always turn off the converter box after you have finished sharpening for the day. LEAVING THE POWER ON COULD DAMAGE THE WATER PUMP!

CAUTION! Always be sure the tip of the back grind adjustment knob stays seated against the lift bracket. The grinding wheel will damage the blade if the tip becomes unseated.

SECTION 2 SHARPENER COMPONENTS

See Figure 2-1. The Sharpener component locations and their functions are listed below.

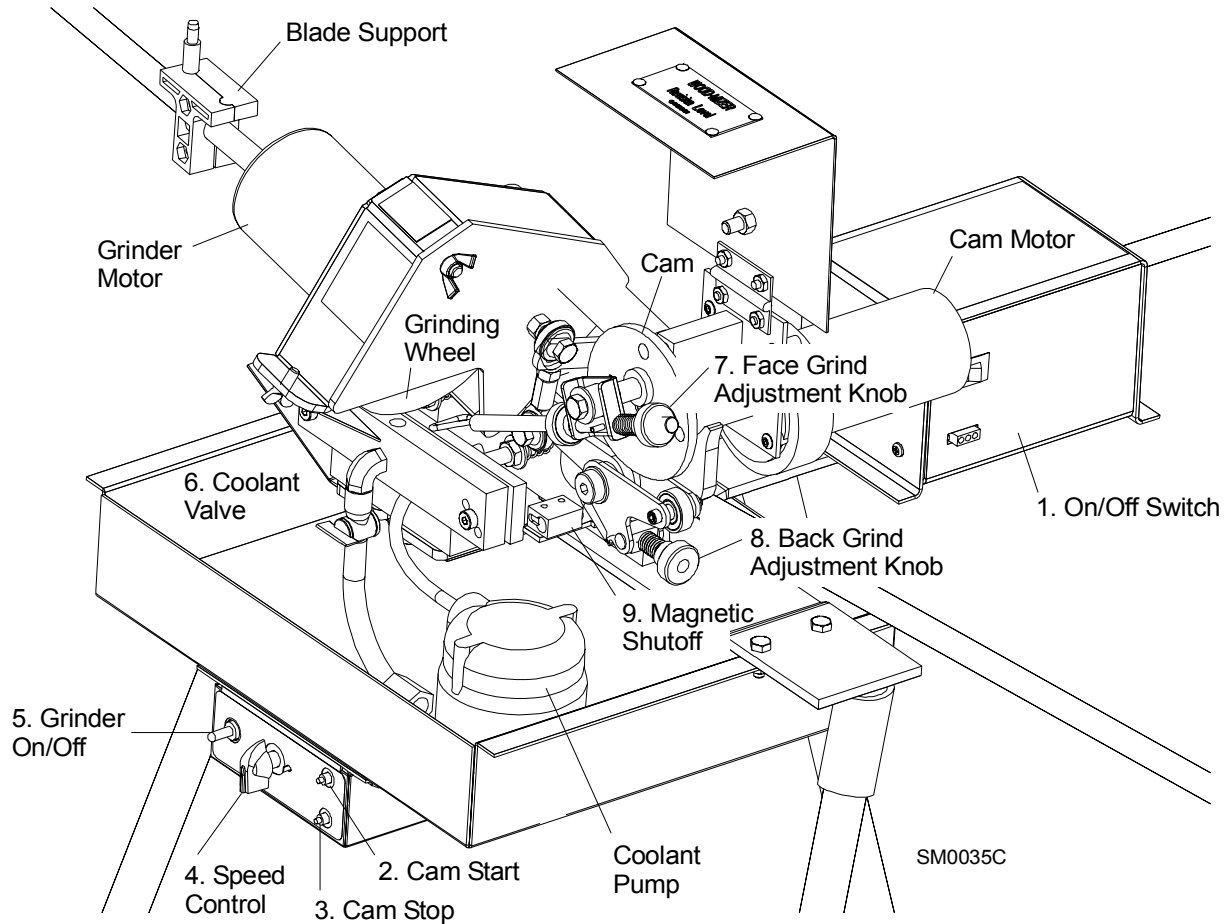


FIG. 2-1

2 Sharpener Components

1. Converter On/Off Switch. Controls power for entire unit.
2. Start Switch. Starts cam motor.
3. Stop Switch. Stops cam motor.
4. Feed Rate Dial. Controls cam speed.
5. Grinder On/Off Switch. Controls Sharpener motor (Start Switch must be pushed first).
6. Coolant Valve. Controls coolant flow.
7. Face Grind Adjustment Knob. Controls amount of metal ground from face of tooth.
8. Depth/Back Grind Adjustment Knob. Controls how far the grinding wheel comes down against the gullet and back side of teeth.
9. Magnetic Shut-off Sensor. Automatically turns off grinder and cam motors by sensing magnet placed on lower inside part of blade band.

NOTE: Circuit breakers (not shown) are located on the back of the control box and the left side of the converter box.

SECTION 3 ASSEMBLY

The Wood-Mizer Automatic Sharpener Assembly (LTAGA) is shipped preassembled. Additional assemblies and parts include:

- Two-height Stand Assembly
- Pump and Coolant
- Blade Support Arms
- Grinding Wheels
- Bag Assembly

Bag Assembly Contents	Qty.
Magnet, Orange Shutoff	3
Plug, Rubber Stop	1
Fitting, 3/8 x 1/4 FPT Hose	1
Roller, Blade Support	1
Stone, Wheel Dressing	1
Blade Support Half without Post	3
Blade Support Half with Post	3
Bolt, 1/4-20 x 1 1/2 Hex Head	6
Nut, 1/4-20 Wing	3
Washer, 1/4" Retaining	1
Nut, 1/4-20 Self-Locking	3
Template, 10° Angle	1
Template, 12.5° Angle	1
Template, 15° Angle	1

3.1 Stand Assembly

The stand assembly consists of one tray assembly, three long stand legs and three short stand legs. It may be set at sitting height or standing height.

See Figure 3-1. For sitting setup, insert the three long stand legs into the sockets in the top of the stand tray.

For a standing setup, add the three short stand legs to the bottom sockets of the stand tray.

Once you have assembled the stand, lift the sharpener assembly and place the underneath sockets of the mount on top of the three long stand legs.

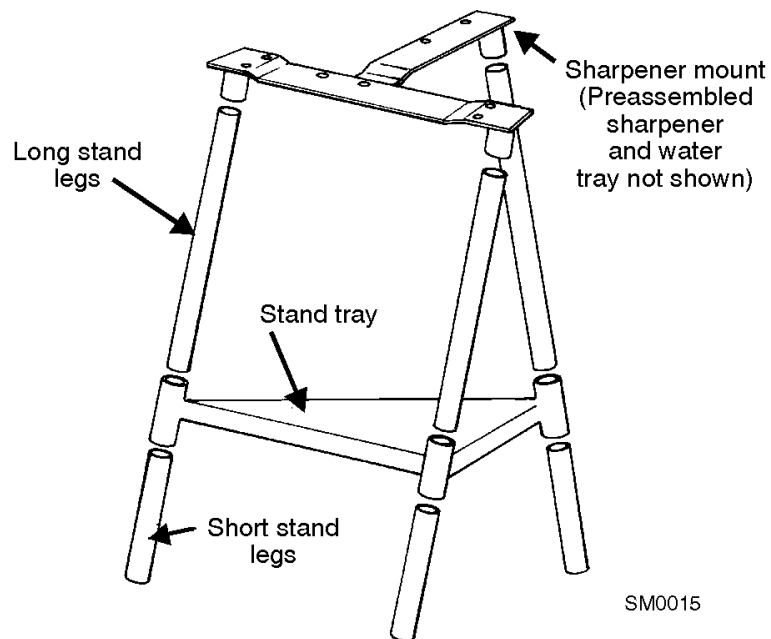



FIG. 3-1

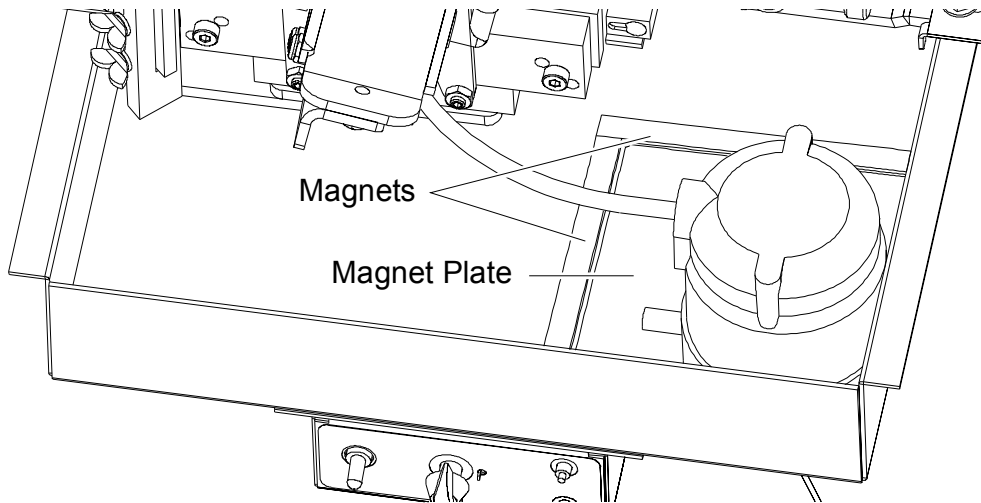
3.2 Coolant Installation

 **CAUTION!** Do not run the pump until it is under water. Dry operation will damage the pump!

The pump conducts coolant from the water tray through the Loc-line valve and up through an opening in the blade clamp assembly.

1. Plug the hole in the water tray with the rubber stop supplied in the bag assembly.

See Figure 3-2.



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FIG. 3

3

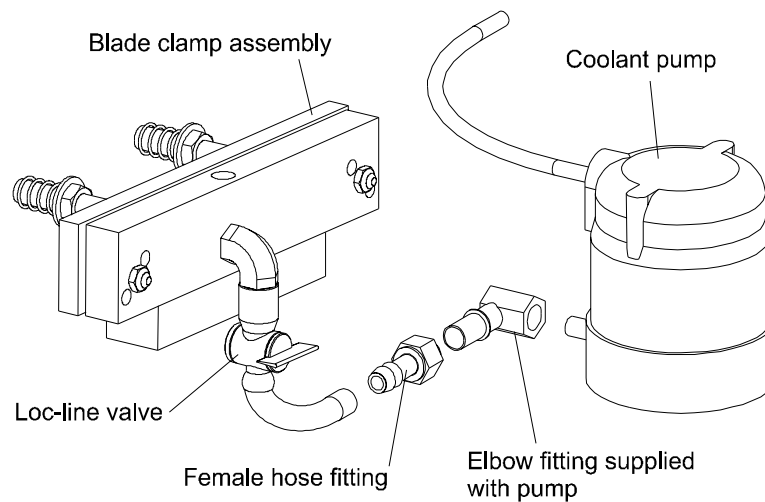
Assembly

Coolant Installation

2. Connect the elbow fitting supplied with the pump to the threaded pump outlet. Install the female hose fitting from the bag assembly to the pump elbow fitting. Lay the pump in the water tray.

See Figure 3-1.

3. Connect the hose from the Loc-line valve to the female hose fitting on the pump.



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FIG. 3-1

4. Plug the pump into the top cord on the converter box. Plug the converter into a grounded receptacle.
5. Coolant is pumped from the water tray through the Loc-line water valve to the grind area. Make sure the rubber stop is properly installed before filling the water tray.

Fill the tray with water to 1" (2.5 cm) from the top. Add about 1/6 bottle of coolant concentrate. (This makes a solution of approximately 1 part coolant to 50 parts water.) Add 50:1 solution as necessary to keep the level 1" from the top of the tray.

3.3 Electrical Installation

See Figure 3-2. Slide the control box into the slots under the water tray. Make electrical connections to the control box as shown.

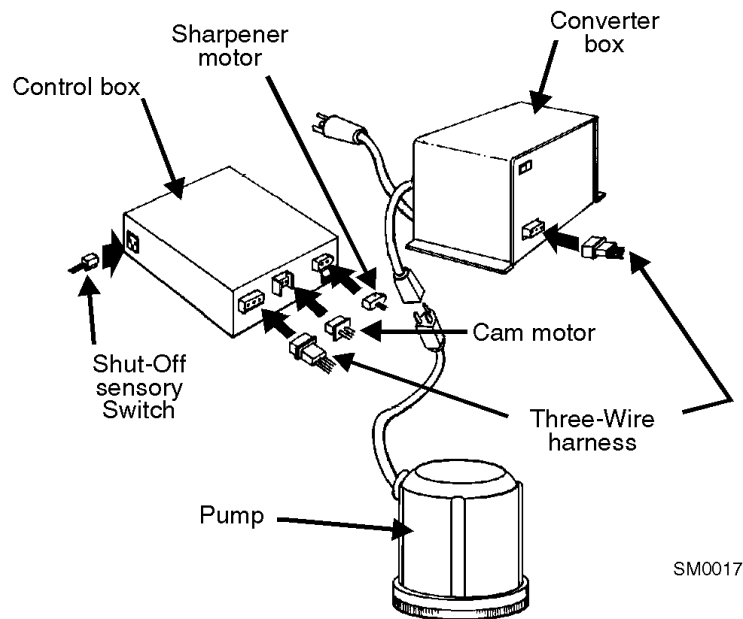


FIG. 3-2

The following is a test for the automatic control mechanisms of the sharpener.

1. Turn the CONVERTER switch on. The switch should light, showing that the converter is on.
2. Turn the LOC-LINE valve counterclockwise. This opens the valve and starts the water flow, showing that the pump is operating.
3. With the FEED RATE all the way down, push the START button on the control box. This turns on the cam motor.
4. Flip the GRINDER switch on. The sharpener motor should come on.
5. Turn up the FEED RATE dial. The cam assembly should rotate counterclockwise.

If a control does not work properly, check connections as shown. Also check the circuit breakers on the back of the control box and on the left side of the converter box. To reset a circuit breaker that has kicked out, push in and release. If a control still does not operate properly, contact your nearest service dealer for assistance.

3.4 Blade Support Installation

The blade support assembly includes three blade support arms and three blade support guide assemblies.

See Figure 3-3. Lubricate the threaded ends of the three blade support arms with grease. Insert a blade support arm in each of the three threaded holes located on the vertical plate of the sharpener.

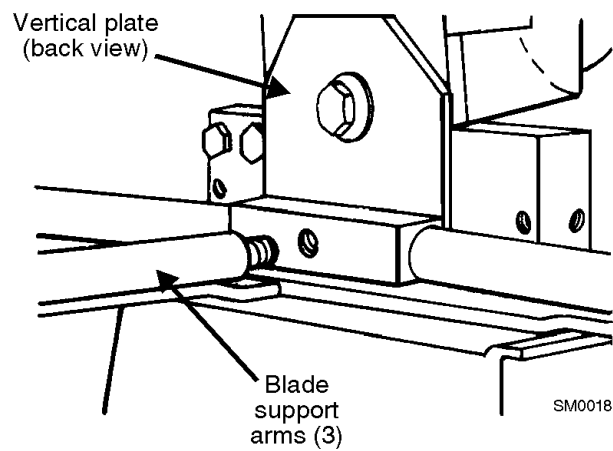


FIG. 3-3

See Figure 3-4. Each guide assembly includes a blade support with post, a blade support without post, two bolts, a keps nut and a wing nut. Join a blade support guide assembly onto the ends of the left and rear blade support arms with posts facing outward as shown. Bolt from the hexed side of the guide assembly. (These hex-shaped holes will keep the bolts from turning once in place.) Tighten the top bolts with the keps nuts. Tighten the bottom bolts with the wing nuts.

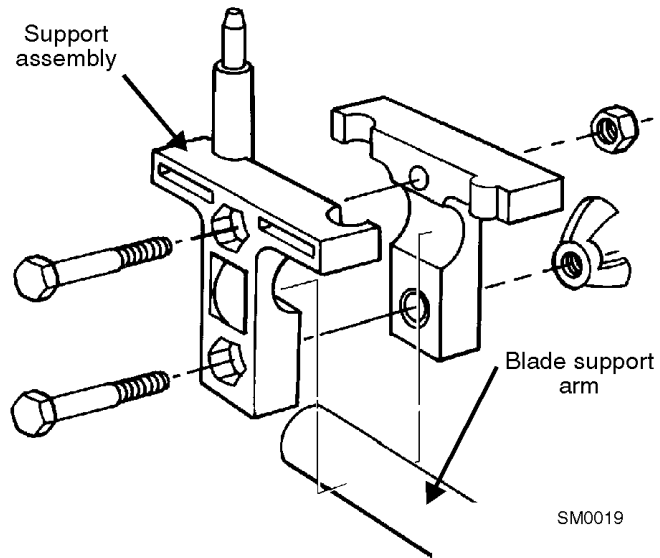


FIG. 3-4

3

Assembly

Blade Support Installation

See **Figure 3-5**. The guide assembly for the right support arm also includes a plastic roller and lock washer. Place the plastic roller and lock washer over the blade support post. Join the guide assembly onto the end of the blade support arm, post facing inward as shown. Continue assembly as above.

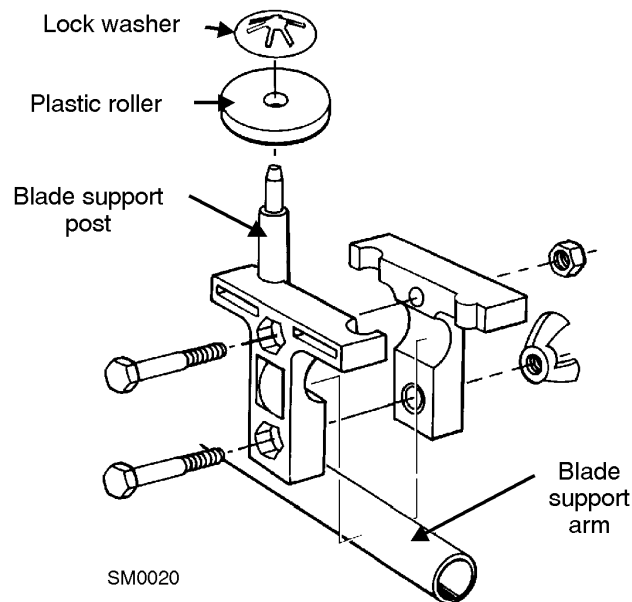


FIG. 3-5

Tilt the guide on the left blade support arm slightly backward, toward the rear of the sharpener, and adjust to 5" (12.5 cm) from the end of the arm. Tilt the guide on the rear blade support arm slightly to the right and adjust to 1" (2.5 cm) from the end of the arm. Tilt the guide on the right support arm slightly forward and adjust to 3" (7.5 cm) from the end of the arm.

3.5 Hook Angle Adjustment

A multi-angle template, which includes angles for 10, 12.5 and 15 degrees, is provided to check hook angle.

Note: Refer to the Wood-Mizer Blade Handbook for recommended hook angle specifications for your sawing application.

See Figure 3-6. To adjust hook angle, set the straight part of the template on the clamping fixture. Loosen the depth adjustment and/or the depth stop knob until the sharpener head rests on the template.

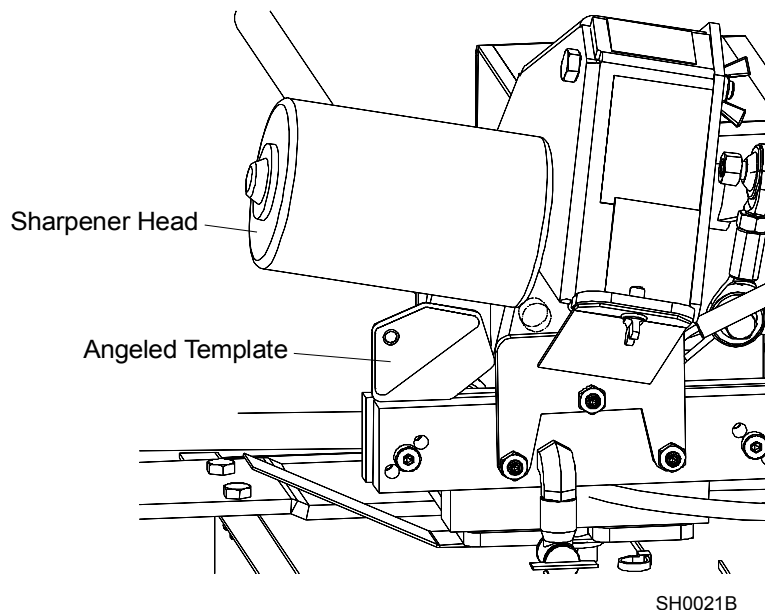


FIG. 3-6

3

Assembly

Hook Angle Adjustment

See Figure 3-7. Next, loosen the bolt in the vertical plate of the sharpener. Tip the sharpener head until you reach the desired angle. Hold the sharpener head in place while retightening the bolt in the vertical plate.

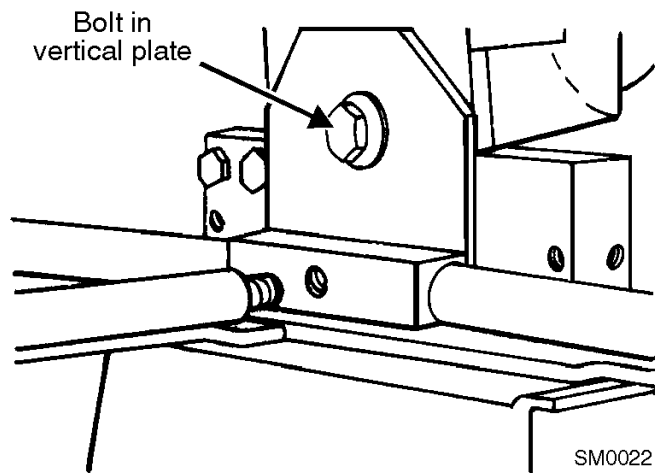


FIG. 3-7

3.6 Grinding Wheel Installation

For sharpening Wood-Mizer blades, select a 5" (12.5 cm) diameter, 1/4" (6.5 mm) wide grinding wheel with a 1/2" (12.5 mm) bore. Wheels approved for use with the Automatic Sharpener are available from Wood-Mizer. To order, call at **+48 63 2610233**. If your sharpener was purchased outside of the United States, contact your distributor for replacement parts.



WARNING! Always check the grinding wheel for cracks or chips before using it. NEVER use a cracked or chipped wheel. Doing so may result in severe personal injury and/or machine damage.

1. Before installing a new grinding wheel, push the START button on the control box and turn the FEED RATE dial up to rotate the cam. Continue operation of the cam until the sharpener head is at its lowest setting. Turn the FEED RATE all the way down and push the STOP button.
2. To install the grinding wheel, remove the wing nut on the right side cover of the sharpener head. Remove the cover.

3

Assembly

Grinding Wheel Installation

3. Remove the arbor nut and nylon washer from the motor shaft. Slide a grinding wheel onto the shaft. Reinstall the nylon washer. Reinstall the arbor nut with the machined, or grooved, side toward the grinding wheel. Hand tighten. Reinstall the cover and wing nut.

See Figure 3-8.



DANGER! Make sure all guards and covers are in place and secured before operating the sharpener. Failure to do so may result in serious injury.

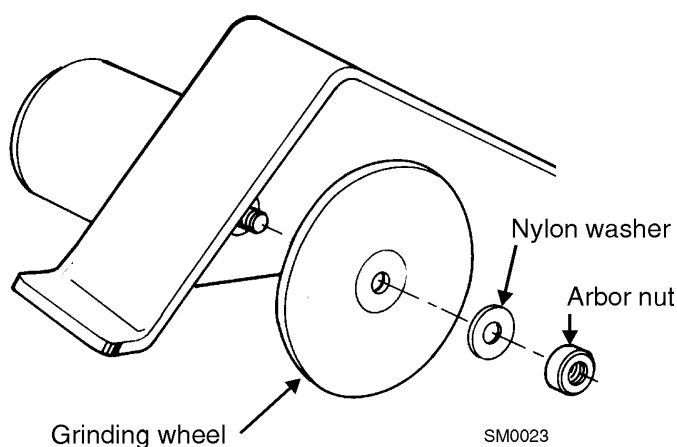


FIG. 3-8

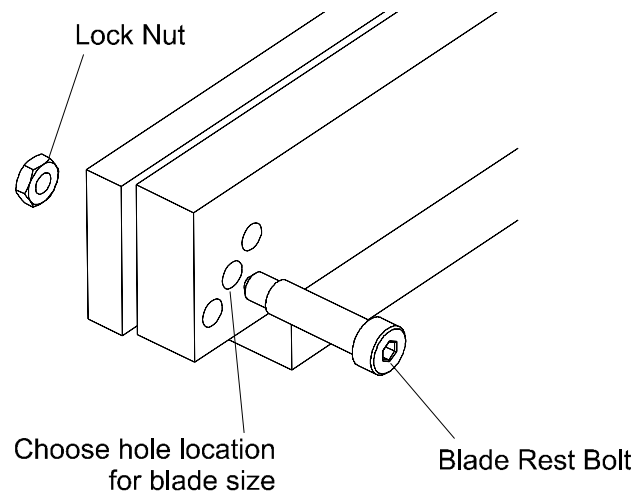
4. After installing the grinding wheel, hold the sharpener head up with your hand and turn the back/depth grind knob until you can lower the head and the grinding wheel will not contact the blade. Carefully lower the sharpener head.

3.7 Blade Rest Bolt Adjustment

The blade rest bolts can be adjusted for 1", 1 1/4", or 1 1/2" wide blades. Remove the nut on each rest bolt and move the bolts to one of the three sets of holes in the clamp plates.

Use the upper set of holes for 1" blades, the middle set of holes for 1 1/4" blades, and the bottom set of holes for 1 1/2" blades.

See Figure 3-9.



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FIG. 3-9

Replace the lock nuts. Tighten the nuts only until the back side of the nut is flush with the end of the bolt.

NOTE: After adjusting the blade rest bolts, flex the blade support arms up or down as necessary so the blade will remain level around the complete length of the blade.

3.8 Blade Installation

See **Figure 3-10**. Before installing a blade, push START and turn the FEED RATE dial until the cam pivot bolt is at the 2 o'clock position.

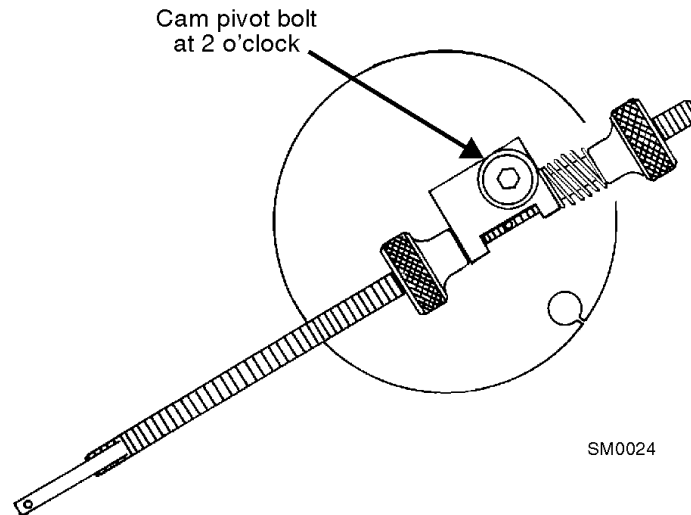


FIG. 3-10

Uncoil a blade and position above the three support assemblies around the sharpener. Check to be sure the teeth on the portion of blade that will be under the grinding wheel point to the right as you face the sharpener. If not, remove the blade and invert it.

See **Figure 3-11**. Position the blade inside the left and rear blade support posts.

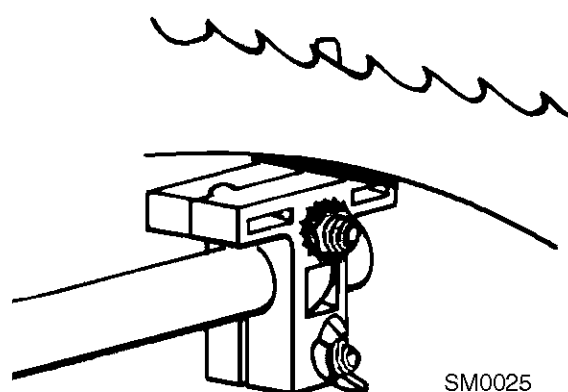


FIG. 3-11

See Figure 3-12. Position the blade outside the right blade guide wheel.

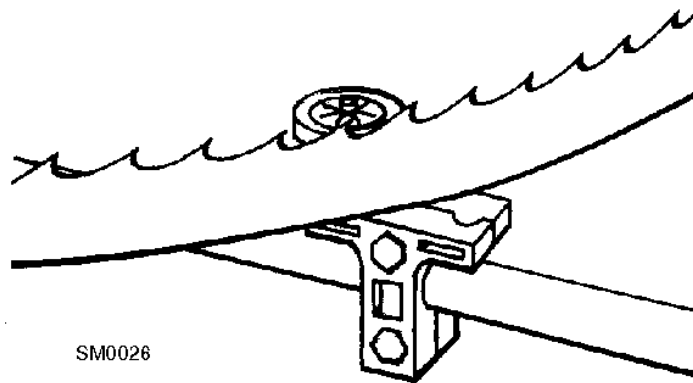


FIG. 3-12

Holding the blade with your left hand, lift the sharpener head with your right thumb and the indexing arm with your right fingers (in that order). Press the blade between the clamping plates. Lower the indexing arm, then lower the sharpener head. Engage the blade clamping fixture.

Make final adjustments to blade support arms and guide assemblies to assure the blade band rests evenly on both the right and left hardened dowel pins located in the blade clamp assembly. The blade should not touch the bottom of either side guide assembly. All three guide assemblies should lean slightly in the direction the blade travels through them.

Bend the blade wiper on the left side of the sharpener so that it touches the blade. The wiper will wipe coolant from the blade into the water tray so it does not drip on the floor.

3.9 Grinding Wheel Shape



WARNING! Always wear eye protection when operating the sharpener. Failure to do so may result in serious injury.

The following section explains how to dress a new grinding wheel and how to maintain the shape of the wheel as you use it to sharpen blades.

Dressing A New Wheel

See **Figure 3-13**. There are three steps in dressing the grinding wheel. They are:

1. Dress a small radius on the left corner.
2. Dress the right corner at the tooth back angle.
3. Blend the back and bottom angles.

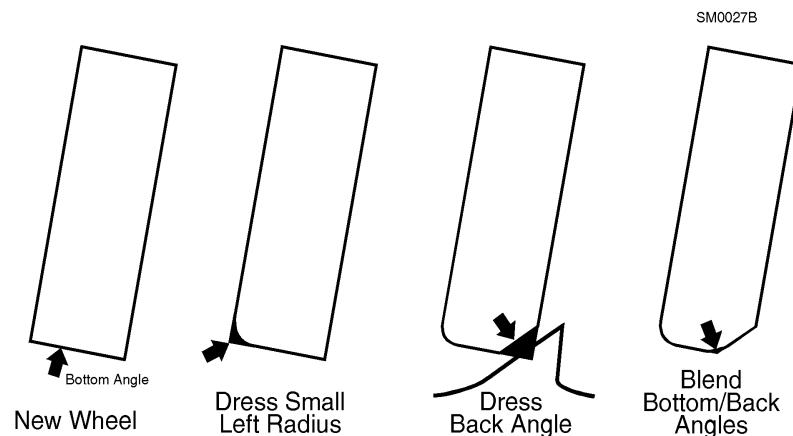


FIG. 3-13

To dress the wheel, turn the converter switch on, push the START button on the control box. Turn the grinder switch to ON to start the grinding wheel spinning.

NOTE: Keep the FEED RATE dial turned all the way down to prevent the cam from moving while you dress the grinding wheel.

Use a flat side of the provided dressing stone to shape the wheel as follows:

First, dress a small radius on the left corner. Blend the radius with the bottom of the wheel.

See **Figure 3-14**. Dress the right 1/3 of the wheel at the same angle as the back of the tooth.

The shape of the wheel will be refined after the sharpener has been adjusted to grind the blade.

Turn the grinder switch to OFF and push the STOP button on the control box.

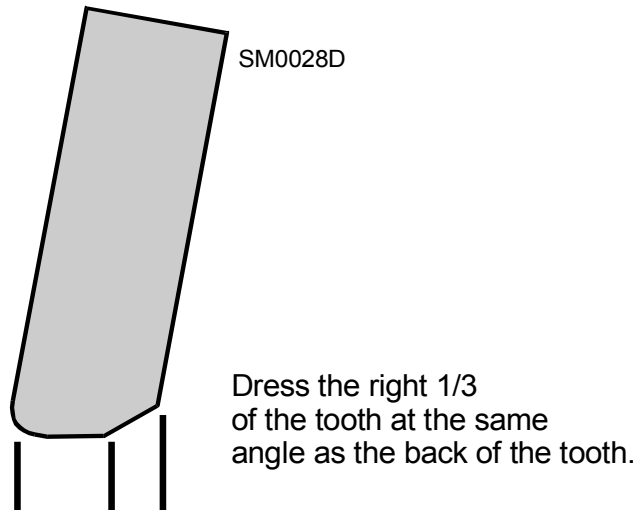


FIG. 3-14

Maintaining Wheel Shape

See **Figure 3-15**. The shape at which you have dressed the wheel must be maintained. It is especially important to maintain the small radius on the left corner of the wheel. This is the section that wears quickest. As the radius increases during sharpening, it starts to grind into the tooth face and leaves little or no hook angle in the tooth.

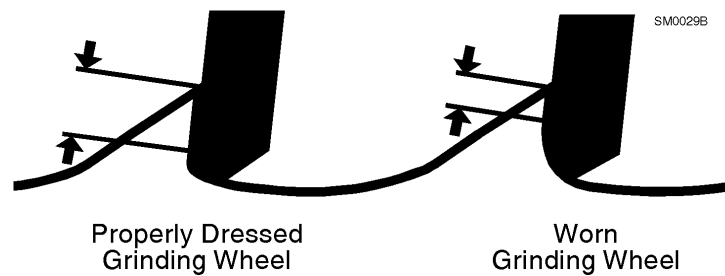


FIG. 3-15

If the radius becomes too large, redress the grinding wheel by redressing the bottom angle. Then, if necessary, redress the left radius and the back angle. Blend the left radius and right back angle with the bottom angle.



WARNING! NEVER dress the wear area of the grinding wheel by using the dressing stone on the side surface of the wheel. Doing so could cause the wheel to explode, resulting in personal injury and/or machine damage.

NOTE: As the wheel becomes smaller in diameter, it has less surface area to grind with and will wear down more quickly. Check the wheel regularly and redress as necessary.

IMPORTANT: When sharpening a blade, particles can become lodged in the grinding wheel that can burn or groove the gullet of the blade. Burns or grooves in the gullet create microscopic stress fractures which will eventually cause the blade to break prematurely. Lightly dress the wheel to remove lodged particles and prevent the wheel from burning or grooving the blade.

SECTION 4 SHARPENER ADJUSTMENTS

4.1 Overview Of Adjustments

At this point in the instructions, you should have your sharpener completely assembled and operational. The sharpener head should be set at the proper hook angle.

At this point in the instructions, you should have:

- your sharpener completely assembled and operational.
- the sharpener head set at the proper angle.
- a blade installed around the supports and clamped firmly.
- a grinding wheel installed.

You are ready to proceed to face and depth/back grind adjustments. To make these adjustments, inspect the blade carefully with proper lighting.

4.2 Face Grind and Depth/Back Grind Adjustments

It is important to know that face grind and depth/back grind adjustments are related. Adjusting one WILL affect the other. By design, face grind increases as tooth depth increases. A light face grind at the tip of the tooth becomes heavier as the grinding wheel drops to the lowest point in the grinding process. (This is more noticeable on tall tooth profiles than on short tooth profiles.) Adjusting face grind after adjusting depth grind will change the amount of grind on the back side of the tooth.

As you operate the sharpener, the cam will rotate causing the index arm to contact a tooth and push it to a position under the grinding wheel. The cam will also raise and lower the grinder for the indexing process.

CAUTION! When indexing the blade during setup, adjust or manually lift the Sharpener head up to prevent the CBN wheel from dragging along the blade. Failure to do so will result in damage to the CBN wheel surface and cause premature wheel wear.

See Figure 4-1. The index arm can be adjusted to leave the tooth closer to or further from the grinding wheel so the tooth face is ground lighter or heavier.

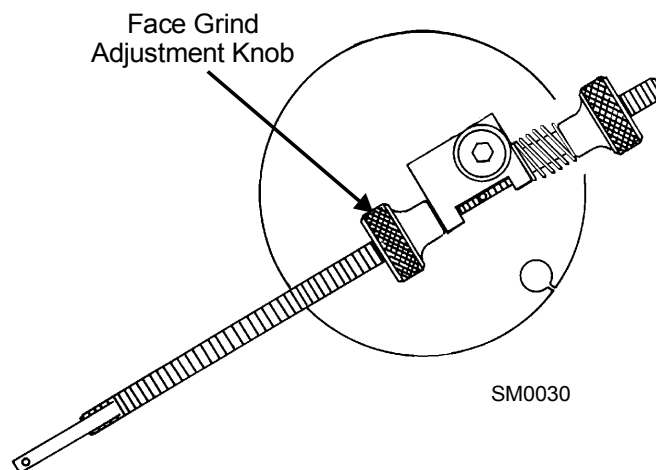


FIG. 4-1

See Figure 4-2. The depth/back grind knob can be adjusted to grind the tooth gullet and back at the desired depth.

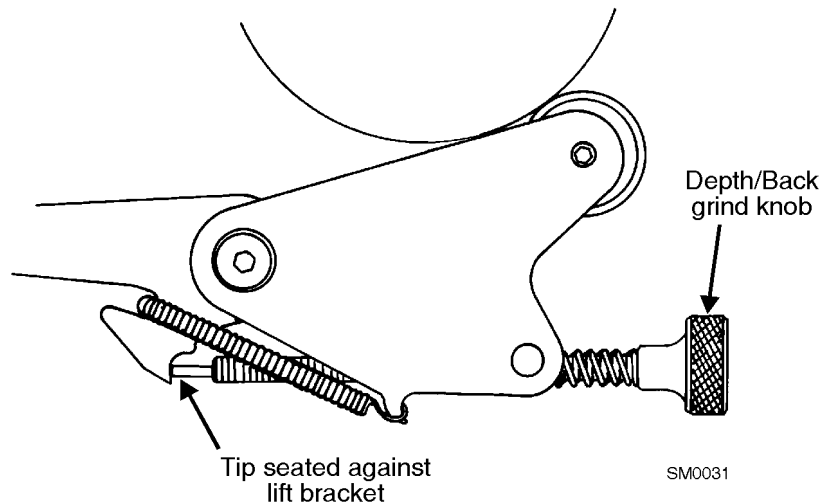


FIG. 4-2

To set up a blade for grinding:

1. Adjust face grind AND depth/back grind so that the wheel is close to, but not contacting, the tooth. Spin the wheel by hand to confirm there is no contact with the tooth.

To adjust face grind if the face grind is too light, turn the face grind adjustment knob out away from the other knob. If the face grind is too heavy, turn the adjustment knob in toward the other knob.

To adjust depth/back grind, turn the depth/back grind knob in to raise the wheel and turn the knob out to lower the wheel.

CAUTION! Always be sure the tip of the back grind adjustment knob stays seated against the lift bracket. The grinding wheel will damage the blade if the tip becomes unseated.

2. Confirm the grinding wheel is not touching the blade, then turn the grinder on by pushing the START button. Slowly increase the FEED RATE to index the blade.
3. Adjust the indexing arm to lightly grind the face of the tooth.

4

Sharpener Adjustments

Face Grind and Depth/Back Grind Adjustments

4. Slowly advance the cam until the cam is at its lowest point. **NOTE:** The cam has a “double grind” configuration. The cam will lower the head for grinding, lift slightly, then drop back down for light grind. This “double grind” helps smooth out the gullet and also helps to break the burr from the back of the blade.
5. Index the blade a half rotation and inspect the gullet. Confirm the face of the tooth and gullet have been completely ground. Make adjustments if necessary.
6. Sharpen the next tooth, then index a half turn. Inspect again, confirming the tooth is sharp and you are not removing any more material than is necessary from the face of the tooth. Make adjustments if necessary.

Before sharpening the blade, be sure to turn on the oil flow. The grinding wheel requires lubrication for proper operation and maximum wheel life. *See Section 4 Sharpener Operation.*

4.3 Sharpener Alignment

Use the LTAGA alignment tool as necessary to achieve accurate alignment between the blade clamp and the grinding wheel.

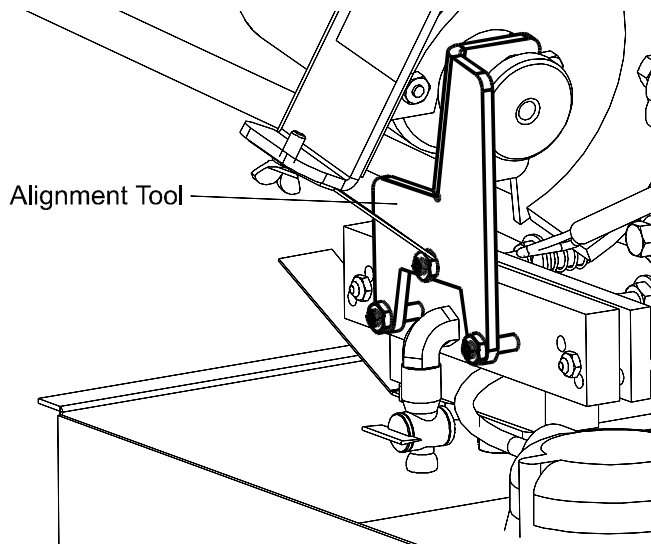


IMPORTANT! Do not attempt to adjust the tool gauge points. They have been pre-calibrated at the factory to ensure accurate alignment results.

1. Make sure the grinder motor is OFF. Cycle the cam until the grinding wheel is at the tip of the tooth (about to begin face grind).
2. Remove the grinding wheel cover and sharpener arbor nut. Remove the grinding wheel.
3. Install the alignment tool to the grinder motor shaft as shown.

See Figure 4-3. Position the tool so all three gauge points are in line with the front clamp plate.

4. Install (2) 1/2" SAE flat washers to the motor shaft. Secure the alignment tool and spacer washers in position with the sharpener arbor nut.



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FIG. 4-3

5. Use a 3/4" wrench to loosen the bottom clamp adjustment nut.
6. Position the clamp assembly so the front clamp plate touches all three tool gauge points. Secure in position by tightening the clamp adjustment nut.

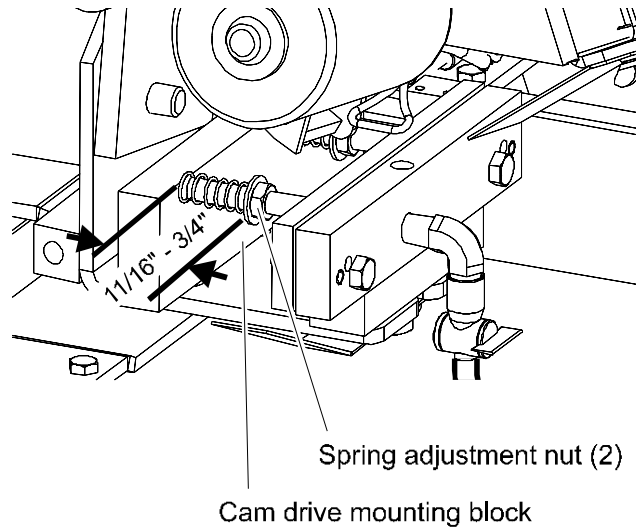
4

Sharpener Adjustments

Sharpener Alignment

7. Use the spring adjustment nuts (one nut on each of the two threaded clamp studs) to adjust the springs until they are compressed to $11/16'' - 3/4''$.

See Figure 4-4.



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FIG. 4-4

8. Remove the arbor nut and alignment tool.
9. Reinstall the grinding wheel and secure in place with the arbor nut.
10. Reinstall the grinding wheel cover.

SECTION 5 SHARPENER OPERATION

5.1 Operation



WARNING! Always wear eye protection when operating the sharpener. Failure to do so may result in serious injury.

Now that the adjustments have been made for a light face, gullet, and back grind, you are ready to sharpen the blade.

1. Push the start button, open the coolant valve, and turn the grinder switch on. Slowly increase the feed rate to begin the blade moving.
2. As a final check before sharpening the blade, grind a tooth and check its shape. Push the stop button, close the coolant valve, and turn the grinder off. Check the radius, tooth height and that the tip is completely sharp. Make adjustments with the face and back/depth grind knobs or redress the wheel to provide the desired tooth shape.
3. Adjust the face grind so the entire tooth face is lightly ground from the tip to the base of the tooth.
4. Adjust the depth/back grind knob so enough gullet is removed to provide the desired tooth height.
5. Dress the back angle of the wheel larger to lighten the back grind. Grind enough from the back of the tooth to sharpen the entire tip of the tooth.
6. Push the start button, open the coolant valve, and turn the grinder switch on. Increase the feed rate to a moderate speed. How fast you can grind will be determined by how much material you are removing from the blade.

5 Sharpener Operation

Operation

To reduce the risk of premature blade fatigue from hairline cracks, it is important to thoroughly clean the gullet during sharpening. It may be necessary to lightly grind the blade twice (using a light face, back and gullet grind each time) to thoroughly clean the gullet.

Also, if a heavy grind is required, it is best to go around the blade lightly twice rather than try to grind heavily once. If you try to grind too heavy, the breaker at the back of the control box will pop. Wait 15 seconds and push the breaker in to reset.

Any adjustments of the depth/back grind knob will affect both gullet and back grind. If you use the knob to lower the wheel for more gullet grind, you will have to dress more from the back angle of the wheel to prevent grinding the back of the teeth too heavy. If you dress the bottom angle of the wheel larger for less back grind, you will have to readjust the gullet grind with the depth/back grind knob.

5.2 Magnetic Shut-off

See **Figure 5-1**. The shut-off sensor is located to the right of the blade clamp assembly. When passed over by a magnet, it automatically shuts down the grinder and cam motors of the LTAGA.

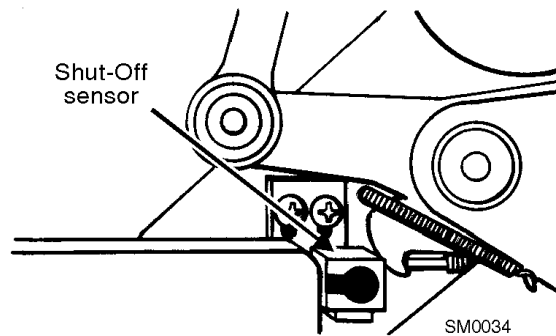


FIG. 5-1

To install, take an orange-painted magnet from the bag assembly. Place the black side of the magnet against the bottom edge of the blade on the inside of the fifth face-ground tooth. After the sensor bracket has shut off the cam and grinder motors, flip the grinder switch into the off position. Remove the magnet.

5.3 Blade Removal

Blade removal is similar to blade installation. First, turn the feed rate dial all the way down. Then push the start button. Turn the feed rate dial until the cam pivot bolt is at the 2 o'clock position.

Lift the sharpener head with your right thumb and the indexing arm with your right fingers (in that order). Use your left hand to remove the blade from the sharpener. Lower the indexing arm, then lower the sharpener head.

Lightly dress the grinding wheel to remove particles that may have embedded in the wheel.

Turn off the converter switch.



CAUTION! Always turn off the converter box after you have finished sharpening for the day. **LEAVING THE POWER ON COULD DAMAGE THE WATER PUMP!**

SECTION 6 REPLACEMENT PARTS

6.1 How To Use The Parts List

- Use the index above to locate the assembly that contains the part you need.
- Go to the appropriate section and locate the part in the illustration.
- Use the number pointing to the part to locate the correct part number and description in the table.
- Parts shown indented under another part are included with that part.
- Parts marked with a diamond (◆) are only available in the assembly listed above the part.

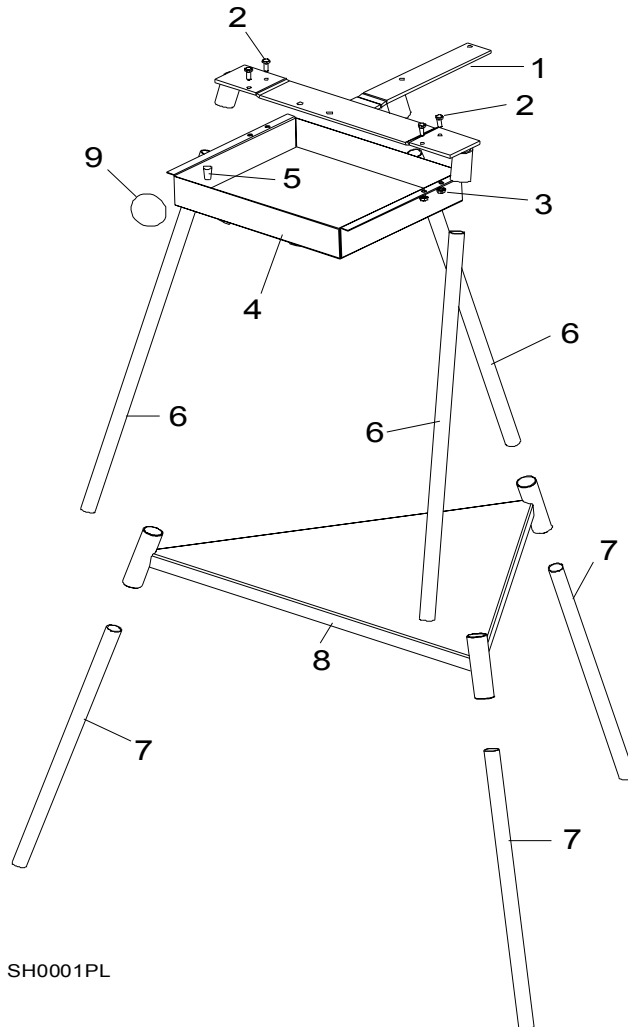
See the sample table below. Sample Part #A01111 includes part F02222-2 and subassembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. The diamond (◆) indicates that S04444-4 is not available except in subassembly A03333. Subassembly K05555 includes parts M06666 and F07777-77. The diamond (◆) indicates M06666 is not available except in subassembly K05555.

6.2 Sample Assembly				
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	Sample Assembly, Complete (Includes All Indented Parts Below)	A01111	1	
7	Sample Part	F02222-22	1	
	Sample Subassembly (Includes All Indented Parts Below)	A03333	1	
8	Sample Part (◆ Indicates Part Is Only Available With A03333)	S04444-4	1	◆
	Sample Subassembly (Includes All Indented Parts Below)	K05555	1	
9	Sample Part (◆ Indicates Part Is Only Available With K05555)	M06666	2	◆
10	Sample Part	F07777-77	1	

To Order Parts:

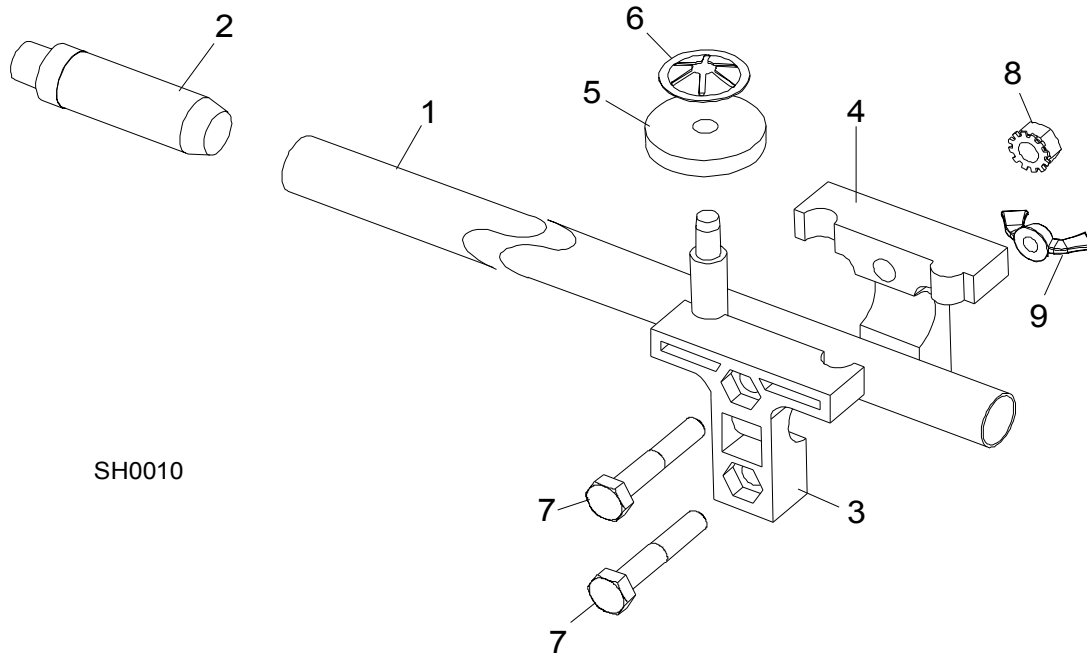
- From the continental U.S., call our toll-free Parts hotline at **1-800-448-7881**. From Europe call our European Headquarters and Manufacturing Facility in Kolo, Poland at **+48-63-2453233** or **+48-3912-1319**. Have your customer number, vehicle identification number, and part numbers ready when you call.
- From other international locations, contact the Wood-Mizer distributor in your area for parts.

6.3 Stand Assembly



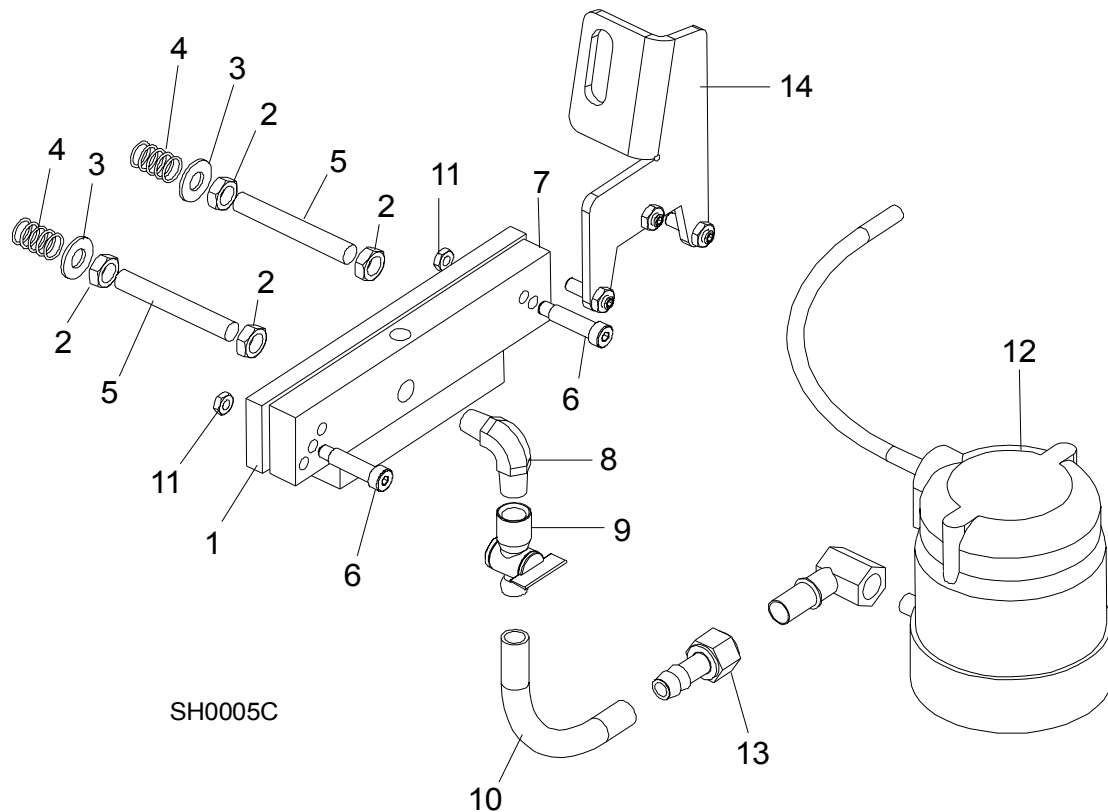
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.
1	BRACKET, AUTOMATIC SHARPENER MOUNTING	W09766	1
2	BOLT, 1/4-20 X 3/4" HEX HEAD FULL THREAD	F05005-1	6
3	NUT, 1/4-20 SELF-LOCKING	F05010-9	6
4	TRAY, WATER COOLANT	W09769	1
5	PLUG, RUBBER WATER TRAY	P09812	1
6	LEG, SHARPENER STAND LONG	S09781	3
7	LEG, SHARPENER STAND SHORT	S09782	3
8	TRAY, BOTTOM SHARPENER STAND	W09778	1
9	DECAL, EYE PROTECTION WARNING, SMALL	S12004G-1	1

6.4 Blade Support Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.	
	TUBE ASSEMBLY, BLADE SUPPORT	A04550	3	
1	Tube, Blade Support	M04551	1	◆
2	Plug, Blade Support Tube	P04552	1	◆
	GUIDE KIT, BLADE SUPPORT	A10617	1	
3	Guide w/Post, Blade Support	S10611	3	
4	Guide w/o Post, Blade Support	S10612	3	
5	Roller, Blade Support	S10539	1	
6	Washer, 1/4" Retainer	P10614	1	
7	Bolt, 1/4-20 x 1 1/2" Hex Head Grade 2	F05005-5	6	
8	Nut, 1/4-20 Self-Locking	F05010-9	3	
9	Nut, 1/4-20 Wing	F05010-13	3	
	Instruction Sheet, Blade Support Guide Assembly	A10617-274	1	

6.5 Clamp & Coolant System



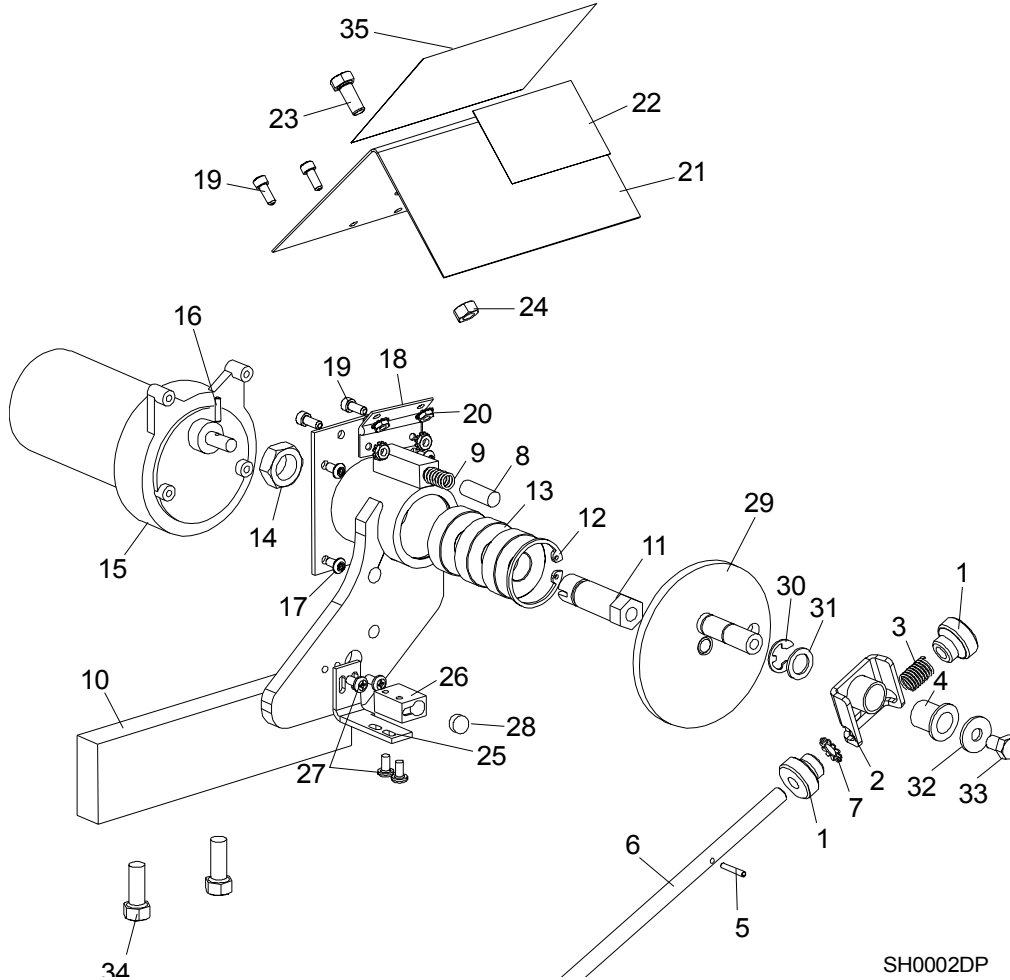
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.	
	CLAMP ASSEMBLY, LTAGA WITH INSTRUCTIONS	010654	1	
	Clamp Assembly, LTAGA	A10653	1	◆
1	Plate, AGA Moving Clamp	S10652	1	◆
2	Nut, 3/8-24 UNC Hex Jam	F05010-22	4	
3	Washer, 3/8 Flat	F05011-3	2	
4	Spring, Clamp Handle LC-067GH-4SS	P09818	2	
5	Stud, 3/8-24 x 2 5/8" Threaded Rod	010658-1	2	
6	Bolt, #10-24 x 1" Socket Head Hardened Shoulder	010664	2	
7	Plate, AGA Fixed Clamp	W10650	1	◆
8	Fitting, 1/4" NPT Elbow	P09140	1	
9	Fitting, 1/4" Loc-Line Valve	P09835	1	
10	Hose, Coolant Pump	S10566	1	
11	Nut, #10-24 Hex Lock	F05010-42	2	
	Instruction Sheet, LTAGA Clamp Assembly Replacement	010654-585	1	
12	PUMP, AGA COOLANT	P09836	1	

13	FITTING, 1/4" NPT X 3/8" TUBE	P04688	1	
	TOOL, ALIGNMENT KIT	010706	1	
14	Tool, Alignment	010722	1	◆

6 Replacement Parts

Cam Index Assembly

6.6 Cam Index Assembly



SH0002DP

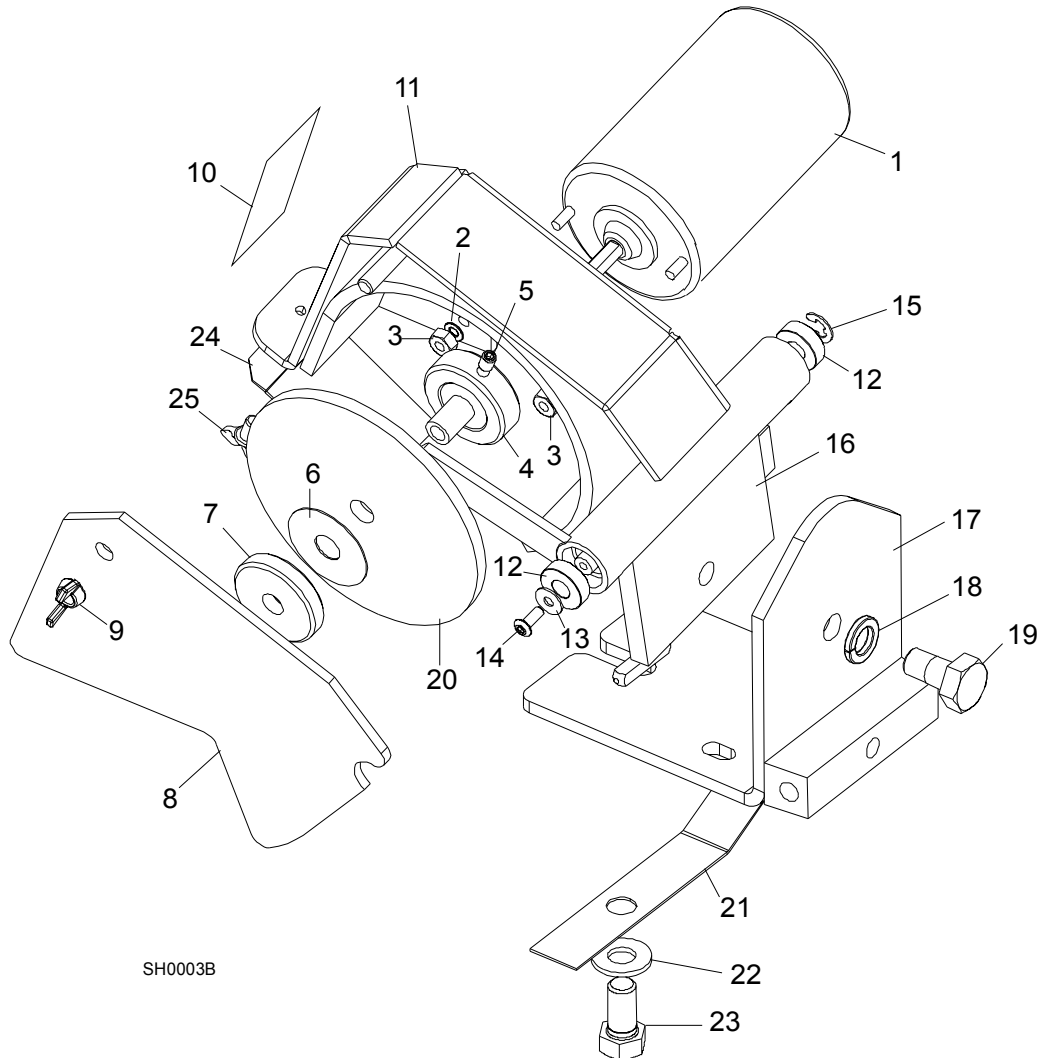
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.
	ARM ASSEMBLY, CAM INDEX	A09821	1
1	Knob, Index Arm Adjustment	S09733	2
2	Adjustment Weldment, Pawl	010702	1
3	Spring, Index Arm LC-045G-7SS	P09816	1
4	Bushing, 3/4" Long Flanged	004653	1
5	Pin, 1/8" x 3/4" Roll	F05012-6	1
6	Arm Weldment, Cam Index	W09763	1
7	Washer, 3/8" Lock	F05011-36	1
8	ROD, CAM BRAKE	S10663	1
9	SPRING, CAM BRAKE	P06460	1
	MOUNT ASSEMBLY, CAM MOTOR	A10690	1
10	Mount Weldment, Cam Motor	W10685	1
11	Shaft, Cam Drive	S09734	1
12	Ring, 1.575" I.D. Retaining	F04254-4	1
13	Bearing, 6203-2NSL 17mm	P06030-2	3
14	Nut, 5/8-18 Jam	F05010-11	1

	MOTOR ASSEMBLY, AGA CAM DRIVE	A10365	1	
15	Motor, 53:1 Gear	P09698-1	1	◆
	Housing, Klauber Motor End	P12756	1	
	Gear Kit, Klauber Motor Replacement	P12569	1	
	Brush Kit, Gear Motor Replacement	P12800	1	
	Shaft Kit, Klauber Gear Motor Replacement	009695	1	
	Connector, 14 Gauge Butt	F04875-1	2	
16	Pin, 1/8" x 9/16" Dowel	S10528	1	
17	Screw, #10-32 x 1/2" Button Head	F05004-56	4	
18	HINGE, 2" CAM COVER	P09800	1	
19	SCREW, #10-24 X 1/2" SOCKET HEAD	F05004-26	4	
20	NUT, #10-24 SELF-LOCKING	F05010-14	4	
21	COVER, AGA CAM	S09811	1	
22	DECAL, WARNING	S10692	1	
23	BOLT, 5/16-18 X 3/4" HEX HEAD GRADE 2	F05006-5	1	
24	NUT, 5/16-18 HEX	F05010-17	1	
25	BRACKET, MAGNETIC SHUTOFF SWITCH MOUNT	S09838	1	
26	SWITCH, MAGNETIC SHUTOFF	A10514	1	
27	SCREW, #10-24 X 3/8" PHILLIPS HEAD	F05004-3	4	
28	MAGNET, ORANGE SHUTOFF	S10519-1	3	
	REPLACEMENT KIT, 10/30 CAM	010635	1	
29	Cam Weldment, AGA Index 10/30	010634	1	◆
30	Clip, 1/2" E	P22342	1	
31	Washer, .5" x .75" x .62" Nylon	P05251-1	1	
	Instruction Sheet, Cam Replacement	LTAGA-214	1	◆
32	WASHER, 5/16" STANDARD FLAT	F05011-6	1	
33	BOLT, 5/16-18 X 1/2" HEX HEAD GRADE 5	F05006-15	1	
34	BOLT, 3/8-16 X 1" HEX HEAD	F05005-7	2	
	WRENCH, ROUTER	P07032	1	
35	DECAL, GENERAL WARNING "!"	086362	1	

6 Replacement Parts

Grinder Assembly

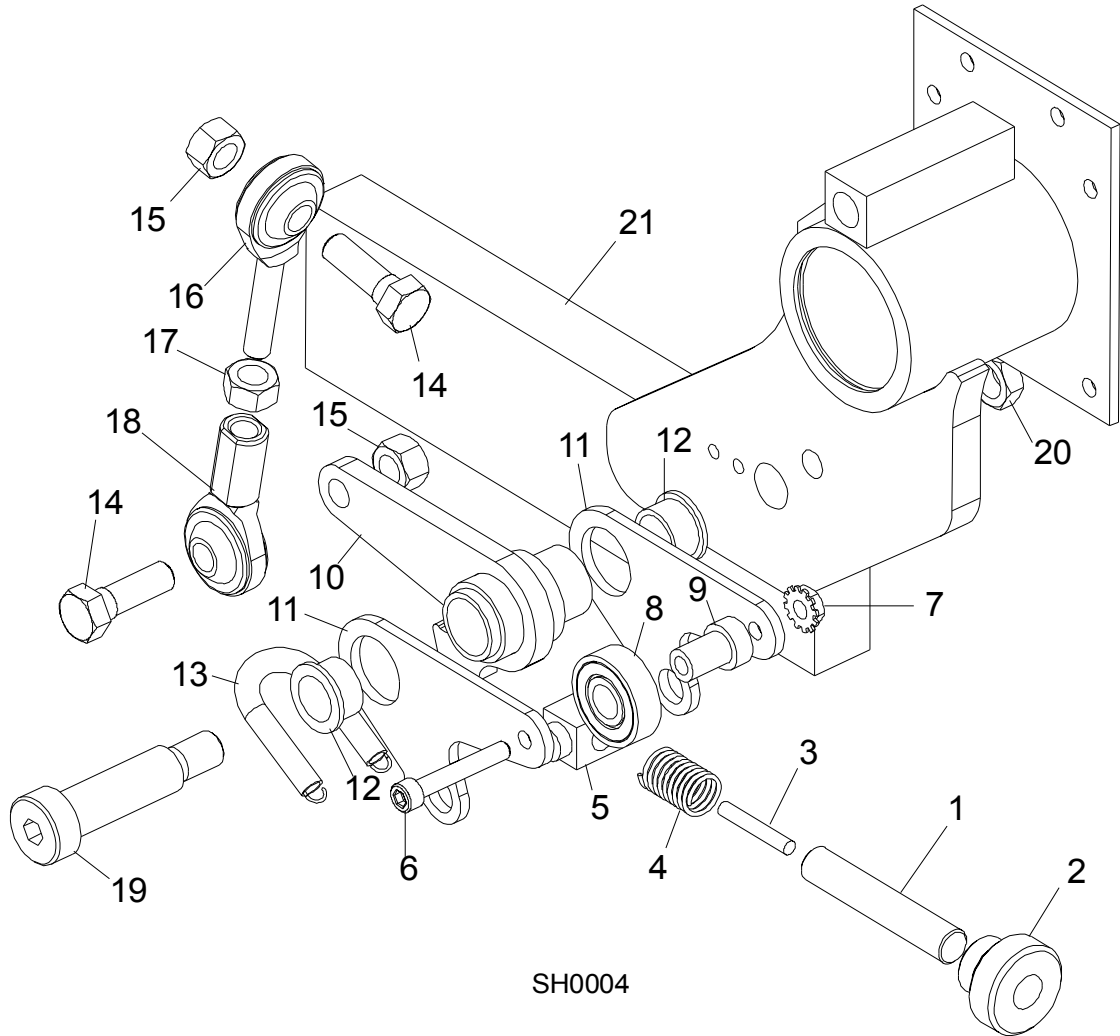
6.7 Grinder Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.	
	HEAD/BASE ASSEMBLY, AGA GRINDER	A10662	1	
	Head Assembly, AGA Grinder	A10665	1	
1	Motor Assembly, AGA Grinder	A04665	1	
	Motor Assembly, 12 Volt DC w/Harness	A10701	1	◆
	Motor, 12 VDC	P04340	1	◆
	Brush Kit, Grinder Motor	A07969	1	
	Brush/Spring Set	P07967	2	◆
	Instruction Sheet, Brush Replacement	A07969-232	1	
	Connector, 2 Pin	E10551	1	◆
	Contact, Wire Pin	E10552	2	◆
	Tube, 3/8" Neoprene	R01897	2 ft.	
	Terminal, 14 Ga. 90° Flag	F05708-1	1	◆
	Nut, 10 Ga. Crimp Wire	F05609-2	1	◆
	Tube, 1/4" x 3/8" Plastic	R01890	6.5 in	

	Instruction Sheet, Motor Replacement	A04665-235	1	
2	Washer, #10 Split Lock	F05011-20	2	
3	Nut, #10-32 Hex	F05010-27	2	
	Arbor Kit, Grinding Wheel	A04799	1	
4	Arbor, Male Wheel	S04553	1	◆
5	Screw, 1/4-28 x 3/8" Cup Point Set	F05005-24	1	
6	Washer, Nylon Grinding Wheel	P04527	1	
7	Arbor, Female Wheel	S04554	1	◆
8	Cover, Grinder head	S10668	1	
9	Nut, 5/16-18 Wing	F05010-23	1	
10	Decal, Guards Warning	086097	1	
11	Head Weldment, AGA Grinder	W10667	1	◆
12	Bearing, R6ZZ	P03054	2	
13	Washer, #10 SAE Flat	F05011-18	1	
14	Screw, #10-32 x 1/2" Button Head	F05004-29	1	
15	Clip, 3/8" E	P10689	1	
	Base Assembly, AGA Grinder	A10666	1	◆
16	Plate Weldment, Vertical Pivot	W10680	1	◆
17	Base Weldment, AGA Grinder	W10677	1	◆
18	Washer, 1/2" Split Lock	F05011-9	1	
19	Bolt, 1/2-13 x 1" Hex Head Grade 2	F05008-50	1	
20	WHEEL, 1/4" GRINDING	P04567-9	1	
21	WIPER, AGA BLADE	S10700	1	
22	WASHER, 1/2" SAE FLAT	F05011-2	1	
23	BOLT, 1/2-20 X 1" HEX HEAD	F05008-42	1	
24	GUARD, AGA MIST	D04672	1	
25	SCREW, 1/4-20 X 1/2" THUMB	F05005-16	1	
	TOOL, LTAGA ALIGNMENT	010706	1	
26	DECAL, MOTOR ROTATION, SMALL	S20097-1	1	

6.8 Lift Assembly

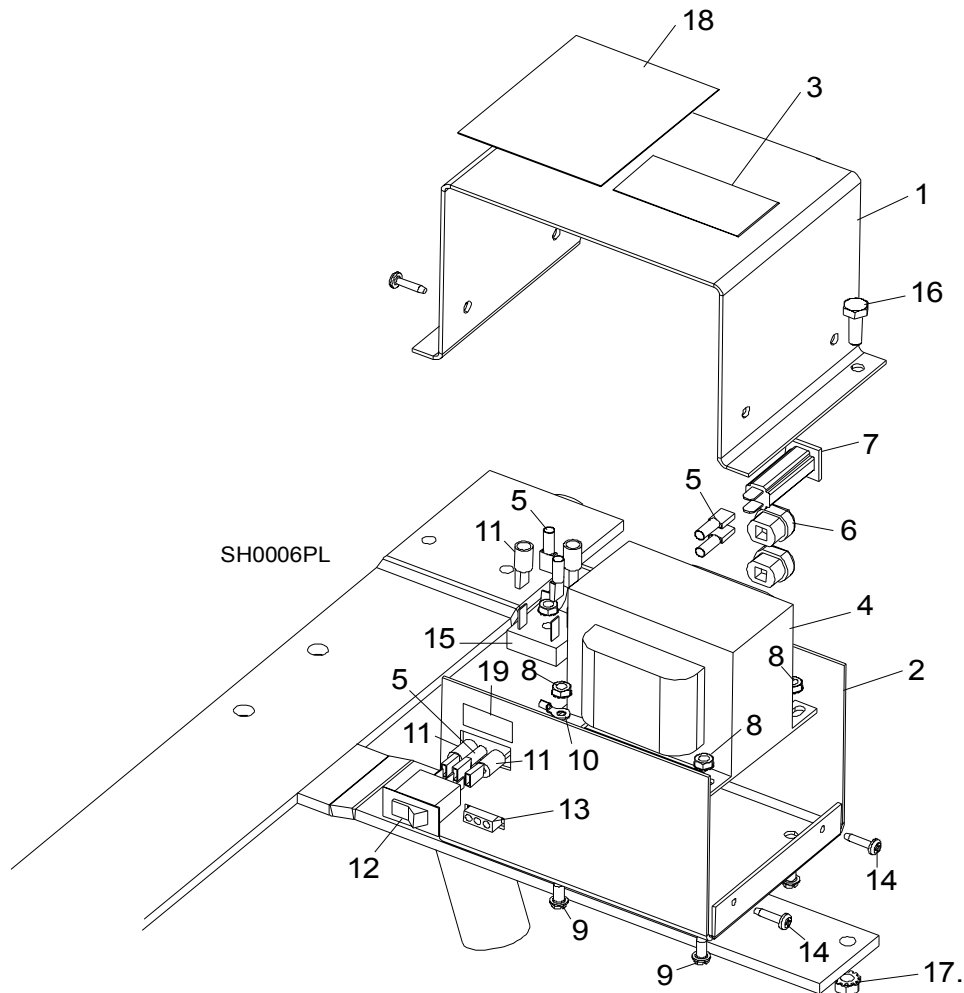


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REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.
	LIFT ASSEMBLY, AGA GRINDER	A09822	1
	Screw Assembly, Back Grind	A09765	1
1	Rod, Back Grind Screw	S09701	1 ◆
2	Knob, Back Grind Screw	S09733	1 ◆
3	Pin, 5/32" x 1" Hardened Dowel	F05012-28	1
4	Spring, Back Grind LC-045G-7SS	P09816	1
5	Block, Back Grind Knob Trunnion	S09730	1
6	Screw, #10-24 x 1 1/4" Socket Head	F05004-31	1
7	Nut, #10-24 Self-Locking	F05010-14	1
8	Bearing, #629	P06049	1
9	Spacer, Lift Bracket Bearing	S09702	1
10	Lift Bracket, AGA Grinder	W09764	1
11	Arm, AGA Lift	S09699	2

12	Bushing, SF1620-6 Bronze	P08060	2	
13	Spring, Lift Arm LE-031C-8SS	P09817	1	
14	BOLT, 5/16-18 X 1" HEX HEAD	F05006-1	2	
15	NUT, 5/16-18 HEX LOCK	F05010-6	2	
16	END, 5/16-24 MALE ROD	P09814	1	
17	NUT, 5/16-24 HEX	F05010-28	1	
18	END, 5/16-24 FEMALE ROD	P09813	1	
19	BOLT, 1/2" X 1 1/2" SHOULDER	F05008-36	1	
20	NUT, 3/8-16 HEX JAM	F05010-29	1	
21	MOUNT WELDMENT, CAM MOTOR (SEE SECTION 6.6)	W10685	1	◆

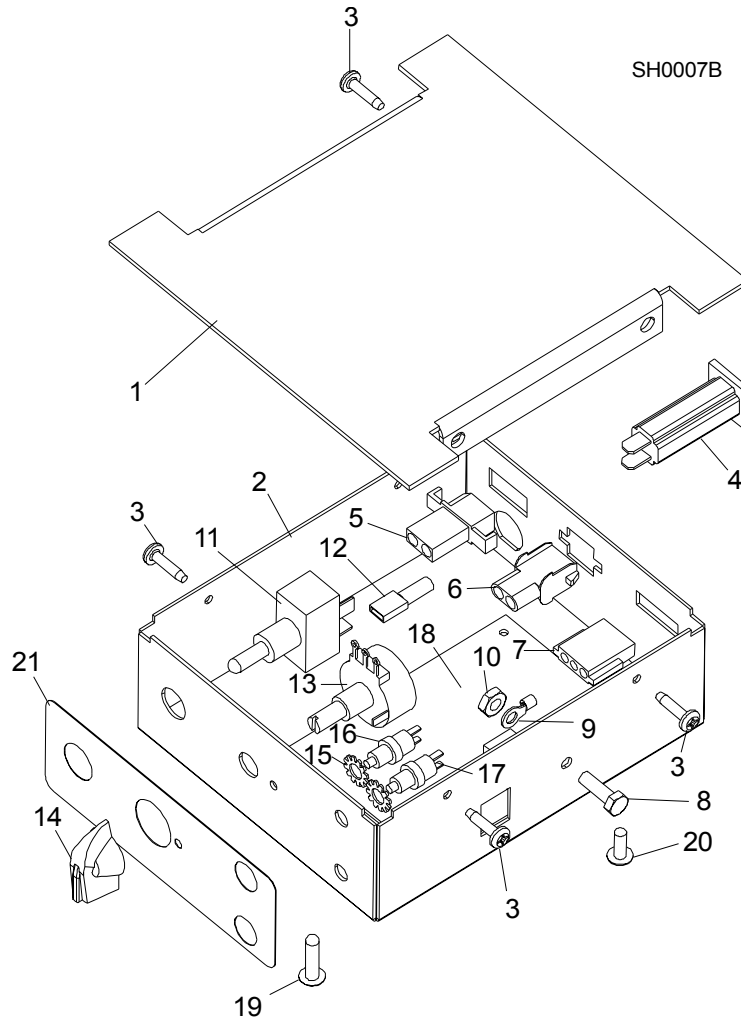
6.9 Transformer Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.	
	TRANSFORMER, 220V TO 12V AGA	A10531-220	1	
1	Cover, AGA Transformer	S10487	1	
2	Base, AGA Transformer	S10488	1	
3	Decal, 220V Transformer Specification	086423	1	
4	Transformer, 220 V	P09743-220	1	◆
5	Terminal, 1/4" Quick 14-16 Ga.	F05708-10R	5	◆
6	Grommet, #1207 Heyco	P06254	2	
7	Breaker, 2 Amp Circuit (220V Transformer)	E10560	1	
8	Nut, #8-32 Self-Locking	F05010-41	5	
9	Screw, #8-32 x 1/2" Slotted Hex Head	F05015-18	3	
10	Terminal, #8 14-16 Ga. Ring	F05092-11R	3	◆
11	Terminal, 1/4" Quick 10-12 Ga.	F05708-9	4	◆
	Switch, AGA On/Off	A10703	1	
12	Switch, Lighted Rocker	E10473	1	◆

	Instruction Sheet, Switch Replacement	A10703-495	1	
13	Connector, Transformer Harness	E10474	1	◆
14	Screw, #8 x 5/8 Phillips Head Pan A	F05015-3	4	
15	Rectifier, KPBC 3508 Bridge	084318	1	
16	BOLT, 1/4-20 X 3/4" HEX HEAD FULL THREAD	F05005-1	2	
17	NUT, 1/4-20 SELF-LOCKING	F05010-9	2	
18	DECAL, HIGH VOLTAGE WARNING	S10364-P2	1	
19	DECAL, POWER ON/OFF SWITCH	086424		

6.10 Control Assembly



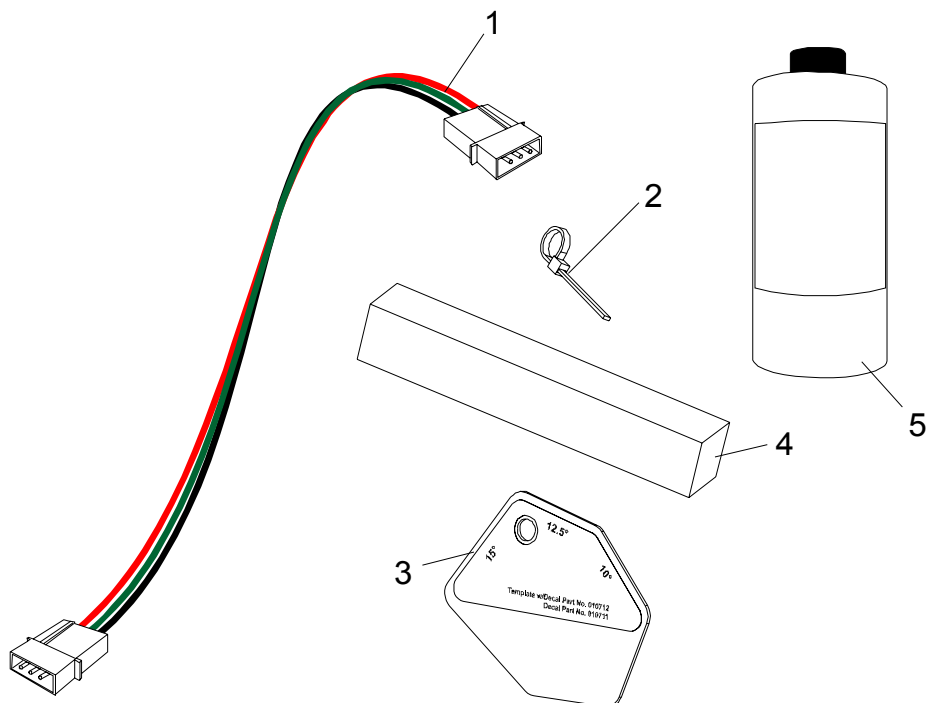
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.	
	CONTROL ASSEMBLY, AGA	A10600	1	
1	Cover, AGA Control Box	S10522	1	
2	Base, AGA Control	S10694	1	
3	Screw, #8 x 5/8" Phillips Pan Head A	F05015-3	4	
4	Breaker, 15 Amp Circuit	E10698	1	
5	Connector, 2-Pin Tapered	E10483	1	◆
6	Connector, 2-Pin Rectangle	E10480	1	◆
7	Connector, 3-Pin Rectangle	E10474	1	◆
8	Bolt, #10-24 x 5/8" Hex Head	F05004-18	1	
9	Terminal, #10 14-16 Ga. Ring	F05092-9R	1	◆
10	Nut, #10-24 Self-Locking	F05010-14	1	
11	Switch, On/Off Toggle	P03027	1	
12	Terminal, 1/4" Quick 14-16 Ga.	F05708-10R	1	
13	Switch, AGA Speed Control	E20519	1	
14	Knob, Speed Control	P06257	1	

15	Washer, 1/4" I.D. Lock	F05011-37	2	
16	Switch, AGA Black Start	E10472	1	
17	Switch, AGA Red Stop	E10471	1	
18	Circuit Board, AGA Control	A10696	1	◆
19	Pin, 3/8" Long Circuit Board Mount	P10489	2	◆
20	Pin, 3/8" Short Circuit Board Mount	P10452	2	◆
21	Decal, AGA Front Panel	010704	1	

6 Replacement Parts

Miscellaneous Parts

6.11 Miscellaneous Parts

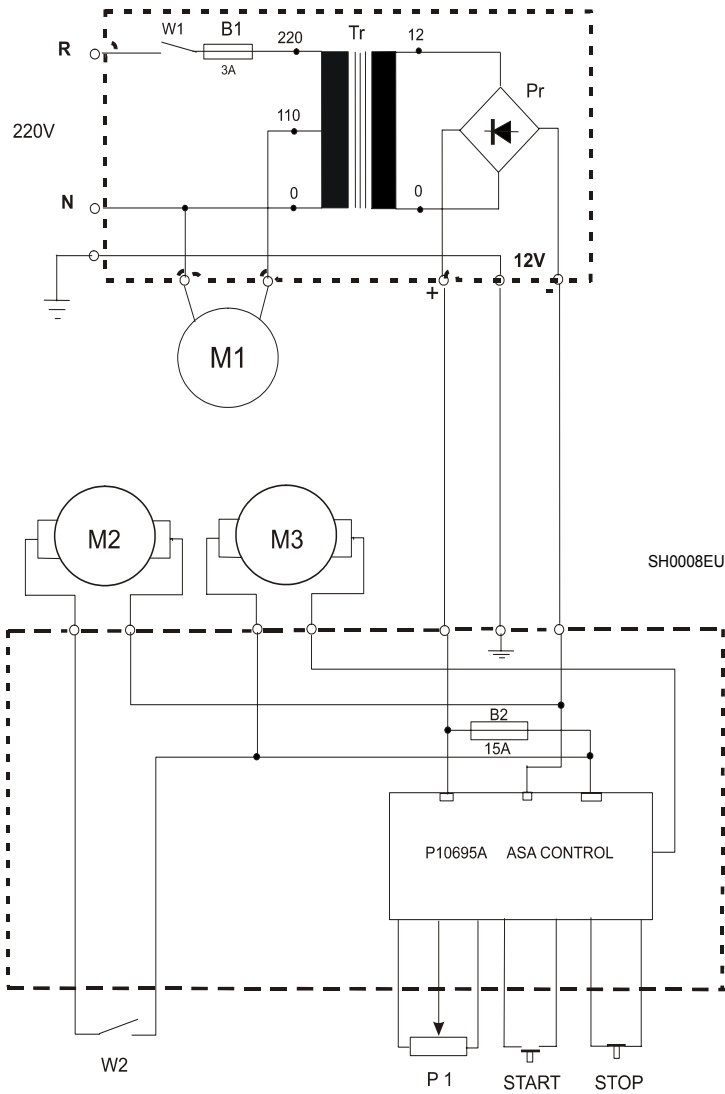


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REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART NUMBER	QTY.	
1	HARNESS, AGA TRANSFORMER/CONTROL	A10532	1	
2	STRAP, 1/4" X 6" TIE	F05089-1	6	
3	TEMPLATE ASSEMBLY, MULT-ANGLE WITH DECAL	010712	1	
4	STONE, GRINDING WHEEL DRESSING	P04570	1	
5	COOLANT, 32 OZ. BOTTLE GRINDING CONCENTRATE	A04673	1	

SECTION 7 MAINTENANCE & TROUBLESHOOTING

7.1 Wiring Diagram



W1 - Main Switch
 B1 - Circuit Breaker
 Tr - 220/110/12V Tranformer
 Pr - Bridge-rectifier
 M1 - Coolant Pump Motor

M2 - Grinder Motor
 M3 - Feed Motor
 B2 - Control Panel Safety
 W2 - Grinder Motor Switch
 P1 - Speed

FIG. 7-1

7.2 Sharpener Maintenance

- Wipe the sharpener dry after each day's use.
- Keep clean of dirt, rust, and metal filings.
- Remove the clamp regularly and clean out any buildup that might cause it to not clamp the blade firmly. When replacing clamp, replace it flat against the stop block.
- Change the water and coolant and clean out the water tray as needed.
- Use a light penetrating oil to keep moving parts lubricated. These include: blade clamp, face grind adjustment knob and back grind adjustment knob.

7.3 Grinding Wheel Maintenance

An important part of blade maintenance is grinding wheel dressing. When dressing the grinding wheel, dress a small radius on the left corner. Then dress the back 2/3 of the wheel at the same angle as the back of the teeth. Blend the back and bottom angles together. If more gullet grind is desired, dress back angle further across wheel. If shorter tooth height is desired, dress bottom angle larger and reblend.

NOTE: If you dress the grinding wheel too heavily, the circuit breaker on the back of the control box may kick out. If this happens, wait 15 seconds. Then push in and release circuit breaker.

Sharpening a blade with a worn wheel will do more damage to the blade than good. The shape at which you have dressed the wheel must be maintained. The small radius on the left corner of the wheel is especially important to maintain. This is the section that does the most grinding. The radius will increase during sharpening. As it becomes larger, it starts to grind into the tooth face and leaves little or no hook angle in the tooth.

To maintain grinding wheel shape, redress the wheel when it becomes worn. Also redress the wheel when it becomes "loaded up" with metal and no longer sharpens teeth properly. To redress, dress the bottom angle of the wheel. Blend this area with the small left corner radius. Redress the back angle if necessary.

Abnormal wear on the grinding wheel may be caused by:

- Improper dressing
- Grinding too fast
- Grinding too heavy
- Grinding too many blades without redressing

IMPORTANT: When sharpening a blade, particles can become lodged in the grinding wheel that can burn or groove the gullet of the blade. Burns or grooves in the gullet create microscopic stress fractures which will eventually cause the blade to break prematurely. Lightly dressing the wheel after sharpening each blade will remove lodged particles and prevent the wheel from burning or grooving the blade.

Replace the grinding wheel when it is worn to less than 4" in diameter.

7.4 Blade Sharpening Tips

This section covers some of the common problem areas of blade sharpening.

Before removing from the saw, clean the blade by running the waterlube on the blade for 15 seconds. This will remove most of the sap buildup that would otherwise have to be scraped off when it dries. Wipe with a clean dry rag.

Make sure a strong flow of water falls directly on the tip of blade tooth which is being ground.

The average time it takes to sharpen a blade is 5 - 15 minutes. (Feed rate will vary on different sharpeners.) If the tooth tip turns blue during sharpening or if you have abnormal or excessive wheel wear, you are grinding too fast.

Sharpen the blade when it first shows signs of dullness. If the blade is extremely dull, due to hitting a rock or some form of foreign matter, sharpen the blade twice lightly, instead of trying to remove too much in one grind. Grinding too much material at once may cause the circuit breaker on the back of the control box to kick out. If this happens, wait 15 seconds. Then push in and release circuit breaker.