



***SNS20-100***

***Operation and Parts Manual***

***Sharp-'n-Set***



*Timberly manual, part number SNS20-989*



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## SECTION 1 INTRODUCTION

### 1.1 About this manual

Congratulations on your purchase of a TIMBERLY SNS20-100 Sharp-'n-Set! When properly maintained and operated, your SNS20-100 Sharp-'n-Set should give you many years of dependable service.

This manual does not cover every possible operation and safety issues that may occur while using this equipment. This manual covers some of the basic safety procedures relating to sawblade maintenance but common sense should take precedence over this manual. Operators should follow safety procedures at all times.

The information and instructions given in this manual do not amend or extend the limited warranties for the equipment given at the time of purchase.



**CAUTION!** Read this entire manual before operating the equipment. Take notice of all safety warnings throughout this manual and those posted on the equipment. Keep this manual with this equipment at all times, regardless of ownership.

Only persons who have read and understood the entire operator's manual should operate the Sharp-'n-Set. The Sharp-'n-Set is not intended for use by or around children.

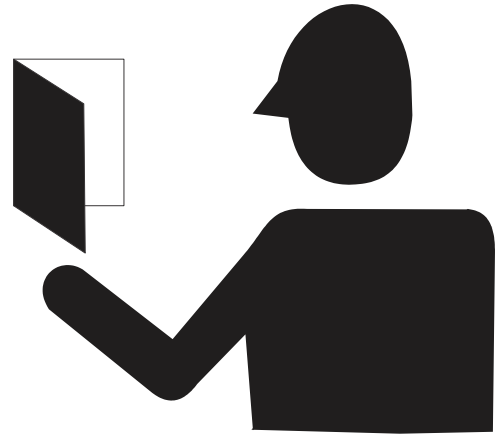




FIG. 1-1

## 1.2 Safety

The triangle symbol calls your attention to instructions concerning your personal safety.

[\(See fig. 1-1.\)](#)

*Read and follow these instructions!*



**DANGER!** INDICATES AN IMMEDIATELY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN SERIOUS INJURY OR DEATH.



**WARNING!** Suggests a potentially hazardous situation which, if not avoided, may result in serious injury or death.



**CAUTION!** Refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury to persons or equipment damage.

**NOTE:** Informs people of important installation, operation, or maintenance information that is not hazard related.

Read and observe all safety instructions before operating this equipment!

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.

### ***Blade handling safety***



**WARNING!** Always wear gloves and eye protection when handling bandsaw blades. Keep all persons away from area when coiling or carrying a blade.

**WARNING!** Before installing the blade, inspect it for damage and cracks. Always handle the blade with extreme care. Use suitable carrier equipment for transporting the blades.



### ***Machine operation safety***



**DANGER!** MAKE SURE ALL GUARDS AND COVERS ARE IN PLACE AND SECURED BEFORE OPERATING THIS MACHINE. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY.

**DANGER!** KEEP ALL PERSONS AWAY FROM MOVING PARTS WHEN OPERATING THIS MACHINE. FAILURE TO DO SO WILL RESULT IN SERIOUS INJURY.

**DANGER!** ALWAYS KEEP HANDS AWAY FROM MOVING BANDSAW BLADE. FAILURE TO DO SO WILL RESULT IN SERIOUS INJURY.



**WARNING!** Always wear eye protection when operating this machine. Failure to do so may result in serious injury.

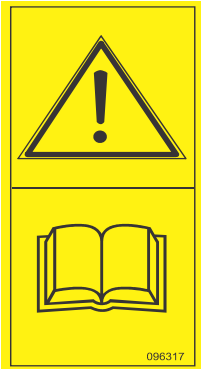
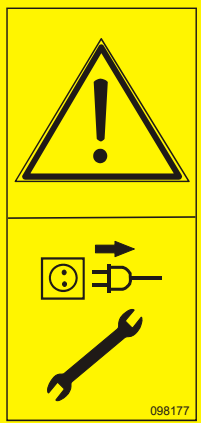
**WARNING!** Secure all loose clothing

and jewelry before operating this machine. Failure to do so may result in serious injury.

**WARNING!** This machine should be operated only by adults who have read and understood the entire operator's manuals.

**WARNING!** The illumination at the operator's position should be at least 300 lux. The light source may not cause stroboscopic effect.


***Decal meaning***

Decals View	Description
	<p><b>096317</b> Carefully read the operator's manual before operating the machine. Observe all safety instructions and rules when operating.</p>
	<p><b>098177</b> Always disconnect the power cord before performing any service.</p>



	<p><b>096321</b> Blade movement direction</p>
	<p><b>S12004G-1</b> Always wear eye protection equipment when operating this machine.</p>
	<p><b>S12005G</b> Always wear ear protection equipment when operating this machine.</p>
	<p><b>501465-1</b> Always wear safety boots when operating this machine.</p>
	<p><b>512107</b> Always wear safety gloves when operating this machine.</p>
	<p><b>P85070</b> CE safety certification</p>



 <small>S20097</small>	<p><b>S20097</b> Motor rotation direction</p>
--	---

### 1.3 Machine Start



**IMPORTANT!** Before starting to use the machine you have to meet the following conditions:

- Fasten the sharpener to a table top using the mounting holes located in the foot plates.
- The sharpener can be operated in well ventilated room only.
- The machine can be operated under roof only.
- The sharpener can be operated only in temperature range from 5° C to 40° C (41 - 104° F), at the humidity of up to 80%.
- The oil for cooling the grinding wheel must meet the specifications shown below. Water or other liquids must not be used.
- The position of the sharpener's operator is shown below.
- The illumination at the operator's position should be at least 300lx<sup>1</sup>.

See Table 1-1. The table below lists the coolant specifications.

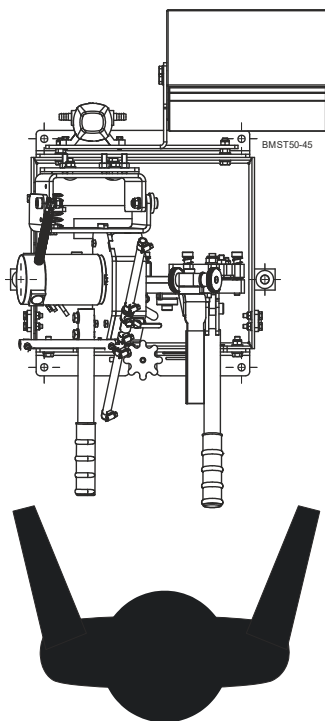
Oil Type	Manufacturer	Freezing Point	Flash Point	Autoignition Point
ACP-1E <sup>1</sup>	Orlen	-20° C -4 F	Above 140° C 284 F	250° C 482F

**TABLE 1-1**

<sup>1</sup> Waste oil must be disposed of in compliance with applicable state and local regulations.

---

1. The light source can not cause stroboscopic effect.



**FIG. 1-2 OPERATOR'S POSITION**

- Have a qualified electrician make the power supply. The power supply must meet the specifications given below.

Voltage	Fuse [A]	Suggested Wire Size
230 VAC	2A	1.5 mm <sup>2</sup> at least 16AWG at least

**TABLE 1-1**

**DANGER!** It is recommended that a 30mA Ground Fault Interrupter (GFI) be used.

## 1.4 Major Components

**This Sharpener & Setter should only be used with a 1" to 1-1/2" blades with a 7/8" tooth spacing.** The figure below shows the major components of the Sharpener & Setter. These terms will be

used throughout this manual to refer to these major components.

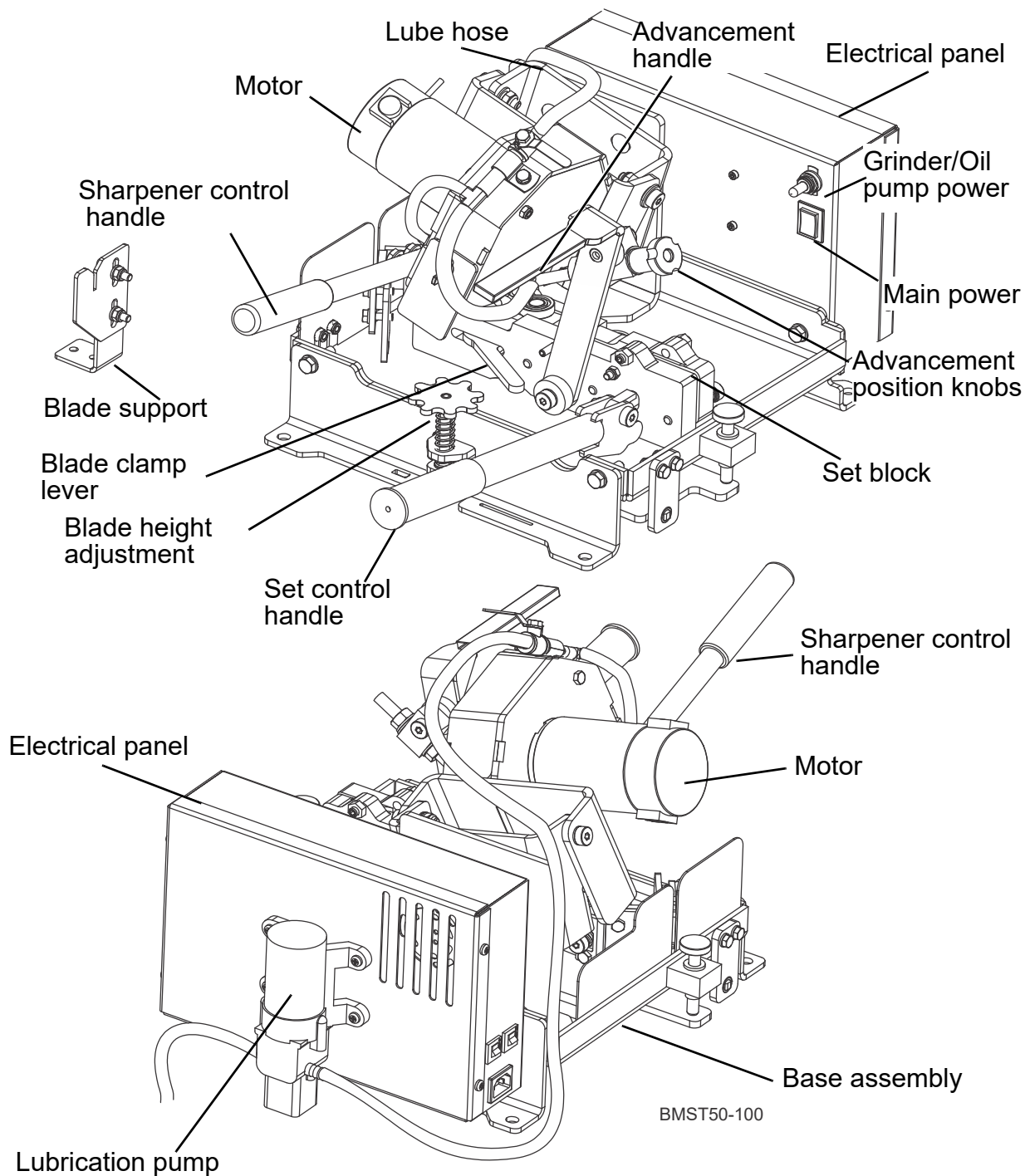
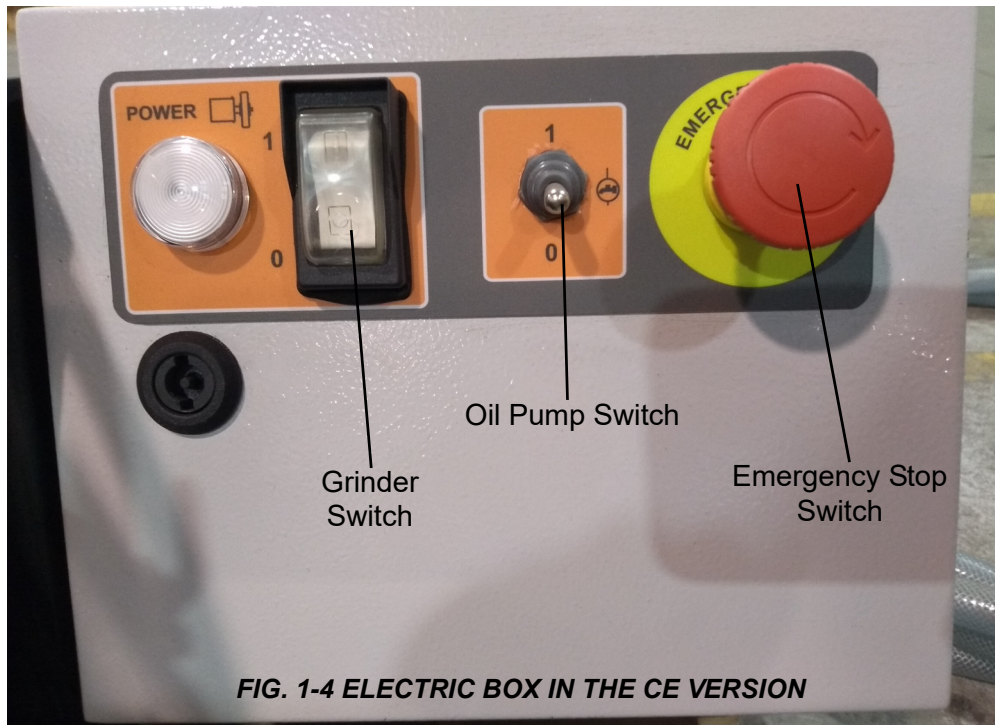
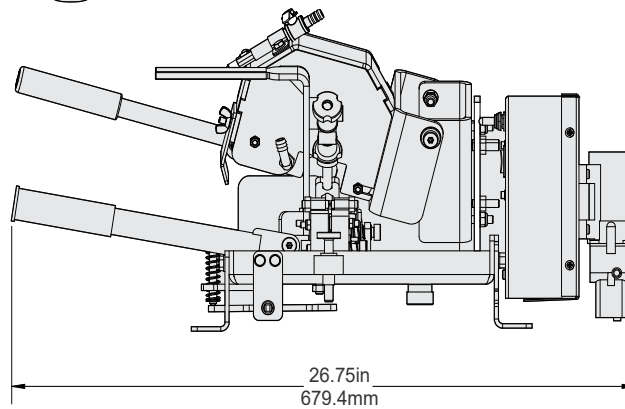
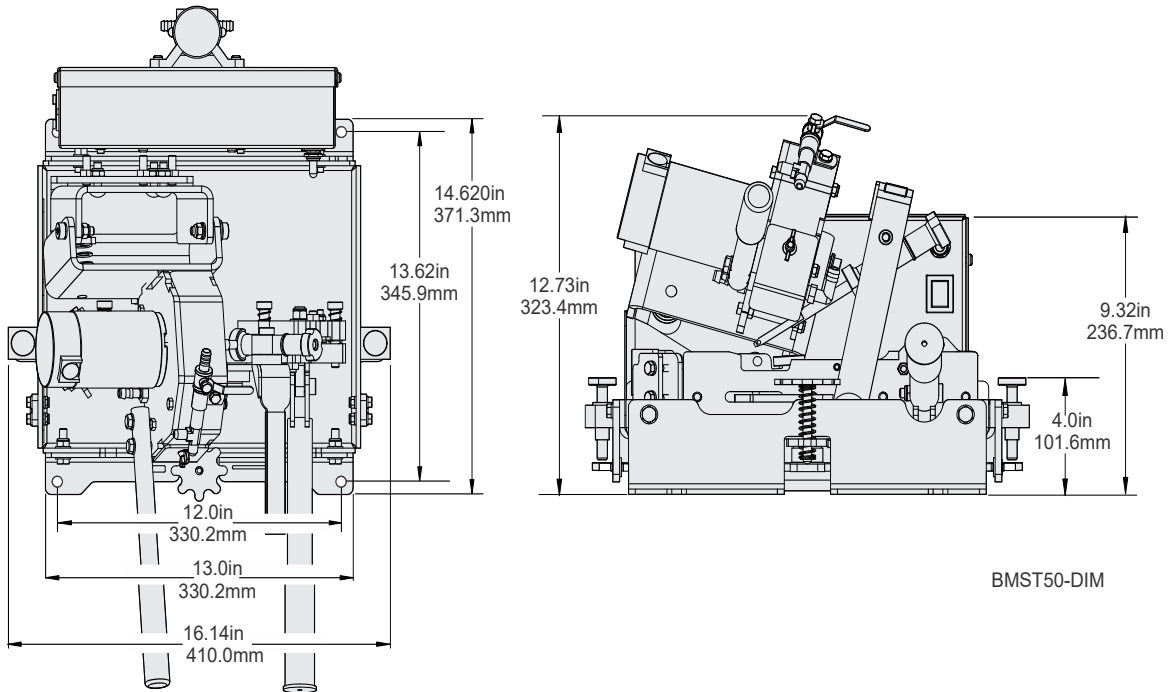


FIG. 1-3

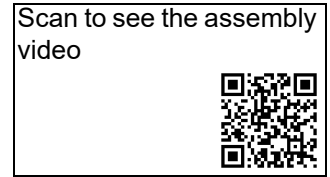


## 1.5 Dimensions and Specifications



Grinding Motor:	1/7 <sup>th</sup> HP
Grinding Wheel:	5" CBN
Blade Capacity:	1-1/4" and 1-1/2" with 7/8 Pitch
Operation:	Manual
Production Capacity:	Individual
Power:	100-240V AC, 50/60 Hz
Weight:	50 kg.





## SECTION 2 SET UP

### 2.1 Items required but NOT included

- Table
- Mounting screws
- Oil Bucket
- Sharpening Oil (Grinding oil CE-150)
- 5 inch grinding wheel

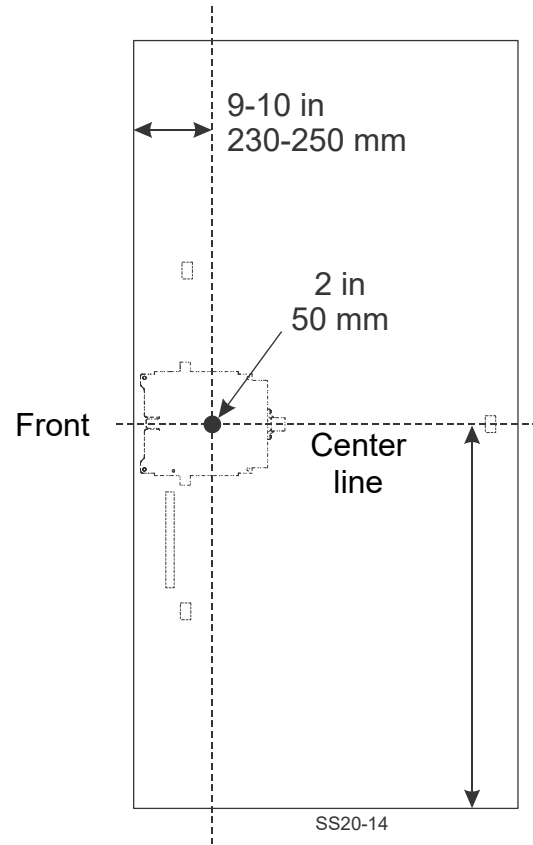
Tools:

- Drill
- Drill bits/hole saw up to 2 in (50mm)
- #2 Phillips screwdriver

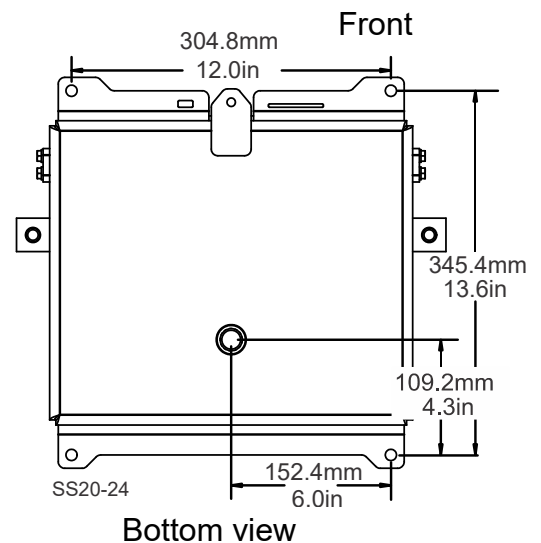
You will need a sturdy table top on level surface on which to mount the SNS20-100 Sharp-'n-Set base unit and the blade supports. The table must be large enough to hold a saw blade (a 4x8 ft (1200x2400mm) sheet works well). The illustration to the right shows approximate locations of the equipment's footprint on the 4x8 ft (1200x2400mm) table. [See fig. 2-1](#)

Dimensions for drilling mounting holes are shown in [fig. 2-2](#).

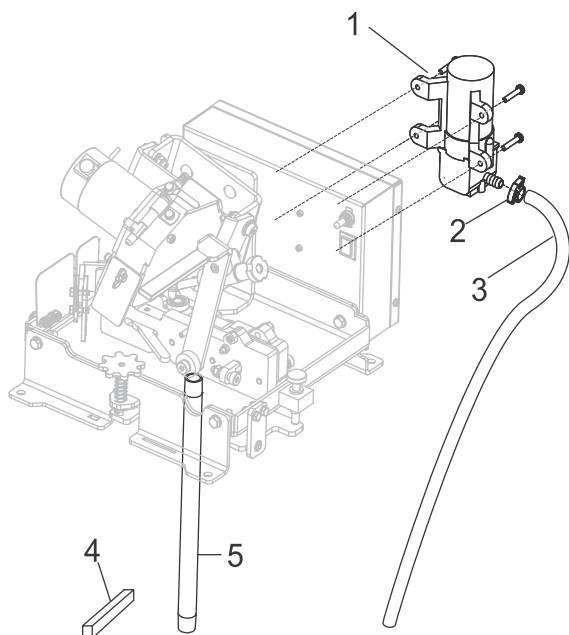
A standard 5-gallon (or 20 l) bucket placed directly under the table can be used for oil recirculation. The drain pipe should not extend so close to the bottom of the bucket that it inhibits drainage.



**FIG. 2-1**

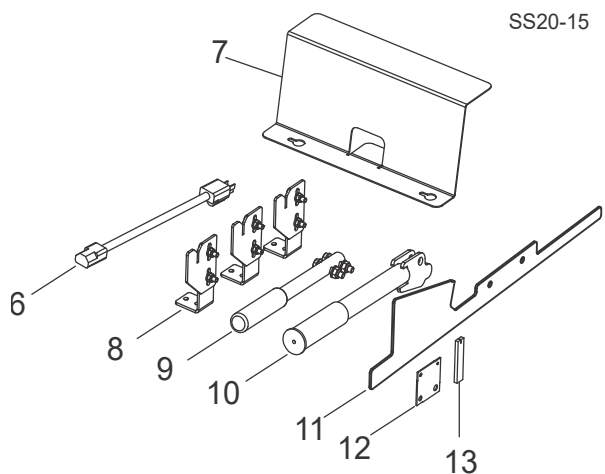


**FIG. 2-2**



## 2.2 Items included

1. SS20-985 Pump Assembly with F05015-27 Screws (4 pcs):
2. 074368 Hose Clamp (1 pc):
3. R01885 Tubing (4 ft included to be cut to length as needed)
4. P31347 Magnet, Filter (1 pc)
5. SS20-968 Drain Pipe
6. 069666 Power Cord
7. SS20-964 Blade Guard
8. SS20-969 Blade Support Assemblies (3)
9. SS20-972 Sharpener Handle Assy
10. SS20-200 Set Handle and 066111 Set Handle Grip
11. SS20-999 Angle Gauge
12. SS20-331 Set Gauge
13. 004754 Set Correction Tool



**FIG. 2-3**

### 2.3 Install the lubrication pump

Use a Phillips head screwdriver to install the pump on the rear of the electrical panel with the 4 screws provided.

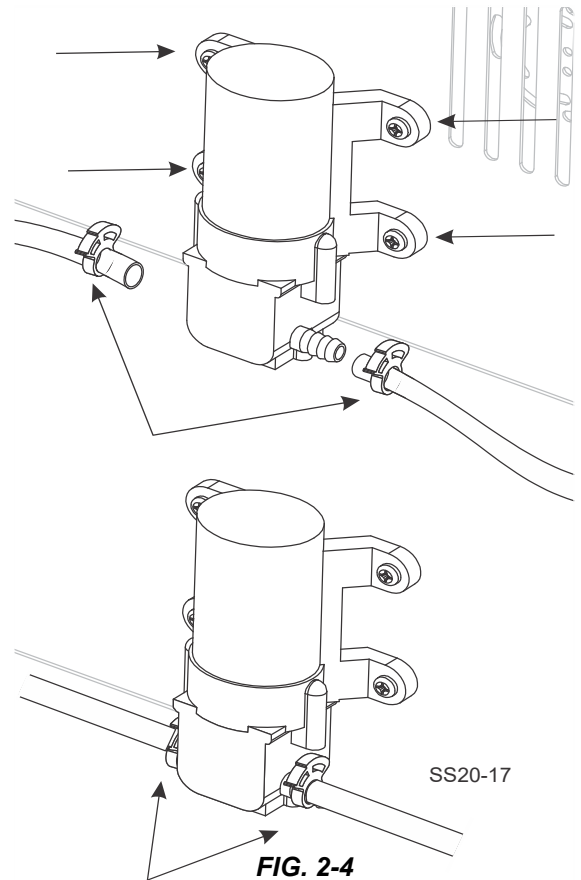
Slide the hose clamps over the lube hose. Leave enough room that the hose can seat itself all the ways on the pump fittings

Push the lube hose onto the pump fittings on both sides of the pump. Secure the hoses on the fittings using the hose clamps provided. You may need plyers for this.

Ensure that the hoses are well seated and secure on the fittings. [See fig. 2-4](#)

Route the supply hose into the oil bucket. With a cutting tool, cut the supply hose to slightly above the bottom of the bucket.

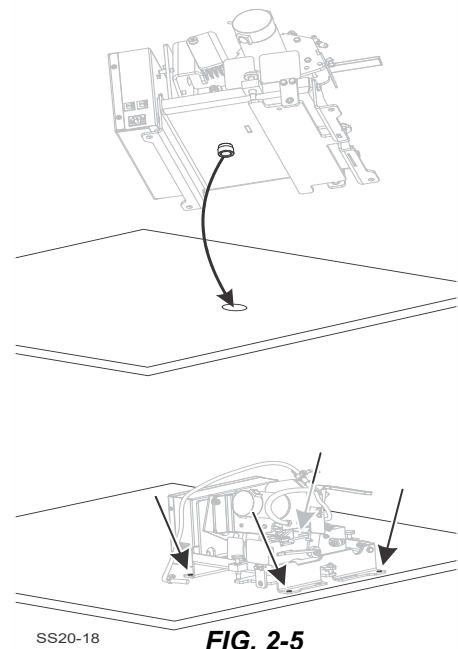
Connect the two power wires extending from the bottom center of the electrical box to the mating wires on the pump.



### 2.4 Mount the base unit

The table will need a 2 inch (50 mm) hole to allow for an oil drain pipe to extend through it into a bucket placed under the machine. An optional 1 inch (25 mm) hole could be also be drilled for the oil supply hose, if desired. Location of the the drain hole is not precise; it may go where the operator feels most comfortable.

Align the base unit so that the drain fitting sets into the hole in the table you have provided. When the unit is aligned with the table, bolt the base unit to the table with screws you provide. [See fig. 2-4](#)



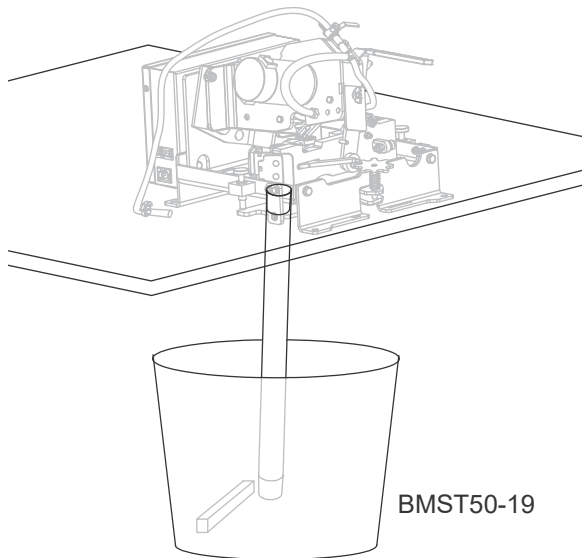


FIG. 2-6

## 2.5 Install the drain pipe

Place the discharge end of the drain pipe into the oil bucket first. Simply screw in the threaded pipe into the drain fitting at the bottom of the pan.

Place the filter magnet into the bottom of the oil bucket near the drain output. [See fig. 2-6](#)

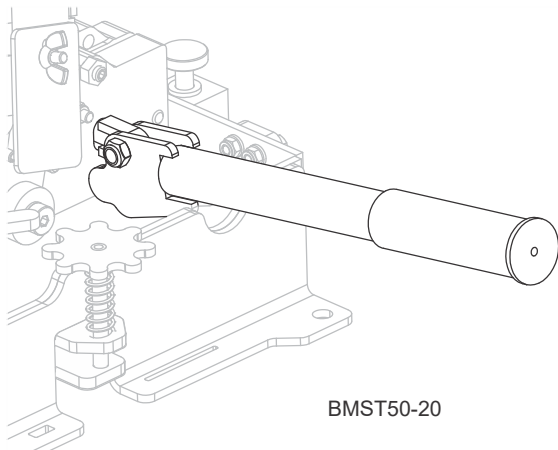


FIG. 2-7

## 2.6 Install the operators handles

For the set handle, rotate the handle from the shipping position to the forward position. [See fig. 2-7](#)

For the sharpener handle, place the nuts and bolt of the handle in the position shown in [fig. 2-8](#). Two washers and the nuts go on the inside of the sharpener housing. Tighten both nuts.

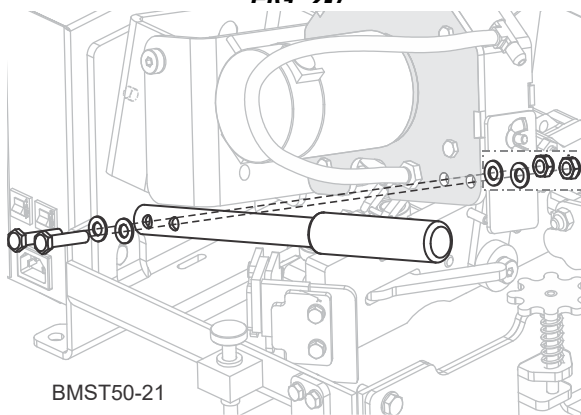
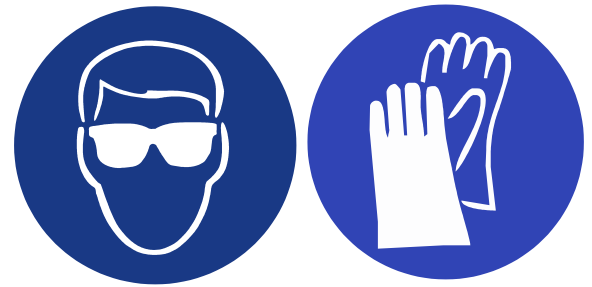


FIG. 2-8

## 2.7 Mount the blade supports

Place the first blade guide on the table in line with the back side of sharpener. Locate it near the outside edge of the table. Orient the groove so the blade slides through parallel to the sharpener. See step 1 in [fig. 2-9](#). Fasten the blade guide to the table with your own screws



**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.

Install a blade in the sharpener and rear guide so that the blade forms an oval shape. See step 2 in [fig. 2-9](#).

Adjust the height of the rear guide so the bottom of the blade is approximately level with the blade's bottom in the sharpener.

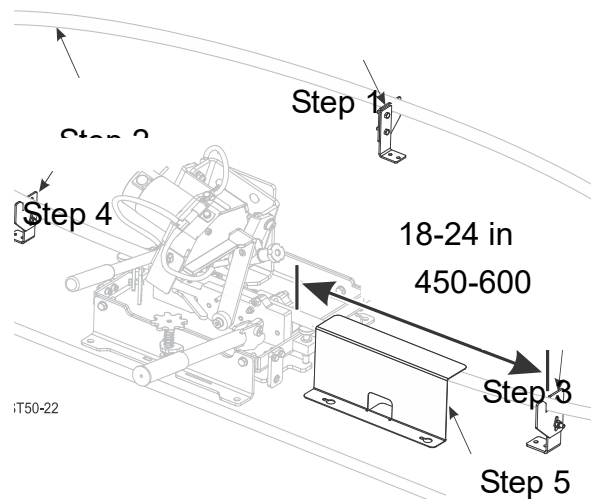


FIG. 2-9

Place a second guide to the right side of the base unit, approximately 18 – 24 inches (450 – 600mm) away **along the curvature of the blade**. Orient the groove so the blade will slide through with minimal pressure against the sides. Adjust the height of the blade guide groove so that the blade does not touch the bottom of the groove. [See fig. 2-10 Side supports](#). Fasten the blade guide to the table with your own screws. See step 3 in [fig. 2-9](#).

Repeat on left side. See step 4 in [fig. 2-9](#).

Install the blade guard on the table to the right of the base unit. Make sure that it is far enough away from the blade that it does not touch at any point. See step 5 in [fig. 2-9](#). Fasten the blade guide to the table with your own screws.

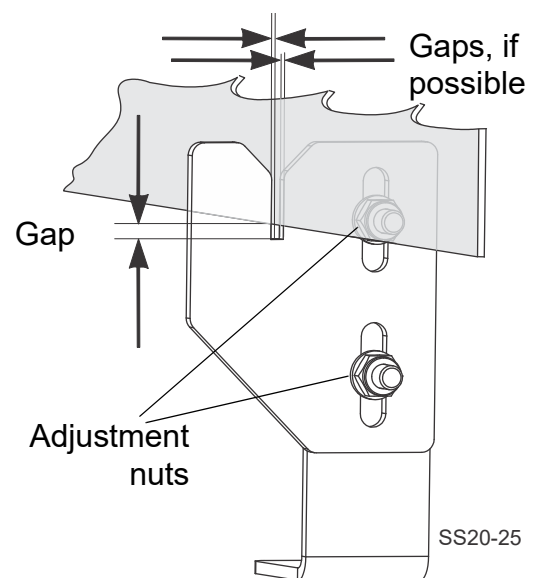
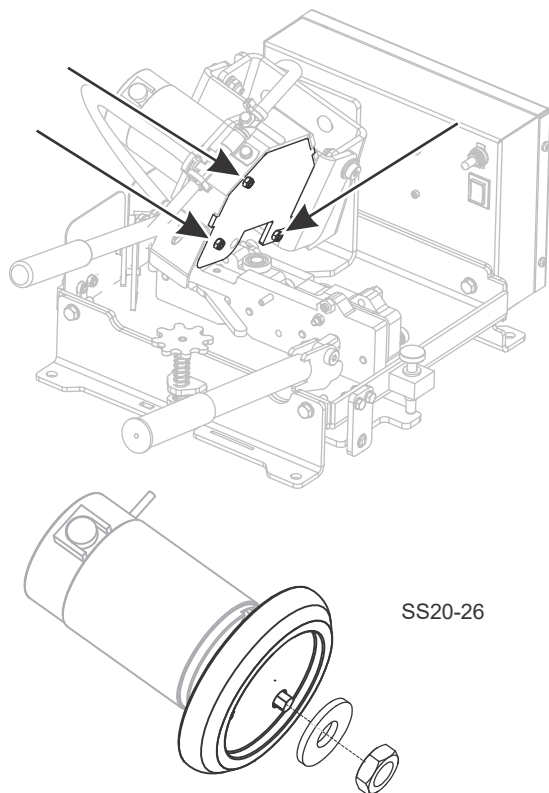


FIG. 2-10 SIDE SUPPORTS

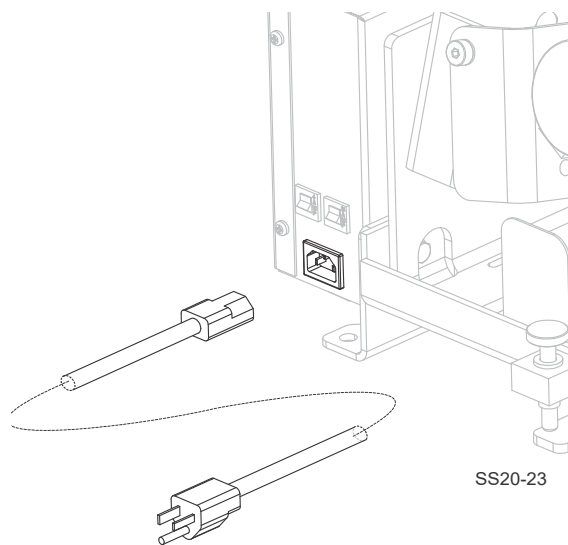
## 2.8 Install grinding wheel



**FIG. 2-11**

Loosen the three nuts on the grinder motor housing and remove the housing plate. Loosen the nut on the grinder motor shaft and remove the washer. Place the wheel on the shaft under the washer, then tighten the motor shaft nut. Reinstall the housing plate. [See fig. 2-11](#).

## 2.9 Power cord



**FIG. 2-12**

Insert the power cord into the power receptacle on the lower left side of the electrical panel. The cord is keyed so that it will fit in only one orientation. [See fig. 2-12](#)

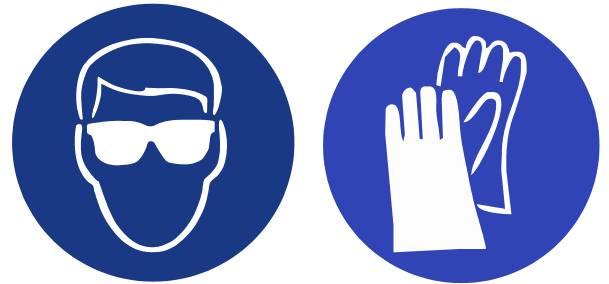
Plug the other end into a standard grounded outlet.

## SECTION 3 OPERATION

### 3.1 Blade introduction



**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.



The blades supplied by Timbery have a raker-style set in the teeth. If you look at a blade from the top, you will see that the teeth are set (or bent out) in a repeating sequence; left, right, and straight. The teeth that are set left and right do the cutting. The straight teeth (rakers) clear the cut of sawdust.

[\(See fig. 0-1.\)](#)

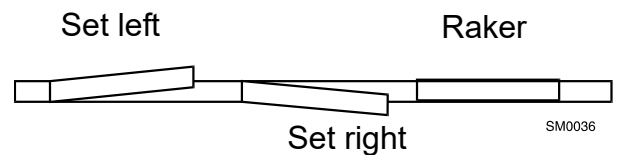


FIG. 0-1

As the blade is sharpened, the tip of the tooth recedes and the set becomes smaller. Correct setting is one of the most important factors in the cutting ability of a blade. Check used blades regularly to see if they need resetting. [\(See fig. 3-1.\)](#)

The Timbery Sharp-'n-Set allows you to sharpen, then evenly set the teeth of a bandsaw blade. The clamping mechanism lets you position a tooth in front of the grinding wheel and sharpen it to the correct profile. You can then measure the set. The tooth is bent by clamping the blade in the setter clamp. This chapter describes proper operation of the Timbery Sharp-'n-Set.

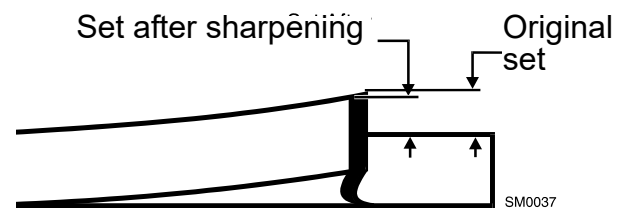


FIG. 3-1

### 3.2 Rejecting blades

Sometimes blades cannot be resharpened. Reasons to reject blades for resharpening include:


- the blade is coil set (the blade is over-stressed and will fold on itself),
- the blade is missing 2 or 3 teeth or more in a row,
- the blade band has been twisted,
- the blade band is too low for the grinder (the blade has been sharpened too many times/too much material has already been ground from the blade),
- the blade has no set on one of its sides/severe rust is present,
- or the blade has tooth spacing uncommon to Timbery blades (i.e., a competitor's blade).

### 3.3 Install the grinding wheel

For grinding wheel set up, see section [see Section 2.8 Install grinding wheel.](#)




### 3.4 Blade installation

 **CAUTION!** Before you sharpen the blade, check it for cracks. Most cracks occur across the band of the blade at the lowest point of the gullet. If you find any cracks, **do not resharpen the blade.**

For grinding wheel set up, see section [2.8 Install grinding wheel](#).

To reduce the risk of premature blade fatigue from hairline cracks, it is important to thoroughly clean the gullet of cracks during resharpening. It may be necessary to lightly grind the blade twice to thoroughly clear the gullet cracks.

1. Clean the blade **before** putting it in the Sharp-'n-Set. Clean the blade **on the mill** by opening the water lube over the moving blade for at least 15 seconds. Sap buildup on the blade or tooth may not allow full sharpening.

 **WARNING!** Use **ONLY** water or windshield washer fluid with the water lube accessory. **Never use flammable fuels or liquids** such as diesel fuel. If the flammable solvents are necessary to clean the blade, remove it from the mill and clean with a rag. Failure to do so can damage the equipment and may result in serious injury or death.

2. Mount the blade in the Sharp-'n-Set. Open the blade clamp ([See fig. 3-2.](#)) and place blade between the clamping plates with the blade's bottom edge on the blade support posts. Adjust the height of the rear guide so

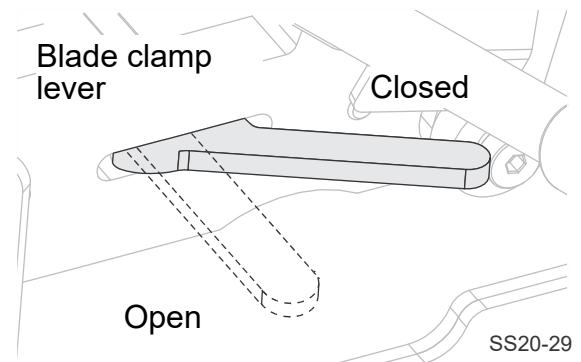


FIG. 3-2

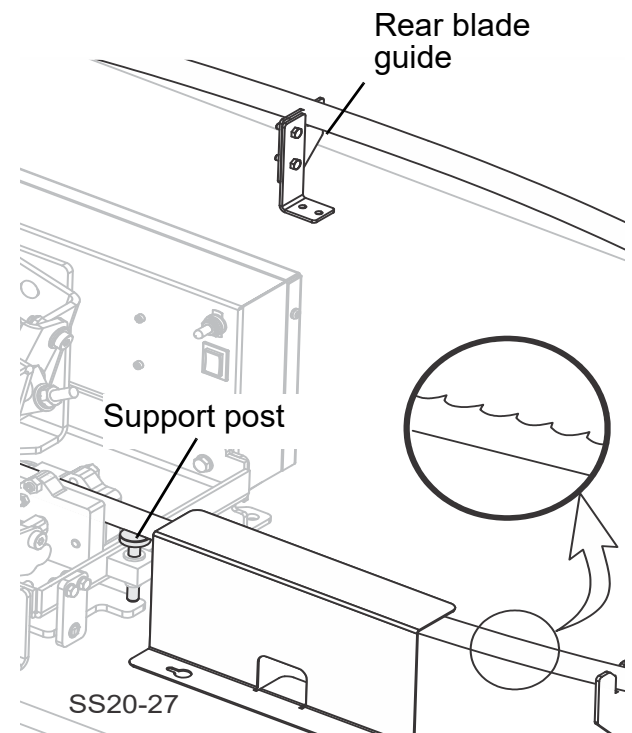
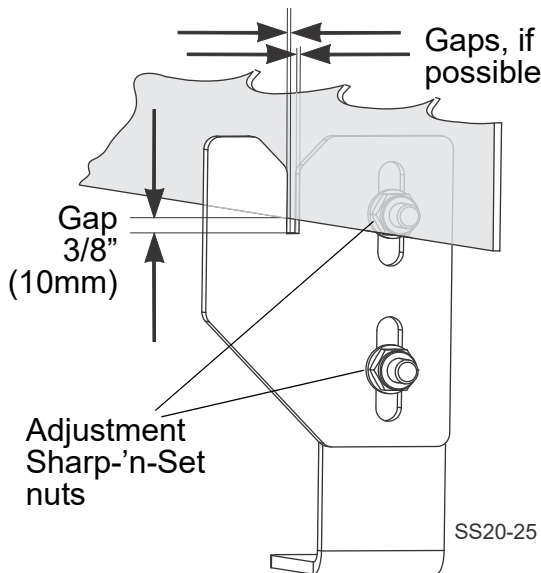


FIG. 3-3



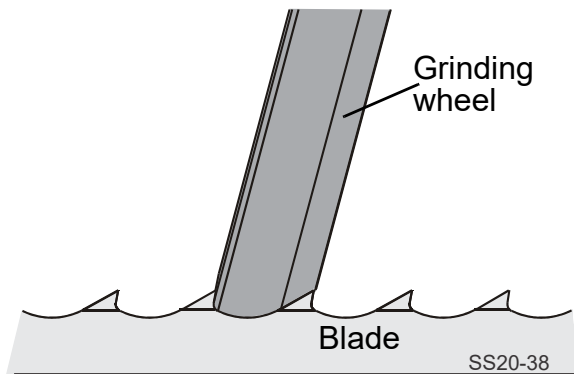
**FIG. 3-4 SIDE BLADE GUIDES**

the bottom of the blade is approximately level with the blade's bottom edge in the sharpener. [\(See fig. 3-3.\)](#)

With (2) 10mm wrenches, adjust the height of the two side blade guides so that the blade does not touch the bottom of the groove in the guide, leaving a gap of about 3/8 inch (10mm) below the bottom of the blade. Only the rear guide should have the blade touching the bottom edge. [\(See fig. 3-4 Side blade guides.\)](#)



**CAUTION:** The blade guide must not interfere with the blade height adjustment in the sharpener. Incorrect sharpening will result.



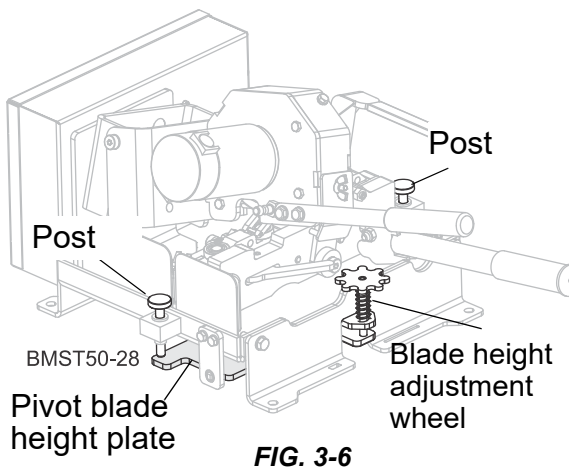
**FIG. 3-5**

### 3.5 Sharpening

**NOTE:** Always sharpen the blade before adjusting the set. As the blade is sharpened, the tip of the tooth recedes and the set becomes smaller.

Tools needed:

- 4mm hex wrench
- 13mm open end wrench
- 17mm open end wrench



**FIG. 3-6**

1. **Open the blade clamp** [\(See fig. 3-2.\)](#) and **adjust the blade in the left-right orientation.** Lower the grinding wheel to align the blade in the gullet of the blade tooth [\(See fig. 3-6.\)](#) Close the blade release lever to hold the blade accurately in place. [\(See fig. 3-7.\)](#)
2. **Adjust the blade height for sharpening.** The blade should rest equally on the blade height posts. Use the blade height adjustment wheel to raise or lower the posts. The

posts can be adjusted in unison by the wheel. Fully lower the sharpener to align the blade with the grinding wheel. When the blade is at the correct height for sharpening, re-tighten the set screw locking nut. ([See fig. 3-6.](#))

**3. Check position of blade at setter pins.**

Raise or lower the blade, if needed, to the desired position for the setter pins. The grinder head stop bolt can be adjusted to raise or lower the grinding head to new position of the blade. Check and re-adjust blade height as needed for sharpening and setting. ([See fig. 3-9.](#))

**4. Set the advancement.** With the blade clamped in the proper position for grinding, set the advancement by adjusting the push pawl.

- With the blade tightened in the sharpening position, loosen the push pawl adjustment nuts with a 17mm wrench. ([See fig. 3-9.](#))

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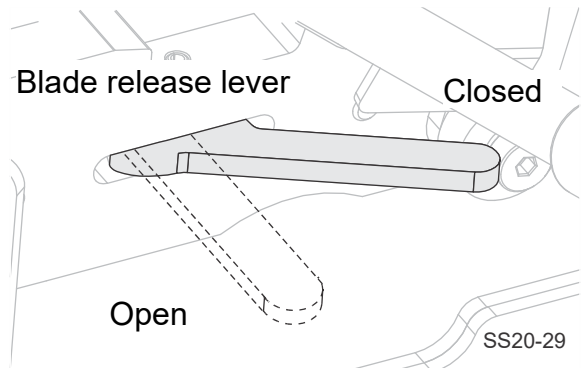


FIG. 3-7

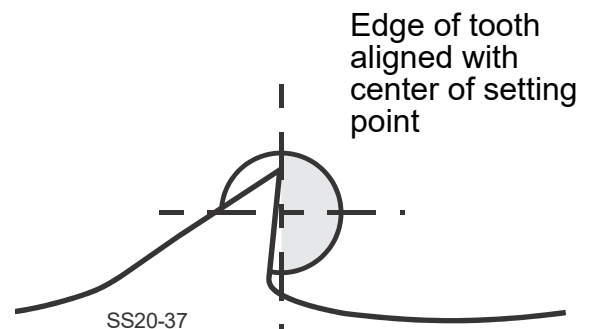


FIG. 3-8

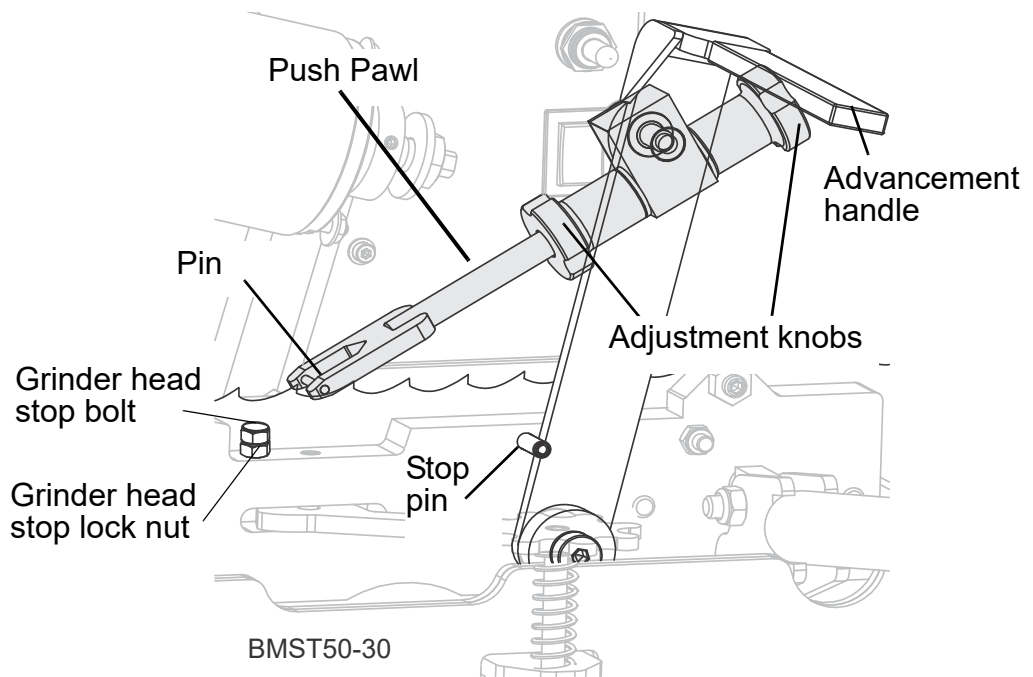


FIG. 3-9

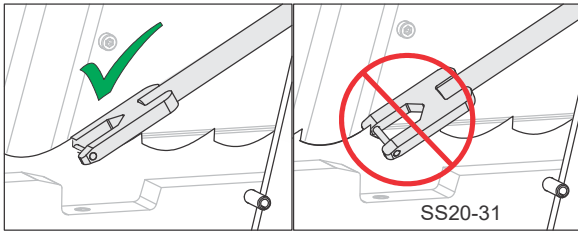


FIG. 3-10

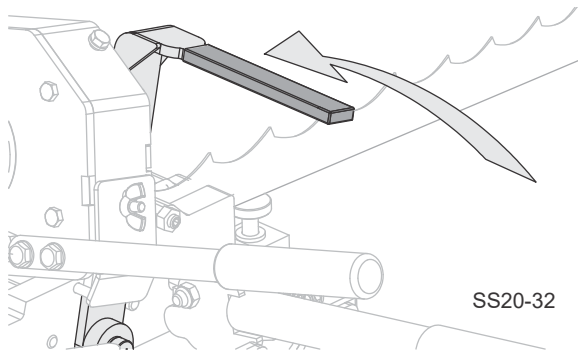


FIG. 3-11

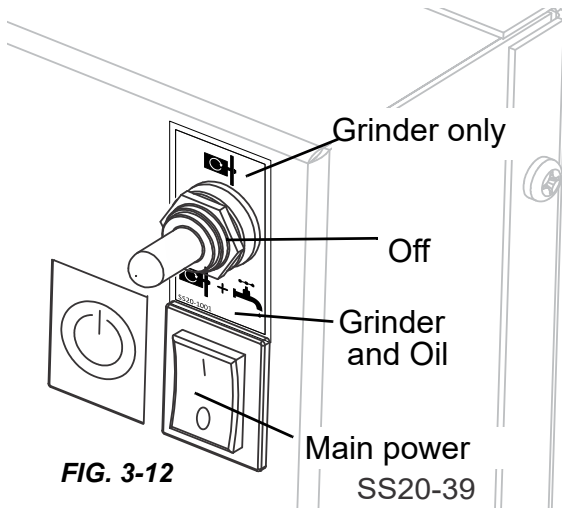


FIG. 3-12



FIG. 3-13 CE VERSION

- Place the push pawl pin into the gullet of the tooth with the handle against the stop pin. The handle and pin should rest solidly, but not pushing the tooth. Make sure that the fork holding the pin remains perpendicular to the blade. [\(See fig. 3-10.\)](#)
  - Tighten the adjustment nuts to hold the push pawl pin in this position. Small adjustments of the push pawl can be made by moving only the grinder side nut; larger adjustments will require loosening the locking nut on the outboard side.
  - Advance one tooth by moving the push pawl handle left and right. [\(See fig. 3-11.\)](#) Recheck the position with the grinding wheel. [\(See fig. 3-6.\)](#)
- 5. Recheck alignment.** Grind at least three teeth without oil to sample the positions for left set, right set and raker teeth. Re-check the alignment, and make any new adjustments. Repeat the adjustments until no more adjustment is necessary.

When the position and advancement are correct, turn on the oil lubrication and grind each tooth. [\(See fig. 3-12.\)](#)

### 3.6 Deburr the blade after sharpening

Sharpening leaves tiny metal burrs on the back side of the teeth. New blades also have burrs. These burrs **must** be removed before the set is checked. If they are not removed, they may cause the toothset gauge to give false readings.

To remove burrs, drag a stick of hardwood across the blade *in the opposite direction* that the teeth cut. Repeat on the other face of the blade. (Use the weld in the blade as a reference point for starting and stopping.)

Cutting with the blade also removes burrs. If the blade you are about to set has been used after sharpening, you will not need to deburr it, but clean the blade before removing from the mill by running the water lube for 15 seconds. Remove the blade and wipe dry with a rag to prevent rusting.

### 3.7 Setting the blade

Tools needed:

- 4mm hex wrench
- 13mm open end wrench

Adjust the blade in the Sharp-'n-Set in the same manner as you would do for sharpening ([See 3.5 Sharpening.](#)), aligning the blade on the set screws. ([See fig. 3-14.](#))

Advance the blade until there is a left set tooth aligned with the left set screw as shown in [fig. 3-14](#) and [fig. 3-15](#). A right set tooth should also align on the right set screw.

Adjust the desired depth of the set on both left and right with a 4mm hex wrench. When the depth is set, tighten the locking nut with a 13mm open end wrench.

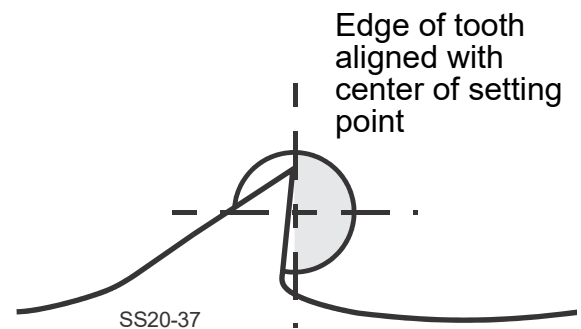


FIG. 3-14

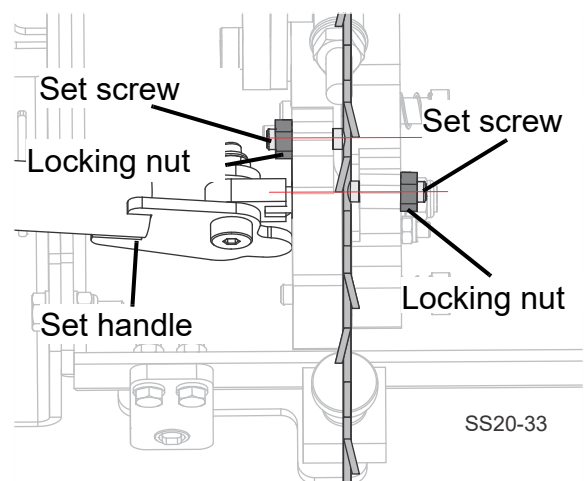
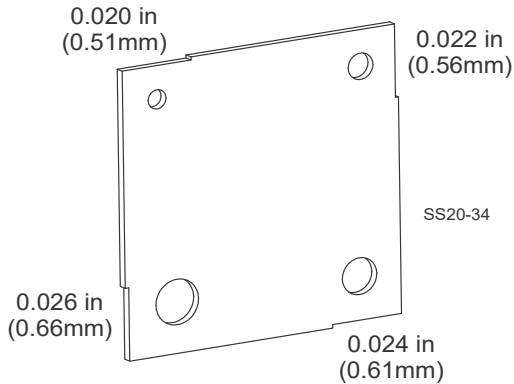
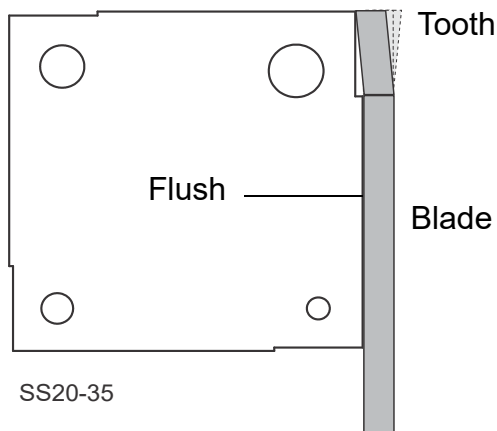


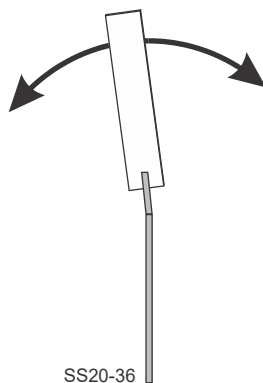
FIG. 3-15



**FIG. 3-16**



**FIG. 3-17**



**FIG. 3-18**

When left and right are set to the desired depth, lower the set handle. Advance the blade three teeth and repeat until the entire blade is set.

### 3.8 Checking the set

When enough teeth have been set and advanced so that you can apply the set gauge, check the set with the set gauge SS20-331 included with your Sharp-'n-Set.

1. Use the set gauge. The set gauge that comes with your Sharp-'n-Set has four standard set markings. Smallest to largest are:

- 0.020 in (0.51mm)
- 0.022 in (0.56mm)
- 0.024 in (0.61mm)
- 0.026 in (0.66mm)

They are denoted on the gauge by the small-to-large holes next to the appropriate corner. ([See fig. 3-16.](#))

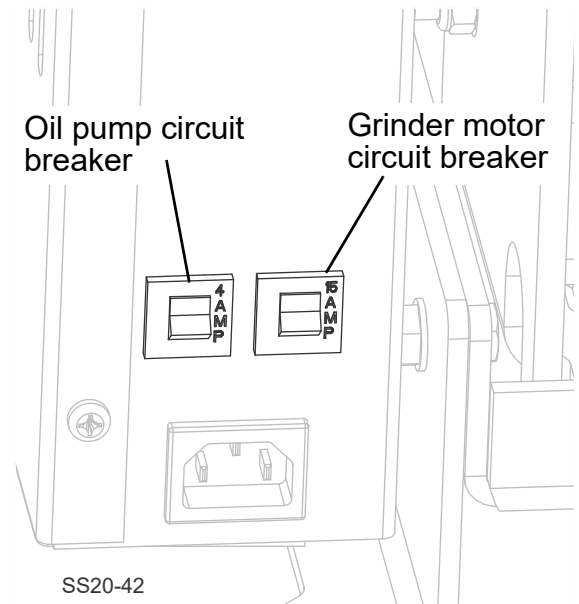
2. Place the gauge flush to the blade. The set is correct when the tip of the tooth makes contact with the appropriate depth mark. ([See fig. 3-17.](#))
3. If the set is not correct, it can be manually changed by using the set correction tool 004754 included with your Sharp-'n-Set. Place the tooth tip into the tool slot and bend the tooth until it reaches the proper set. ([See fig. 3-18.](#))
4. Readjust the set screws as described above, if necessary.

### 3.9 Blade Sharpening Tips

Before removing a blade from the sawmill, 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 the flow of oil through the assembly is strong.

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 in the control box to trip. If this happens, wait 15 seconds. Then turn it on (push circuit breaker down). ([See fig. 3-19.](#))



**FIG. 3-19**

## SECTION 4 MAINTENANCE

### 4.1 Maintaining your Sharp-'n-Set

Proper maintenance of your Sharp-'n-Set will result in years of good blade sharpening and setting. Maintenance is simple and easy. Keep the machine clean.

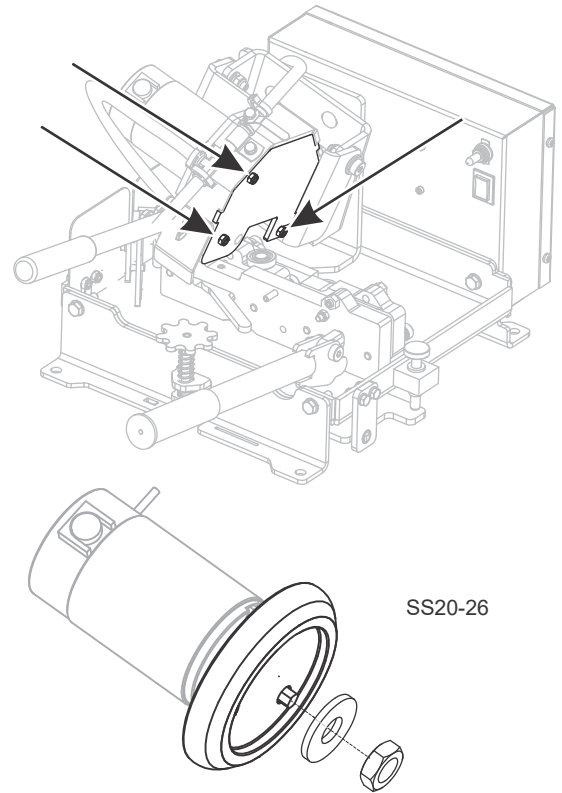
### 4.2 Grinding wheel replacement

Check the grinding wheel often and change as necessary.

The grinding wheel should be in good condition. Replace if worn, the edges look shiny, and/or the wheel is "burning" the blades.

1. To replace, shut down and lock out all power to the machine.
2. Remove the grinding wheel cover.
3. Remove the grinding wheel nut, washer plate and grinding wheel.
4. Install the new grinding wheel. Reinstall the washer plate and nut.
5. Reinstall the grinding wheel cover.

[\(See fig. 4-1.\)](#)



**FIG. 4-1**



### 4.3 Grinding Oil

Periodically check the oil level and refill with oil as necessary.

Clean the metal shavings from the magnetic filters after every use.

### 4.4 Periodic maintenance

Daily (8 Operating hours):



- Wipe the Sharp-'n-Set dry, remove the blade, lower the head, and unplug the machine after each day's use.
- Keep clean of dirt, rust, and metal filings.
- Check the blade clamp regularly and clean out any buildup that might cause it to not clamp the blade firmly.

Weekly (40 Operating hours):

- Clean the grinding wheel.
- Clean sediment from the oil pan and filter magnets as needed.
- Keep the oil at such a level that the pump intake hose is completely covered with the oil.
- Replace the oil completely every six months. Dispose of worn-out oil in compliance with applicable regulations.

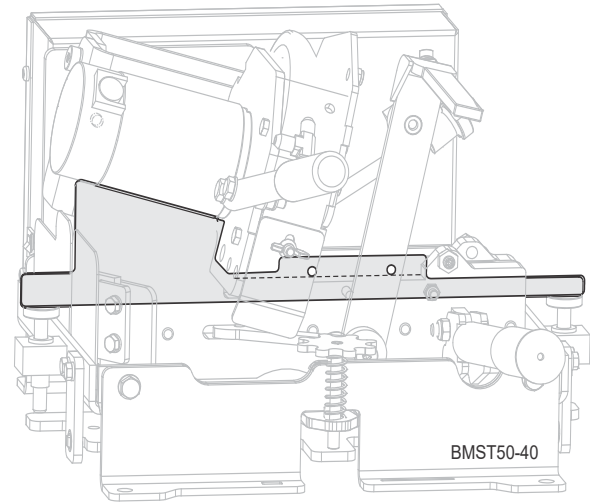
Monthly (160 Operating hours):

- Check motor and indexer brushes.
- Check plugs and switches.

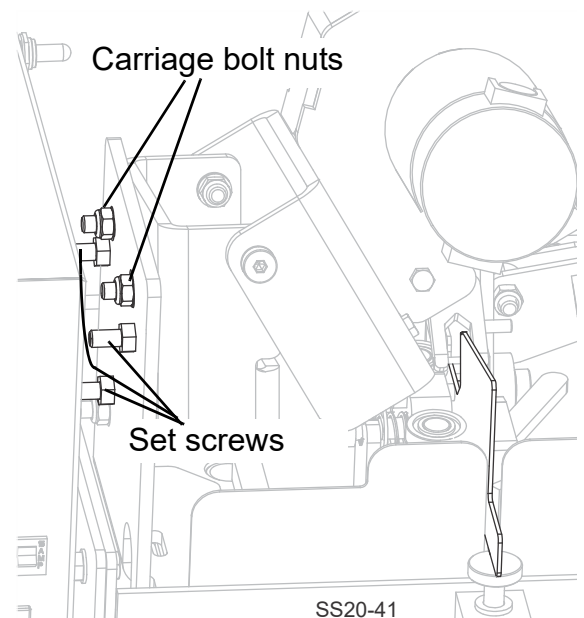
## 4.5 Adjusting the grinding angle

The Sharp-'n-Set is set at the factory to the proper cutting angle. If, for any reason, the angle becomes misaligned, it can be reset using the angle gauge plate SS20-999 provided.

1. Place the angle gauge in the blade slot.
2. Press the angle gauge flat against the main block.
3. With the adjustment set screw in front, raise the angle gauge until the reference holes just clear the main block.
4. Lower the grinder to the lowest position, touching the main block.
5. Fit the angle gauge in until it makes contact with the motor and motor housing. ([See fig. 4-2.](#))
6. If the motor and housing does not align properly, then loosen the two upper carriage bolt nuts where the motor housing bracket attaches to the base. ([See fig. 4-3.](#))
7. Pivot motor housing until it aligns with the angle gauge.
8. If adjustments front-to-back are needed, the set screws may be adjusted by loosening the lock nut and finger-tightening them into the proper position. Re-tighten the lock nuts.
9. Re-check the alignment and repeat this procedure as necessary.



**FIG. 4-2**



**FIG. 4-3**

## SECTION 5 REPLACEMENT PARTS

### 5.1 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.

See the sample table below. Sample Part #A01111 includes part F02222-2 and subas-sembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. Subassembly K05555 includes parts M06666 and F07777-77.

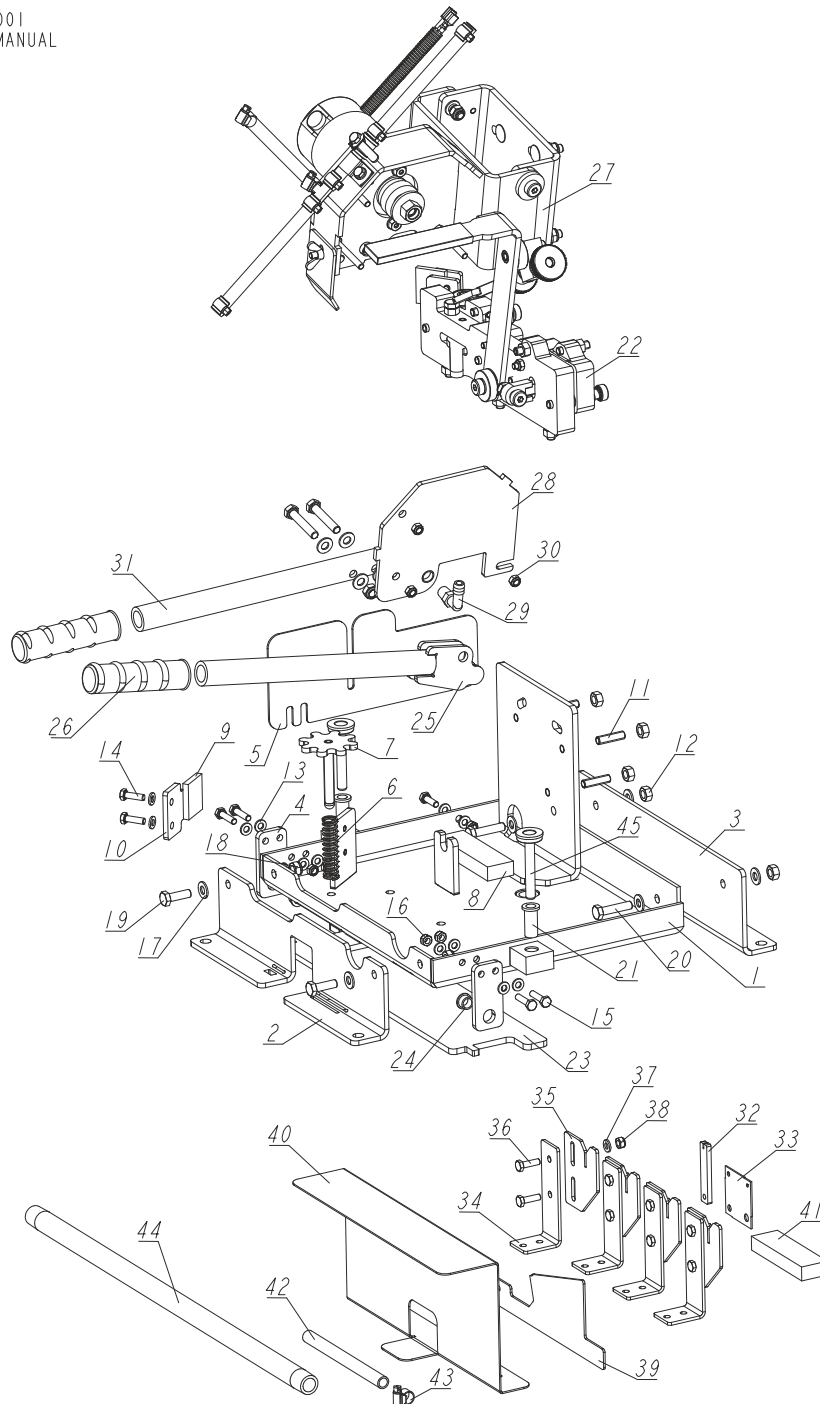
<b>5.2 Sample Assembly</b>			
<b>REF.</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY</b>
	Sample Assembly, Complete (Includes All Indented Parts Below)	A01111	1
<b>1</b>	Sample Part	F02222-22	1
	Sample Subassembly (Includes All Indented Parts Below)	A03333	1
<b>2</b>	Sample Part	S04444-4	1
	Sample Subassembly (Includes All Indented Parts Below)	K05555	1
<b>3</b>	Sample Part	M06666	2
<b>4</b>	Sample Part	F07777-77	1

# 5 REPLACEMENT PARTS

Base Assembly

## 5.3 Base Assembly

524736\_001  
524736\_MANUAL



REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
-	<b>BMST50PL SHARPENER &amp; SETTER</b>	524736	1
-	BASE ASSEMBLY	524598	1
1	BASE	524596-1	1

# REPLACEMENT PARTS

Base Assembly

5

REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
2	GUARD, FRONT	524597-1	1
3	GUARD, REAR	524599-1	1
4	PLATE, PIVOT SUPPORT	524600-1	2
5	PLATE, SHARPENER GUARD	524601-1	1
6	SPRING, .60ODX2-1/2X.098 WIRE	066816	1
7	KNOB, HEIGHT ADJUSTMENT	524604-1	1
8	MAGNET, 100X30X15 SHARPENER OIL FILTER	516192	1
9	SWEEPER, OIL	524605	1
10	RETAINER, SWEEPER	524602-1	1
11	SCREW, M8X30 DIN 913 A2-70 STAINLESS STEEL SET	F81014-8	3
12	NUT, M8-8-B HEX ZINC	F81032-1	5
13	WASHER, 6.4 FLAT ZINC	F81053-1	12
14	BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZINC	F81001-2	3
15	BOLT, M6X25-8.8 HEX HJEAD FULL THREAD ZINC	F81001-3	4
16	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	5
17	WASHER, 8.4 FLAT ZINC	F81054-1	8
18	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	2
19	BOLT, M8X25-8.8-B HEX HEAD FULL THREAD ZINC	F81002-5	2
20	BOLT, M8X35-8.8 HEX HEAD FULL THREAD ZINC	F81002-13	2
21	BUSHING, 3/8 ID X 1/2 OD X 1-1/4	SS20-921	2
22	ASSEMBLY, SHARP/SET BLOCK	524618	1
23	PLATE, BLADE HEIGHT ADJUSTMENT	524737-1	1
24	BUSHING, 10MMIDX13MMODX8MM	SS20-923	2
-	HANDLE, SETTER - COMPLETE	526219	1
25	HANDLE, SETTER	524740-1	1
26	GRIP, HANDLE (ESSENTA PART NO. 10126)	524767	1
27	MOUNT ASSEMBLY, SHARPENER MOTOR	524746	1
	MOUNT ASSEMBLY, SHARPENER MOTOR CE	528492	1
28	GUARD, GRINDING WHEEL	524750-1	1
29	BARB, 3/8 IN HOSE X 1/4 ML NPT ELB	P04730	1
30	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	3
31	HANDLE ASSEMBLY, SHARPENER	524753	1
-	ITEMS PROVIDED WITH THE MACHINE	524762	1
32	TOOL, SET CORRECTION	524755	1
33	TOOL, QUICK SET CHECK	524756	1
-	SUPPORT ASSEMBLY, BLADE	524757	4
34	BASE, BLADE STAND	524758-1	1
35	PLATE, BLADE STAND	524759-1	1
36	BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZINC	F81001-2	2
37	WASHER, 6.4 FLAT ZINC	F81053-1	2
38	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	2
39	GAUGE, ANGLE	524760-1	1

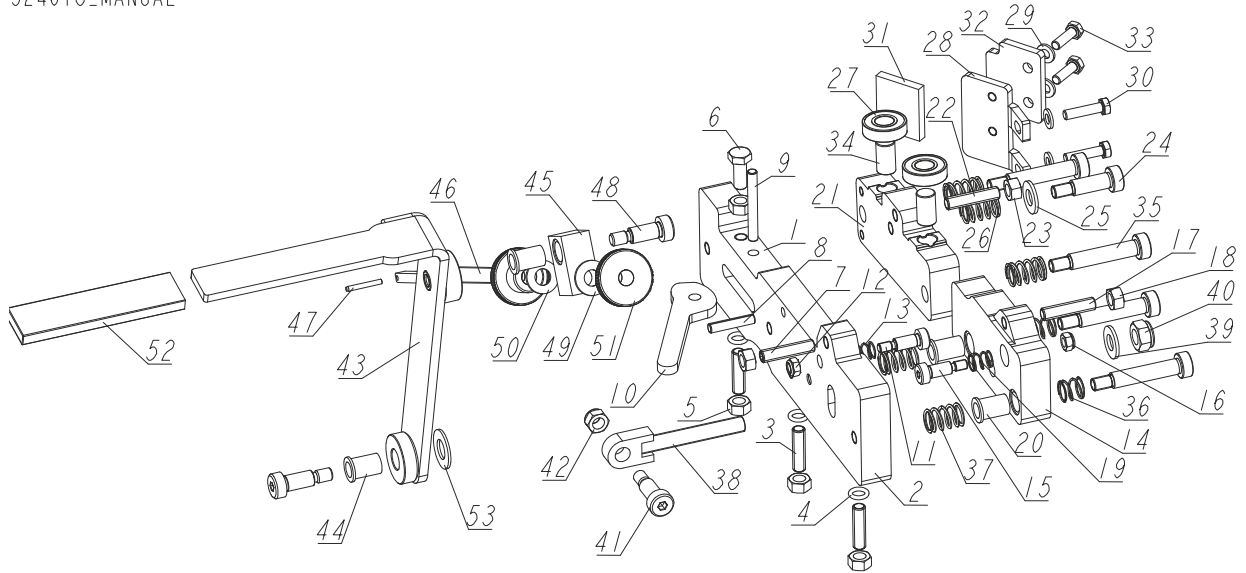
**5****REPLACEMENT PARTS***Base Assembly*

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REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY	
40	GUARD, BLADE	524761-1	1	
41	MAGNET, 100X30X15 SHARPENER OIL FILTER	516192	1	
42	HOSE, WATER LUBE STOCK	R01885	1	
43	CLAMP 8-12	F81080-1	1	
44	PIPE, DRAIN	524763	1	
45	PIN, BLADE HEIGHT ADJUSTMENT	524754	2	

5.4 Sharp/Set Block Assemblies

524618\_001  
524618\_MANUAL



REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
-	<b>ASSEMBLY, SHARP/SET BLOCK</b>	524618	1
1	BLOCK ASSEMBLY, MAIN	524609	1
2	PLATE, MAIN	524607-1	1
3	SCREW, M8X30 DIN 913 A2-70 STAINLESS STEEL SET	F81014-8	3
4	O-RING, OR 8X2.5 CX	524608	3
5	NUT, M8-8-B HEX ZINC	F81032-1	5
6	BOLT, M8X20-8.8 HEX HEAD FULL THREAD ZINC	F81002-1	1
7	SCREW, M8X35 DIN 913 A2-70 STAINLESS STEEL SET	F81014-9	1
8	PIN, 6X30 ROLL ZINC	F81045-7	1
9	PIN, 6X50 ROLL ZINC	F81045-1	1
10	LEVER, BLADE CLAMP	524610-1	1
11	BOLT, 8/M6X16-12.9 ISO 7379 SHOULDER	F81001-70	1
12	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	1
13	SPRING, 10.67MMOD X 12.7MM LX.89MM WIRE	SS20-937	1
-	<b>CLAMP ASSEMBLY, SETTER</b>	524612	1
14	PLATE, SETTER	524611-1	1
15	BOLT, 8/M6X16-12.9 ISO 7379 SHOULDER	F81001-70	1
16	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	1
17	SCREW, M8X35 DIN 913 A2-70 STAINLESS STEEL SET	F81014-9	1

## 5

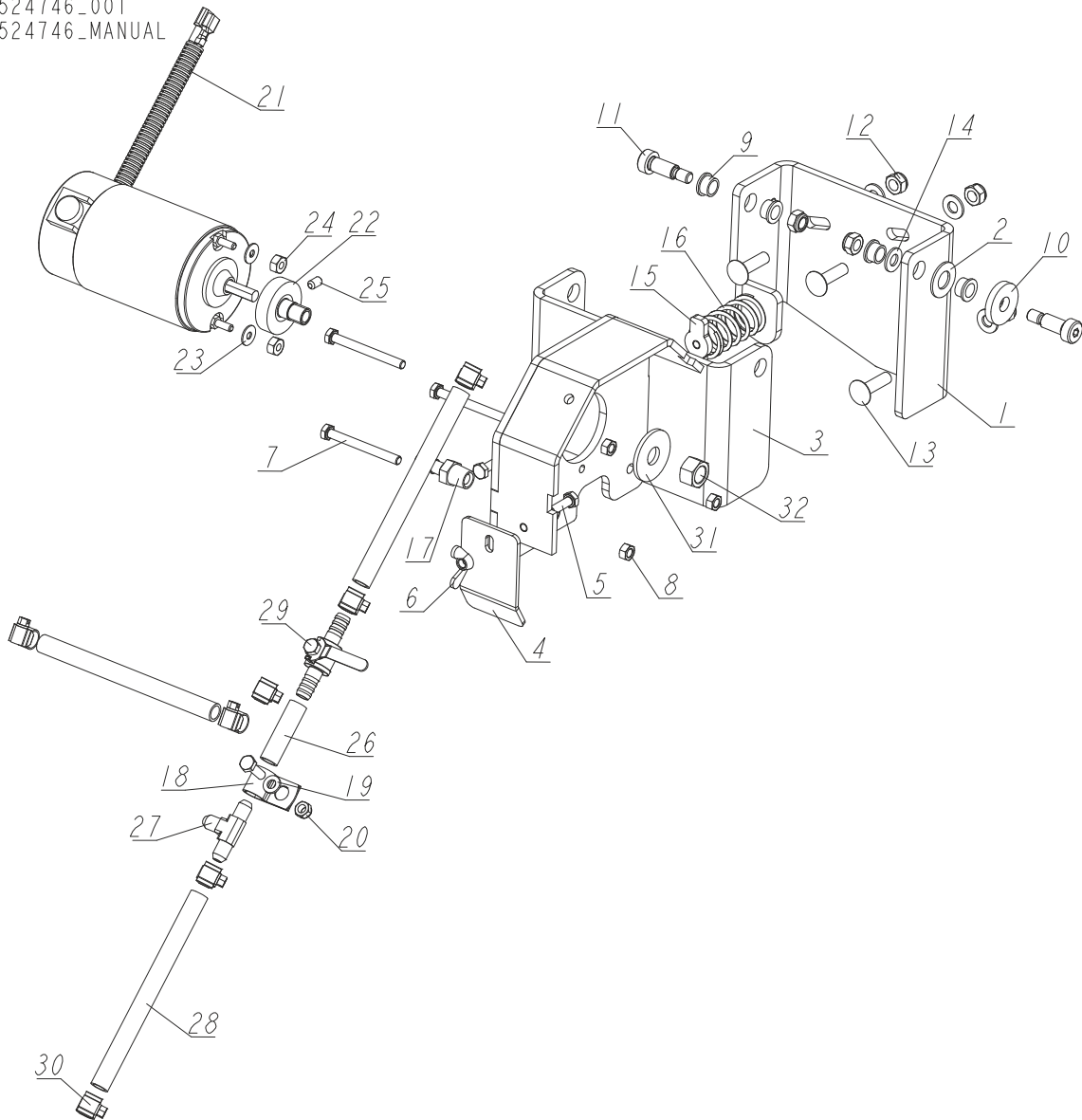
**REPLACEMENT PARTS***Sharp/Set Block Assemblies*

REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
18	NUT, M8-8-B HEX ZINC	F81032-1	1
19	SPRING, 10.67MMOD X 12.7MM LX.89MM WIRE	SS20-937	1
20	BUSHING, 10MMIDX13MMODX20MM	SS20-922	2
-	PLATE, SHARPENER	524615	1
21	PLATE, SHARPENER CLAMP	524614-1	1
22	SCREW, M8X35 DIN 913 A2-70 STAINLESS STEEL SET	F81014-9	1
23	NUT, M8-8-B HEX ZINC	F81032-1	1
24	BOLT, 10/M8X25 12.9 ISO7379 SHOULDER	F81003-77	1
25	WASHER, 10.5 FLAT ZINC	F81055-1	1
26	SPRING, 14MMODX24MMLX1.6MM WIRE	SS20-936	1
27	BEARING, 6001 2RSR (FAG, SKF)	087893	2
28	PLATE, SWEEPER RETAINER REAR	524617-1	1
29	PODKŁADKA 6.4 FE/ZN5 PN-78/M-82005	F81053-1	4
30	ŚRUBA M6X25-8.8 FE/ZN5 PN-85/M-82105	F81001-3	2
31	SWEEPER, OIL	524605	1
32	RETAINER, SWEEPER	524602-1	1
33	ŚRUBA M6X20 8.8 FE/ZN5 PN-85/M-82105	F81001-2	2
34	SHAFT, SHARPENER PLATE	524616	2
35	BOLT, 10/M8X45 12.9 ISO7379 SHOULDER	F81003-126	4
36	SPRING, 13.7MMODX12.7MMLX1MM WIRE	SS20-943	2
37	SPRING, 14MMODX24MMLX1.6MM WIRE	SS20-936	4
38	WELDMENT, ROD END	524621-1	1
39	WASHER, 10.5 FLAT ZINC	F81055-1	1
40	NUT, M10-8-B HEX NYLON ZINC LOCK	F81033-1	1
41	BOLT, 10/M8X20-12.9 BOSSARD SHOULDER	F81003-99	1
42	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	1
-	PUSH PAWL ASSEMBLY	524735	1
43	HANDLE, PUSH PAWL	524628-1	1
44	BUSHING, 10MMIDX13MMODX20MM	SS20-922	2
45	BLOCK, PUSH PAWL	524624-1	1
46	FORK, PUSH PAWL	524622-1	1
47	PIN, 3M6X24 DIN6325 HRC60 DOWEL	F81048-9	1
48	BOLT, 10/M8X20-12.9 BOSSARD SHOULDER	F81003-99	2
49	WASHER, BELLEVILLE .4IDX.875ODX.075H	F05011-139	1
50	WASHER, 10.5 FLAT ZINC	F81055-1	1
51	NUT, DIN466-M10 GANTER-GRIFF PUSH PAWL ADJUSTMENT	087375	2
52	SLEEVE, VINYL GUARD	086875	1
53	WASHER, THRUST BUSHING	SS20-983	1



### 5.5 Motor Mount Assembly

524746\_001  
524746\_MANUAL



REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
-	<b>MOUNT ASSEMBLY, SHARPENER MOTOR</b>	524746	1
-	<b>MOUNT ASSEMBLY, SHARPENER MOTOR CE</b>	528492	1
1	PLATE, SHARPENER	524741-1	1
2	WASHER, THRUST BUSHING	SS20-983	1
3	MOUNT WELDMENT, MOTOR	524745-1	1

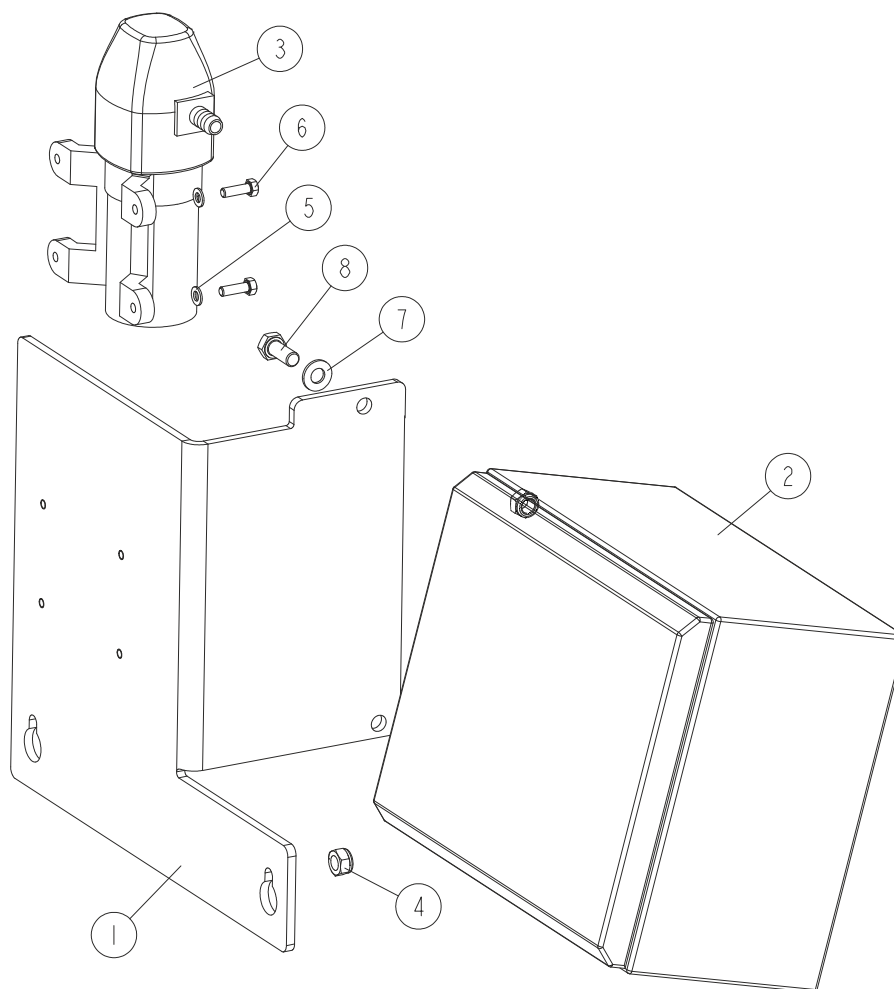
## 5

**REPLACEMENT PARTS***Motor Mount Assembly*

REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY	
4	PLATE, GUARD	524747-1	1	
5	BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZINC	F81001-2	3	
6	NUT, M6 FE/ZN5 PN-M/82439 WING	F81032-3	1	
7	BOLT, M6X60-8.8 HEX HEAD FULL THREAD ZINC	F81001-9	3	
8	NUT, M6 8 HEX ZINC	F81031-1	3	
9	BUSHING, 10MMIDX13MMODX8MM	SS20-923	4	
10	WASHER, 10.5/30-5	505156-1	1	
11	BOLT, 10/M8X20-12.9 BOSSARD SHOULDER	F81003-99	2	
12	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	5	
13	BOLT, M8X30-8.8 CARRIAGE ZINC (DIN 603)	F81002-69	3	
14	WASHER, 8.4 FLAT ZINC	F81054-1	4	
15	CLAMP, SPRING HOLD DOWN	524748-1	1	
16	SPRING, 1.1ODX2LX.112 WIRE	SS20-938	1	
17	FITTING, 3/8 BARB 1/4NPT MALE	P04682	1	
18	CLAMP, 1/2EMT COATED	P07584	1	
19	WASHER, 6.4 FLAT ZINC	F81053-1	1	
20	NUT, A M6-8-B HEX NYLON ZINC LOCK	F81031-2	1	
-	ASSY, MOTOR 12VDC	SS20-952	1	
-	ASSY, MOTOR 12VDC/3700RPM/1/7HP <b>CE</b>	528491	1	
21	ASSY, MOTOR AND CABLE	SS20-984	1	
	MOTOR, 12VDC CURRENT APPLICATION, 3700RPM, 1/7H <b>CE</b>	528485	1	
22	ADAPTOR, WHEEL 12V MOTOR	SS20-917	1	
23	WASHER, #10 SAE FLAT	F05011-18	2	
24	NUT, #10-32 HEX	F05010-27	2	
25	SCREW, M6-1 X 10 SH CUP PT SET	F05020-16	1	
26	HOSE, WATER LUBE STOCK	524749	1	
27	FITTING 3/8 TEE BARB	015485	1	
28	HOSE, WATER LUBE STOCK	R01885	3	
29	VALVE, 1/4TURN BALL 3/8 HOSE BARBS	065635	1	
30	CLAMP, 8-12	F81080-1	7	
31	WASHER, 13 SPECIAL FLAT ZINC	F81056-14	1	
32	NUT, M12-8-B HEX ZINC	F81034-1	1	
	GRINDING WHEEL, CBN 10/30, BORAZON COATED	030381-1	1	

## 5.6 Electric Box w/Pump

526248\_001  
526248\_MANUAL



REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
-	<b>ELECTRIC BOX W/LUBE PUMP</b>	526248	1
1	BRACKET, MOUNT	518726-1	1
2	BOX, BMST50 ELECTRIC	517368	1
	DECAL, BMST50 ELECTRIC BOX	533521	1
3	PUMP, 12V FEED	033491	1
4	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	4
5	WASHER, 5.3 FLAT ZINC	F81052-1	4
6	BOLT, M5X16-8.8 HEX HEAD FULL THREAD ZINC	F81000-51	4
7	WASHER, 8.4 FLAT ZINC	F81054-1	2
8	BOLT, M8X20-8.8 HEX HEAD FULL THREAD ZINC	F81002-1	2

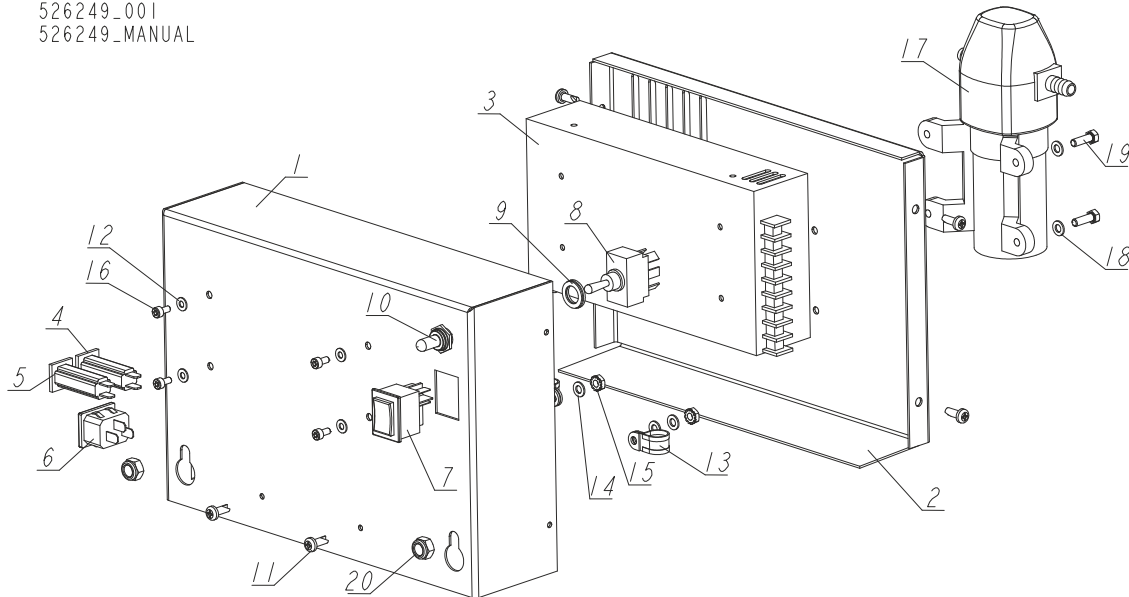
# 5

## REPLACEMENT PARTS

Electric Box w/Pump (USA)

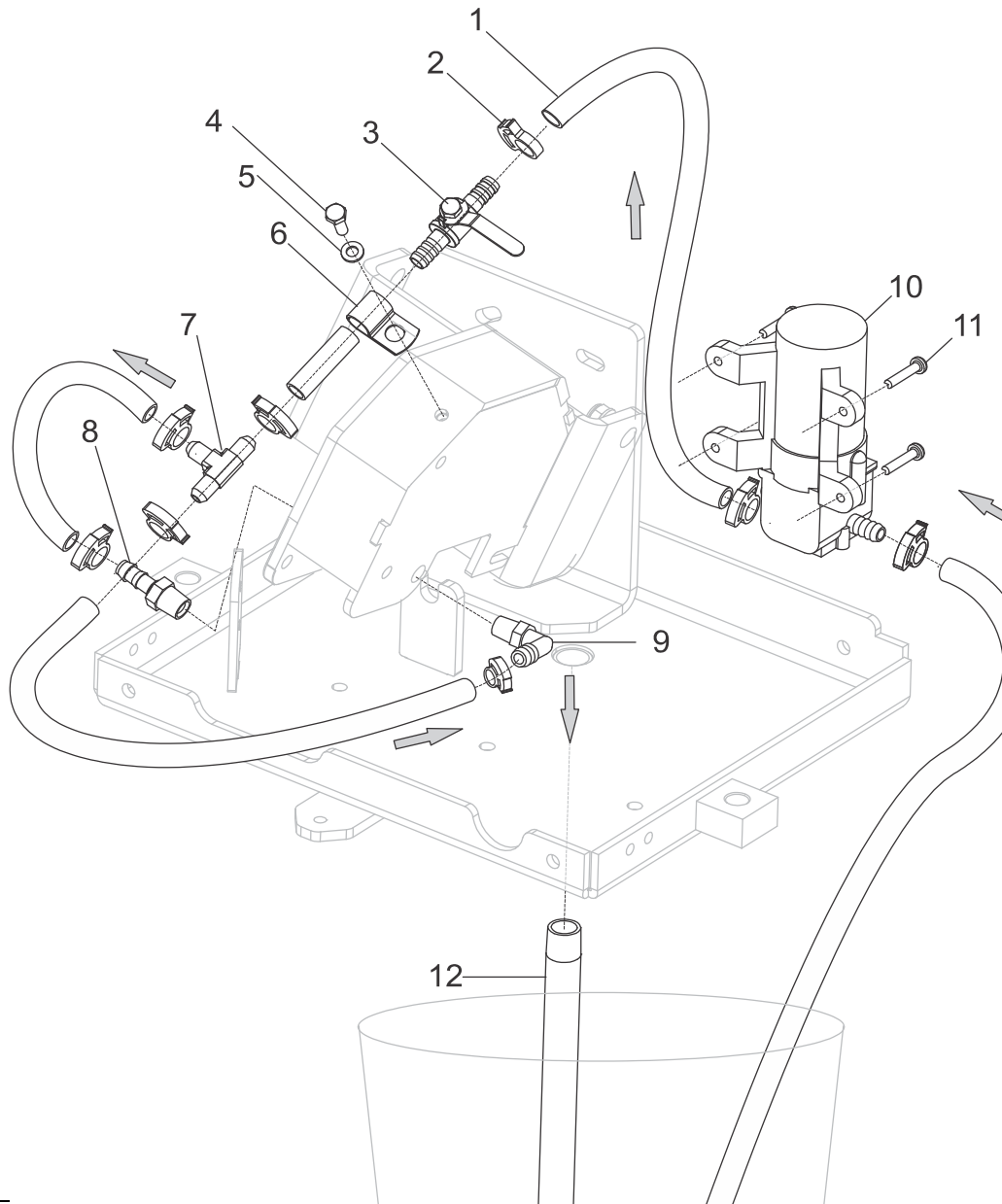
### 5.7 Electric Box w/Pump (USA)

526249\_001  
526249\_MANUAL



REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
-	<b>ZELECTRIC BOX W/PUMP (USA)</b>	526249	1
-	BOX, ELECTRIC (USA)	524766	1
1	BOX WELDMENT, ELECTRIC (USA)	524765-1	1
2	COVER, ELECTRIC BOX (USA)	524764-1	1
3	POWER SUPPLY, 12VDC 320W CHASSIS-MOUNT	053592	1
4	BREAKER, 4A PANEL MOUNT	068334	1
5	BREAKER, 15 AMP PANEL MOUNT	E10698	1
6	RECEPTACLE, POWER ENTRY	060216	1
7	SWITCH, I/O ROCKER	060515	1
8	SWITCH, DPDT ON/OFF/ON 15A TOGGLE	024588	1
9	WASHER, 1/2X3/4X1/16 NYLON	P05251-1	1
10	BOOT, SWITCH SEALING	024589	1
11	BOLT, #10-24X1/2 PH	F05015-17	6
12	PODKLADKA 4.3 FE/ZN5 PN-78/M-82005	F81051-2	4
13	CLAMP, RSGU 1.10/12W1 METAL & RUBBER	086861	2
14	WASHER, 5.3 FLAT ZINC	F81052-1	3
15	NUT, #10-24 KEPS	F05010-14	2
16	SCREW, M4X8 8.8 HEX SOCKET HEAD CAP ZINC	F81011-36	4
17	PUMP, 12V FEED	033491	1
18	WASHER, 5.3 FLAT ZINC	F81052-1	4
19	BOLT, M5X16-8.8 HEX HEAD FULL THREAD ZINC	F81000-51	4
20	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	2

5.8 Lube System



REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
1	Tubing, Lube <sup>1</sup>	R01885	247 cm
2	Hose Clamp, Single Snap Grip	F81080-1	8
3	Valve, 1/4 Turn Ball 3/8 Hose Barbs	065635	1
4	Bolt, M6 x20-8.8 Hex Head Full Thread Zinc	F81001-2	1
5	Washer, 6.4 Flat Zinc	F81053-1	1
6	Clamp, 1/2EMT Coated	P07584	1
7	Fitting, 3/8 Barb Tee	015485	1
8	Fitting, 3/8Barb 1/4NPT Male, Nylon	P04682	1

## 5

**REPLACEMENT PARTS***Lube System*

REF.	DESCRIPTION (* Indicates Parts Available in Assemblies Only)	PART #	QTY
9	Barb, 3/8IN. Hose X 1/4 NPT NylElbow	P04730	1
10	Pump, 12VDC Feed	033491	1
	Fitting, 12VDC Feed Pump <sup>2</sup>	074750	1
11	Bolt, M5x16-5.8 Hex Head Full Thread Zinc	F81000-51	4
12	Pipe, Drain	524766	1
13	Magnet, Filter	516192	1

<sup>1</sup> Tubing is cut to length and assembled at the factory.

**Oil not included. It must be purchased separately by ordering 010740 Oil, 19l #Grindeze 150C w/Label.**

<sup>2</sup> Fitting comes with the pump, but can be ordered separately.



**EC declaration of conformity**  
according to EC Machinery Directive 2006/42/EC, Annex II, 1.A

**Manufacturer:** Timbery Sp. z o.o.; Nagórna 112; 62-600 Koło, Poland

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Following machine in our delivered version complies with the appropriate essential safety and health requirements of the EC Machinery Directive 2006/42/EC based on its design and type, as brought into circulation by us. In case of alteration of the machine, not agreed by us, this declaration is no longer valid.

**We, the undersigned herewith declare, that:**

Designation of the machine: **Sharpener and Setter**  
Type: SNS20-100  
No. of manufacturer: .....

**Is in conformity with the following EC directives::**  
EC Machinery Directive 2006/42/EC  
EC Electromagnetic Compatibility Directive 2014/30/EU

**And is in conformity with the following Harmonized Standards:**  
PN-EN ISO 12100:2012  
PN-EN ISO 14120:2016-03  
PN-EN ISO 13849-1:2016-02  
PN-EN 60204-1:2010

Responsible for Technical Documentation: Radosław Adamkiewicz / Product Manager  
Timbery Sp. z o.o.  
62-600 Koło, Nagórna 112, Poland  
Tel. +48 63 26 26 047

Place/Date/Authorized Signature: Koło, 02.01.2016 *Radosław Adamkiewicz*

Title: Product Manager