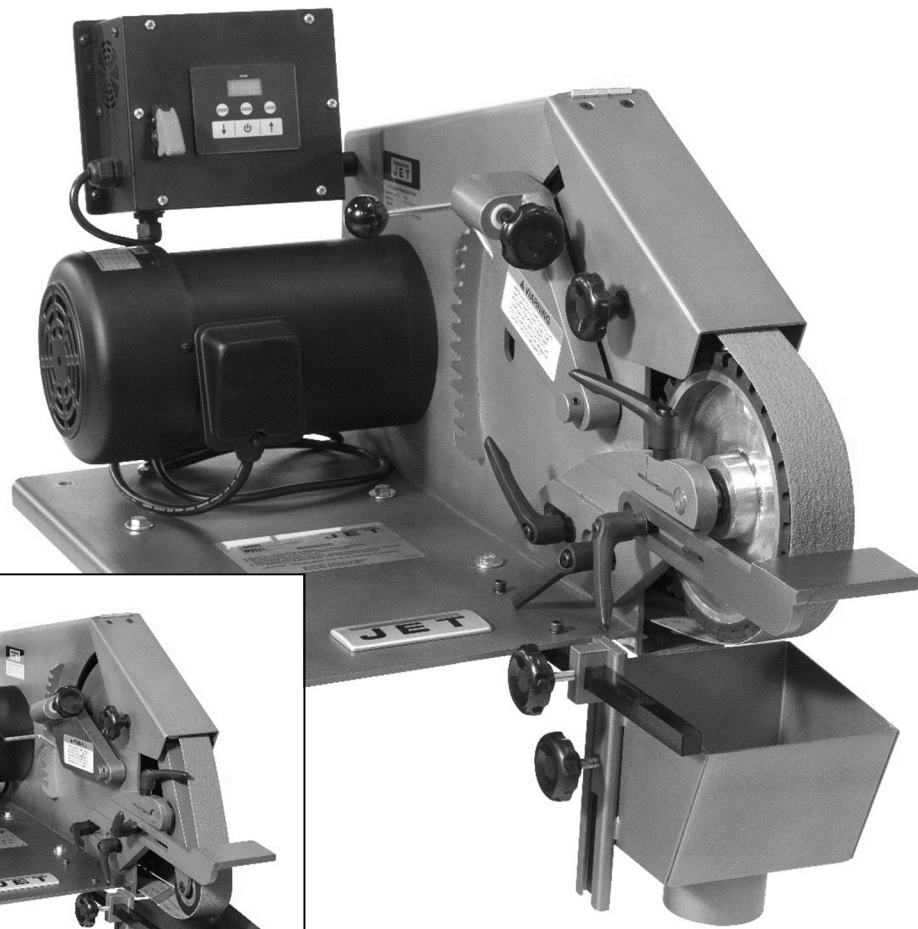




# Operating Instructions and Parts Manual

## 2 x 72-inch Square Wheel Belt Grinder

Model SWG-272, SWG-272VS



Variable speed model



Single speed model  
*shown with platen assembly*

**JET**  
427 New Sanford Road  
LaVergne, Tennessee 37086  
Ph.: 800-274-6848  
[www.jettools.com](http://www.jettools.com)

**Part No. M-577400**  
Edition 2 02/2021  
Copyright © 2020 JET



## 1.0 IMPORTANT SAFETY INSTRUCTIONS

- Misuse of this machine can cause serious injury.
- For safety, machine must be set up, used and serviced properly.
- Read, understand and follow instructions in the operator's manual and all labels affixed to the machine.

### When setting up machine:

- Always avoid using machine in damp or poorly lighted work areas.
- Always be sure machine is securely anchored to the floor or bench.
- Always keep machine guards in place.
- Always put start switch in OFF position before plugging in machine.

### When using machine:

- Never operate with machine guards missing.
- Always wear safety glasses with side shields (See ANSI Z87.1)
- Never wear loose clothing or jewelry.
- Never overreach – you may slip and fall into the machine.
- Never leave machine running while you are away from it.
- Always shut off the machine when not in use.

### When servicing machine:

- Always unplug machine from electrical power while servicing.
- Always follow instructions in operators and parts manual when changing accessory tools or parts.
- Never modify the machine without consulting JET.

### 1.1 Machinery general safety warnings

1. Always wear protective eye wear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from the breakage of the eye protection.
2. Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Contain long hair. Rubber soled, nonslip footwear is recommended for best footing.
3. Do not overreach. Failure to maintain a proper working position can cause you to fall into the machine or cause your clothing to get caught — pulling you into the machine.

4. Keep guards in place and in proper working order. Do not operate the machine with the guards removed.
5. Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lit.
6. Avoid accidental starts by being sure that the start switch is in the "OFF" position before plugging in the machine.
7. Never leave the machine running while unattended. The machine shall be shut off whenever it is not being used.
8. Disconnect the electrical power before servicing, whenever changing accessories or when general maintenance is done on the machine.
9. Maintain all machine tools with care. Follow all maintenance instructions for lubricating and the changing of accessories. No attempt shall be made to modify or have makeshift repairs done to the machine. This not only voids the warranty but also renders the machine unsafe.
10. If there is any risk of tipping or sliding, the machinery must be anchored to the floor.
11. Secure your work. Use clamps or a vise to hold your work, when practical. It is safer than using your hands and it frees both hands to operate the machine.
12. Never brush chips away while the machine is in operation.
13. Keep work area clean. Cluttered areas invite accidents.
14. Remove adjusting keys and wrenches before turning the machine on.
15. Use the right tool. Don't force a tool or attachment to do a job for which it was not designed.
16. Use only recommended accessories and follow manufacturer's instructions pertaining to them.
17. Keep hands in sight and clear of all moving parts and cutting surfaces.
18. All visitors should be kept at a safe distance from the work area. Make your workshop completely safe by using padlocks, master switches, or by removing starter keys.
19. Know the tool you are using; its application, limitations, and potential hazards.
20. This machine must be grounded in accordance with the National Electrical Code and local codes and ordinances. The work should be done by a qualified electrician. The machine should be grounded to protect the user from electrical shock.

## 1.2 Safety requirements for abrasive grinding machines

Abrasive grinding can be hazardous to operators and bystanders. Grinding sparks, chips and dust particles thrown off by the grinding disc or belt can cause serious injury by contact or inhalation. To avoid such injuries you must comply with the following safety requirements:

1. Always wear protective eyewear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1.
2. Wear leather safety gloves, arm guards, leather aprons and safety shoes.
3. A dust collection system is recommended, Operator shall also wear a dust mask at all times. See Figure B, below.
4. Additional precautions may be necessary for grinding materials which are flammable or have other hazardous properties. You should always consult the manufacturer of such materials for instructions on grinding and handling.
5. Do not force or jamb the workpiece into the grinding disc/belt.
6. Before grinding, always allow the motor to come up to operating speed, then check the grinding disc for wobble, runout, or any unbalanced condition. If the disc is not operating accurately and smoothly, immediately stop the motor and make repairs before attempting any grinding operations.
7. Abrasives must be stored in a controlled environment area. Relative humidity should be 35% to 50% and the temperature should be between 60 and 80 degrees Fahrenheit. Failure to do so could cause premature abrasive failure.
8. Examine the face of the grinding disc/belt carefully. Excessive grinding which wears down to the backing material can tear the abrasive.

9. Never use an abrasive which shows backing, nicks or cuts on the surface or edge or damage due to creasing or poor handling.
10. Always present the workpiece to the wheel while resting the workpiece firmly on the table. Failure to do so could result in damage to the workpiece or throwing of the workpiece off the wheel.
11. Safety shoes which comply with ANSI Z41.1 shall be worn. See Figure C.
12. Personal hearing protection such as ear plugs or ear muffs shall be used to protect against the effect of noise exposure. See Figure D.

**⚠ WARNING:** This product can expose you to chemicals including lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov>.

**⚠ WARNING:** Some dust, fumes and gases created by power sanding, sawing, grinding, drilling, welding and other construction activities contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead based paint
- crystalline silica from bricks, cement and other masonry products
- arsenic and chromium from chemically treated lumber

Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as dust masks that are specifically designed to filter out microscopic particles. For more information go to <http://www.p65warnings.ca.gov/> and <http://www.p65warnings.ca.gov/wood>.



Figure A

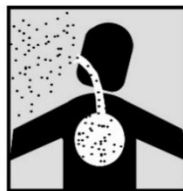


Figure B



Figure C



Figure D

Familiarize yourself with the following safety notices used in this manual:

**⚠ CAUTION** This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

**⚠ WARNING** This means that if precautions are not heeded, it may result in serious, or possibly even fatal, injury.

## 2.0 About this machine and manual


The JET SWG-series Square Wheel Belt Grinders are designed for grinding, deburring, chamfering, and internal/external grinding of small and large parts. The Grinders can be used to polish or buff finished parts and grind small internal radii using available accessories. Accessory changeover is quick and easy. Belt tension and tracking are easily adjustable.

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET Model SWG-series Square Wheel Belt Grinder. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions set forth in this document.

This document is not, however, intended to be an exhaustive guide to grinding operations or choice of metal stock. Consult machinery handbooks, web forums, or experienced users if additional information is needed. Safety of user and bystanders must always be first priority.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: [www.jettools.com](http://www.jettools.com).

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

** **WARNING** Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.**

Register your product using the mail-in card provided, or register online:  
<http://www.jettools.com/us/en/service-and-support/product-registration/>

## 3.0 Table of contents

Section	Page
1.0 IMPORTANT SAFETY INSTRUCTIONS .....	2
1.1 Machinery general safety warnings .....	2
1.2 Safety requirements for abrasive grinding machines .....	3
2.0 About this machine and manual .....	4
3.0 Table of contents .....	5
4.0 Specifications for SWG-series Grinders .....	6
4.1 Hole spacing, SWG-272 / -272VS .....	7
5.0 Setup and assembly .....	8
5.1 Contents of carton .....	8
5.1 Location .....	8
5.2 Installing work rest .....	8
5.3 Installing dust hood .....	8
6.0 Electrical connections .....	9
6.1 GROUNDING INSTRUCTIONS .....	9
6.2 Voltage conversion .....	9
6.3 Extension cords .....	10
7.0 Adjustments .....	10
7.1 Platen or Wheel installation .....	10
7.2 Platen wheel adjustment .....	10
7.3 Installing/replacing grinding belt .....	11
7.4 Belt tracking .....	11
8.0 Operation .....	12
8.1 Controls .....	12
8.2 Typical uses for the Square Wheel Belt Grinder .....	13
9.0 User-maintenance .....	14
9.1 Cleaning .....	14
9.2 Lubrication .....	14
9.3 Contact wheel replacement .....	14
9.4 Additional servicing .....	14
10.0 Optional accessories .....	14
11.0 Troubleshooting SWG-series Square Wheel Grinders .....	15
12.0 Replacement Parts .....	15
12.1.1 SWG-272 Square Wheel Belt Grinder – Exploded View .....	16
12.1.2 SWG-272 Square Wheel Belt Grinder – Parts List .....	17
12.2.1 SWG-272 Motor Assembly – Parts List and Exploded View .....	18
12.3.1 SWG-272 Push Button Switch Assembly – Parts List and Exploded View .....	19
12.4.1 SWG-272VS Square Wheel Belt Grinder – Exploded View .....	20
12.4.2 SWG-272VS Square Wheel Belt Grinder – Parts List .....	21
12.5 SWG-272VS Motor Assembly – Parts List and Exploded View .....	22
12.6 SWG-272VS Control Switch Assembly – Parts List and Exploded View .....	23
12.7 Idler Housing Casting Assembly (all models) – Parts List and Exploded View .....	24
12.8 Platen Assembly (all models) – Parts List and Exploded View .....	25
12.9 Contact Wheel Assembly (all models) – Parts List and Exploded View .....	26
12.10 Dust Hood Assembly (all models) – Parts List and Exploded View .....	27
13.0 Electrical Connections .....	28
13.1 Wiring diagram for SWG-272 .....	28
13.2 Wiring diagram for SWG-272VS .....	28
14.0 Warranty and Service .....	29

## 4.0 Specifications for SWG-series Grinders

Table 1

Model number	SWG-272	SWG-272VS
Stock number	577400	577405
<b>Motor and Electricals</b>		
Motor type	Totally enclosed industrial	Totally enclosed fan cooled, inverter
Horsepower	1 HP	
Motor phase	Single	3 phase motor (but single phase input to inverter)
Motor voltage	115/230 V (prewired 115V)	
Cycle	60 Hz	
Listed FLA (full load amps)	11 / 5.5 A	13 / 6.5 A
Motor speed	1,750 RPM	1800 RPM
Start capacitor	400MFD 125VAC	n/a
Run capacitor	45 $\mu$ F 350VAC	n/a
Power transfer	Direct drive	
On/off switch	Push button w/ power indicator and safety key	Toggle switch with safety cover; Membrane switch inverter panel
Power cord	SJT 16AWGx3C, 6 ft.	
Power plug	5-15P, 125V/15A installed	
Recommended circuit size <sup>1</sup>	15 A	
Sound emission <sup>2</sup>	80 dB at 3ft. without load	
<b>Base</b>		
Footprint, L x W	35-7/16 x 16-15/16 in. (900 x 430 mm)	
Mounting hole dimensions	Dia. 7/16 in. (11mm)	
<b>Belt Grinder</b>		
Belt included, L x W	50 grit; 72 x 2 in. (1829 x 50.8 mm)	
Belt speed, SFPM	4,600	2,000~6,200
Contact wheels included, Dia. x W	1-1/2 x 2 in. (38 x 50.8 mm) smooth 3 x 2 in. (76.2 x 50.8 mm) smooth 8 x 2 in. (203.2 x 50.8 mm) serrated	
Dust port diameter	3 in. (76.2 mm)	
<b>Main materials</b>		
Frame	Steel	
Contact wheel, 8-inch	Rubber, 90 Durometer	
Contact wheel, 3 x 2-inch	Rubber, 70 Durometer	
Contact wheel, 1.5 x 2-inch	Rubber, 70 Durometer	
Idler wheel	Rubber	
Drive wheel	Aluminum	
Platen	Steel	
Head casting	Cast iron	
<b>Dimensions</b>		
Overall dimensions L x W x H	35-7/16 x 17 x 21-1/4 in. (900 x 433 x 540 mm)	35-7/16 x 17 x 21-27/32 in. (900 x 433 x 555 mm)
Shipping dimensions L x W x H	34-1/4 x 21-1/4 x 22-7/16 in. (870 x 540 x 570 mm)	
<b>Weights</b>		
Net weight	126 lb. (57.27 kg)	131 lb. (59.54 kg)
Shipping weight	162 lb. (73.64 kg)	167 lb. (75.90 kg)

<sup>1</sup> subject to local/national electrical codes.

<sup>2</sup> The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

L = length, W = width, H = height, Dia. = diameter

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

#### 4.1 Hole spacing, SWG-272 / -272VS

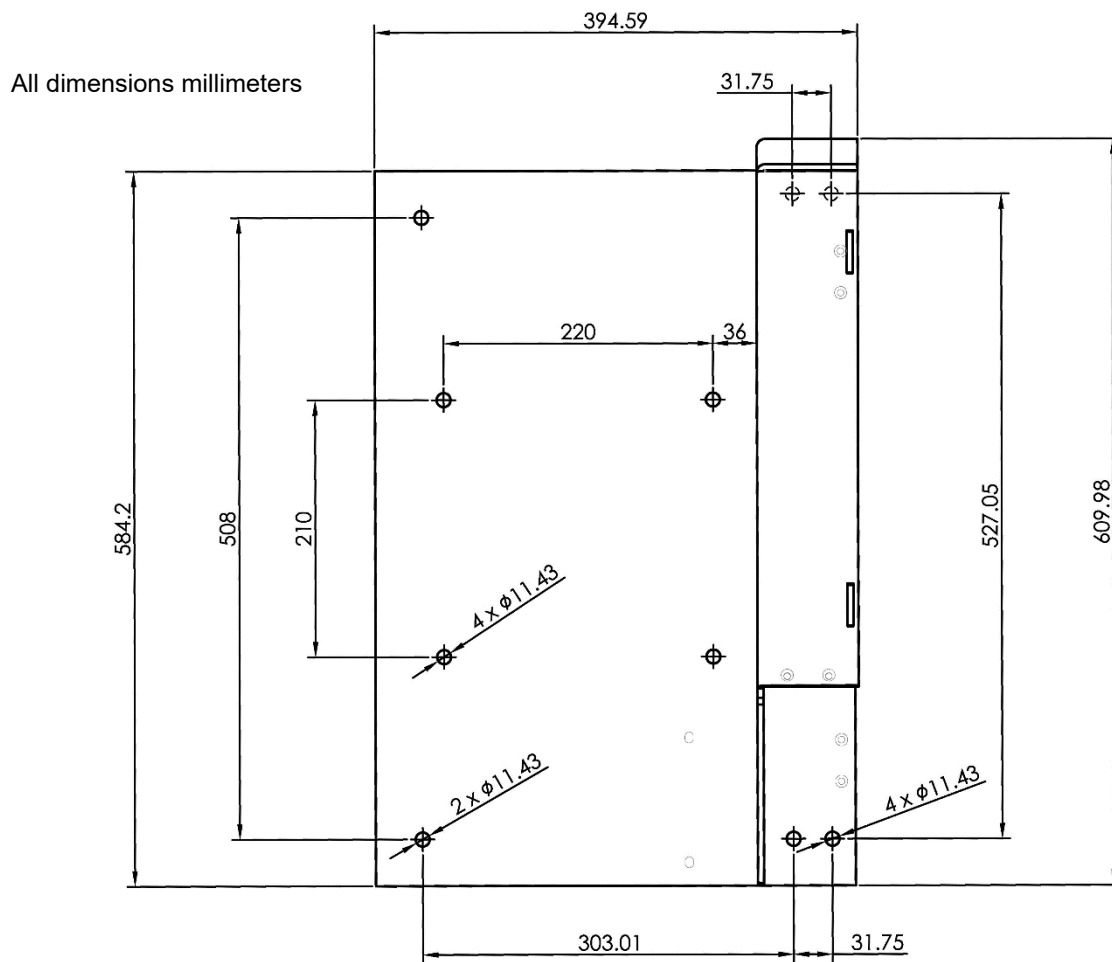


Figure 4-1

**⚠WARNING** Read and understand all assembly instructions before attempting assembly. Failure to comply may cause serious injury.

Note: Some illustrations in this manual may be representative only, and not show your specific model.

## 5.0 Setup and assembly

### 5.1 Contents of carton

- 1 Grinder
- 1 Serrated contact wheel 8"x2" (installed)
- 1 Abrasive belt (installed)
- 1 Operating Instructions and Parts Manual
- 1 Product registration card

Uninstalled accessories (Figure 5-1):

- 1 Work rest
- 1 Adjustable handle 3/8x3/4"
- 1 Flat washer 3/8"
- 1 Platen assembly
- 1 Rail
- 1 Channel slide
- 2 Hand knobs 5/16x1
- 2 Socket hd cap screws 1/4x1/2
- 2 Lock washers 1/4
- 1 Dust hood

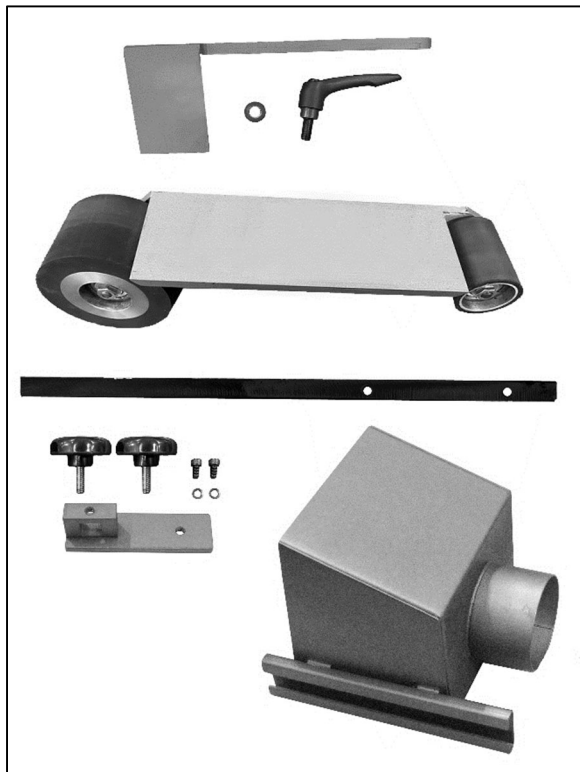


Figure 5-1: contents (not to scale)

### 5.1 Location

It is strongly recommended that the machine be secured to a bench or stand. The base has multiple holes (some are accessed behind the side panel) to accept fasteners for this purpose. Sect. 4.1 shows the hole patterns.

An optional JET stand is available for this machine. See sect. 10.0. Use the 4 holes in front of the motor to secure to this stand.

### 5.2 Installing work rest

The work rest mounts to a channel on left side of head casting. See Figure 5-2. Attach work rest with adjustable handle. Slide work rest inward until it is about 1/16 inch from front of contact wheel. Tighten cap screw.

### 5.3 Installing dust hood

It is recommended that the dust hood be used, and connected to a metal dust collection system by a 3-inch diameter hose secured with a hose clamp (not provided).

Assemble dust hood parts as shown in Figure 5-2. Also, secure the rail below the stand using the 2 socket head screws with lock washers (A, Figure 5-2). Slide the dust hood assembly onto the rail and tighten with the knobs.

The dust hood can be positioned as needed below the contact wheel.

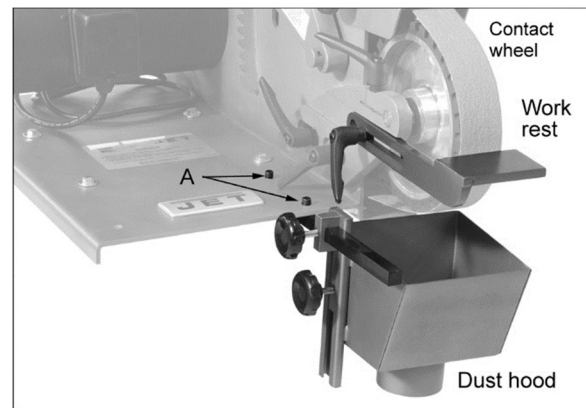


Figure 5-2: work rest and dust hood



## 6.0 Electrical connections

**⚠WARNING** Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

The SWG-272 and 272VS Square Wheel Grinder is pre-wired for 115V power. It may be converted to 230V power; see sect. 6.2.

It is recommended that the grinder be connected to a dedicated minimum 15-amp circuit with circuit breaker or fuse. If connected to a circuit protected by fuses, use time-delay fuse marked “D”. **Local codes take precedence over recommendations.**

### 6.1 GROUNDING INSTRUCTIONS

#### 1. All Grounded, Cord-connected Tools:

This machine must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Before connecting to power source, be sure the switch is in *off* position.

**⚠WARNING** Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Failure to comply may cause serious or fatal injury.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating **less than 150** volts:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in **A**, Figure 6-1. An adapter, shown in **B** and **C**, may be used to connect this plug to a 2-pole receptacle as shown in **B** if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet is available. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code, C22.1.

3. *Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating between 150 - 250 volts, inclusive:*

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in **D**, Figure 6-1. The tool is intended to be used with a grounding plug that looks like the plug illustrated in **D**. Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

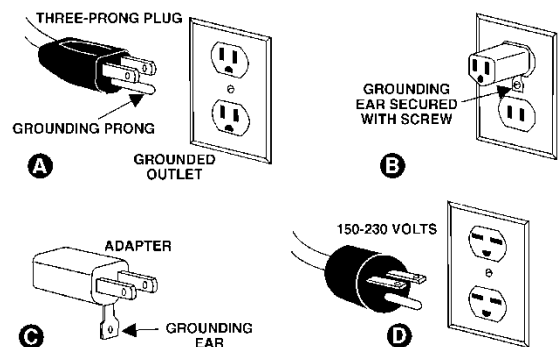


Figure 6-1

### 6.2 Voltage conversion

The grinder is prewired for 115 volt input power, but can be converted to 230 volt input, as follows.

#### 6.2.1 Single speed model (SWG-272)

1. Open motor junction box cover, and reconnect the leads according to diagram inside cover. See sect. 14.0 for similar diagram. (Note: In case of discrepancy, diagram on junction cover takes precedence.)
2. Remove existing plug from power cable and attach a UL/CSA listed plug designed for 230V power; or “hardwire” the machine directly to a panel. If hardwiring make sure a disconnect is provided for the operator.

### 6.2.2 Variable speed model (SWG-272VS)

1. Remove existing plug from power cable and attach a UL/CSA listed plug designed for 230V power; or “hardwire” the machine directly to a panel. If hardwiring make sure a disconnect is provided for the operator.

No internal rewiring is needed for the inverter to accept the new input voltage.

### 6.3 Extension cords

The use of extension cords is discouraged; try to position your machine within reach of the power supply. If an extension cord becomes necessary, make sure the cord rating is suitable for the amperage listed on the machine’s motor plate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

Use the chart in Table 2 as a general guide in choosing the correct size cord. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

#### Recommended Gauges (AWG) of Extension Cords

Amp Rating		Volts	Total length of cord in feet			
More Than	Not More Than	120	25	50	100	150
		240	50	100	200	300
			AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

Table 2

## 7.0 Adjustments

### 7.1 Platen or Wheel installation

**⚠WARNING** Move switch to OFF to avoid personal injury.

To install either the platen or the 8-inch serrated wheel:

1. Pull out on tension lever (shown in Figure 7-3) and lower it, to release tension on the belt.
2. Loosen knob and raise upper guard (see Figure 7-2). Open side panel by turning its knob and lowering panel on its hinges.
3. Loosen clamp handle on head casting. See Figure 7-1.
4. Install pivot shaft of platen (or shaft of wheel) all the way into head casting, as shown in Figure 7-1.

5. Position platen as desired:

- For grinding flat or angular workpieces, position platen with platen surface facing outward.
- For grinding of cylindrical workpieces, position platen with “yoke” side facing outward.

6. Set platen at desired angle and tighten clamp handle.

[See sect. 7.2 before installing belt, then return to step #7.]

7. Install and track the abrasive belt (see sect. 7.3 and 7.4).
8. Raise tension lever to set belt tension. **Do not overtighten.**
9. Bring upper guard down into position and adjust so that it will not contact abrasive belt. Tighten upper guard knob.
10. Adjust work rest to 1/16 inch from belt.

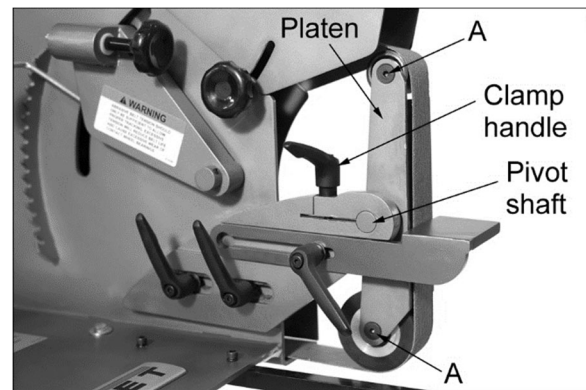


Figure 7-1: installing platen assembly

### 7.2 Platen wheel adjustment

The platen wheels have eccentric shafts, which allow adjustment of the wheels in relation to the platen, either flush to platen or according to user needs. See Figure 7-1a.

Remove the abrasive belt from the platen, and remove the work rest. Place a straight edge on the platen and across both wheels. Turn one or both shaft screws (A) as needed.



Figure 7-1a: wheel-to-platen adjustment

### 7.3 Installing/replacing grinding belt

**⚠WARNING** Do not operate machine with side panel open.

1. Lower belt tension lever (see Figure 7-3) to release tension on belt.
2. Loosen knob and raise upper guard (see Figure 7-2). Open side panel by turning its knob and lowering panel on its hinges.
3. If required, loosen work rest to provide clearance for belt removal.
4. Remove belt from drive wheel, idler wheel, and contact wheel. Install replacement belt centered over drive wheel, idler wheel, and contact wheel. Make sure direction arrows on belt match machine operation.
5. Raise belt tension lever to tighten belt against the wheels. Tighten belt until it is just taut. Do not over-tension the abrasive belt. A moderate tension will provide faster cutting, longer belt life, and better tracking.

**⚠CAUTION** Excessive belt tension will reduce belt life and cause excessive wear of contact wheel bearings. Belt tension should only be sufficient to allow proper tracking.

6. Check belt tracking; see sect. 7.4.

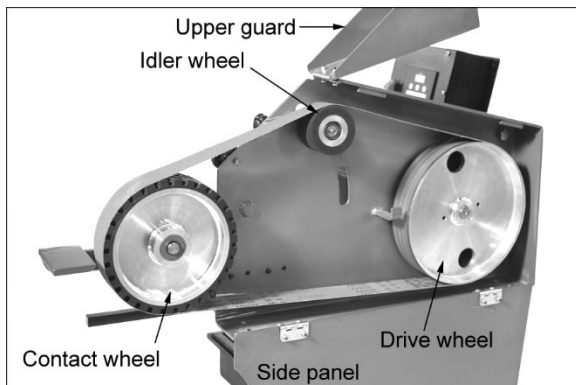


Figure 7-2: belt replacement

### 7.4 Belt tracking

**⚠WARNING** Do not operate machine with side panel open.

1. Loosen knob and raise upper guard. Open side panel by turning its knob.
2. Spin drive wheel by hand and check tracking of belt. If belt tracks to right or left, adjustment is required.
3. Turn idler adjust screw (Figure 7-3) clockwise to cause belt to track right. Turn idler screw counterclockwise to cause belt to track left. Perform this in small increments and allow belt to respond to the changes.
4. Close side panel and secure by turning knob on panel. Lower upper belt guard and secure with knob.
5. Turn on grinder. Check belt tracking; belt should remain centered on contact wheel. Make further adjustments as needed according to step #3.
6. If belt still does not track properly, increase belt tension and repeat steps 1 through 5.
7. The set screw in the idler casting (see Figure 7-3a) can be turned to adjust the angle of the idler, and make the belt completely parallel to the three wheels (contact, drive and idler).

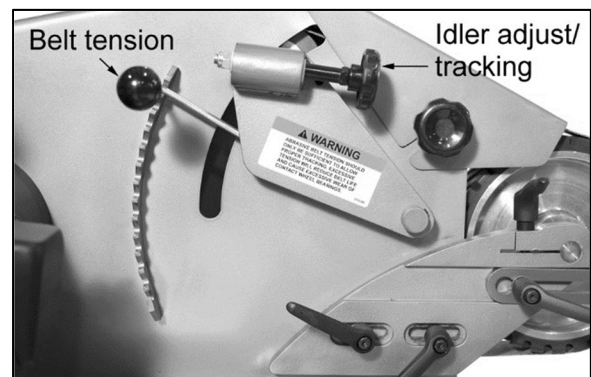


Figure 7-3: belt tracking



Figure 7-3a: set screw

## 8.0 Operation

### 8.1 Controls

#### 8.1.1 Variable speed model (SWG-272VS)

To activate machine, lift the red switch cover and pull up the toggle switch to start the machine. To stop, simply push down the red cover.

Press on/off button on keypad (Figure 8-1) to start or stop belt action. Press any of the numbered buttons to start machine at the designated speed. Press arrow buttons to change rotation speed in 100 RPM increments.

The digital readout displays RPM (revolutions per minute), and will flash briefly during start up and speed adjustments.

The control panel will automatically shut off after 10 minutes of inactivity.

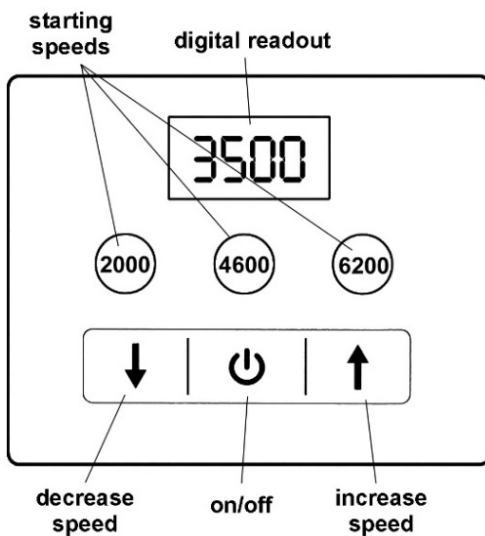


Figure 8-1: variable speed control

#### 8.1.2 Single speed model (SWG-272)

See Figure 8-2.

Pull the red “mushroom” switch outward to start machine. The green light will illuminate. Push back in to stop machine; green light will turn off.

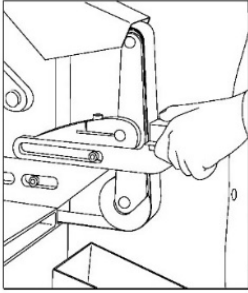
To prevent accidental or unauthorized operation, stop the machine and pull out the yellow safety key. The key must be reinserted to start the machine. (Push key all the way in until a “snap” sound is heard.)



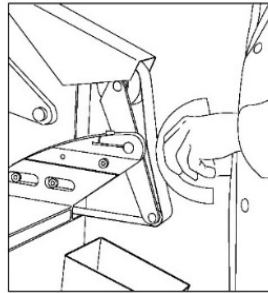
Figure 8-2: standard control

## 8.2 Typical uses for the Square Wheel Belt Grinder

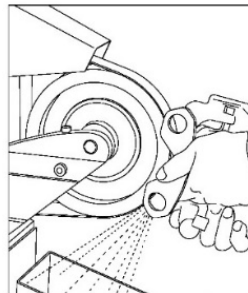
Figure 8-3



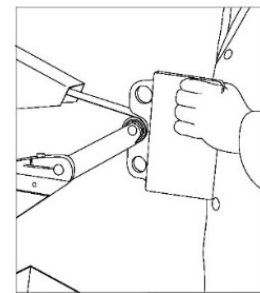
**Flat or angular stock** – Platen setting is the perfect angle for high speed, flat and level grinding of tools, knives, plastics, and other materials. The platen allows working to very close tolerances.



**Shaping** – For grinding and finishing cylindrical shapes. The yoke surface conforms to the shape of the workpiece surface to produce an even, smooth finish without the danger of scarring. Excellent for tool post applications.



**Roughing** – Serrated contact wheel is used for removing heavy stock, cleaning up a weld or snagging a casting. This durable 8-inch diameter wheel is used extensively for hollow grinding and profiling knives and other culinary tools.



**Contouring** – Grind difficult, hard-to-reach areas with the 3-inch by 2-inch, or 1-1/2 inch by 2-inch diameter contact wheels. Contour and shape unique parts such as propellers and metal furniture.

## 9.0 User-maintenance

**⚠WARNING** Always disconnect power to machine before performing maintenance. Failure to comply may result in serious personal injury.

### 9.1 Cleaning

Shut off machine and disconnect before cleaning. Keep machine exterior clean and free of chips. Use a brush or vacuum to remove grinding dust and particles – do not use bare hands. Do not use compressed, as this may force metal debris into critical areas of the machine.

Frequently empty grinding dust from any attached dust collection system.

### 9.2 Lubrication

Lubrication of the grinder is not required. The drive motor and contact wheel are fitted with pre-lubricated and sealed bearings.

### 9.3 Contact wheel replacement

**⚠WARNING** Move switch to OFF to avoid personal injury.

If the contact wheel becomes worn, a new contact wheel can be assembled to the existing wheel shaft and bearings (refer to Figure 9-1):

1. Lower tension lever to release belt tension.
2. Loosen upper guard knob and swing guard back for clearance.
3. Loosen handle on head casting.
4. Remove contact wheel assembly.
5. Remove the C-retaining ring (6-4) from wheel shaft.
6. Remove shaft (6-2) and bearings (6-3) from the old wheel.

7. Install bearings in new contact wheel.
8. Install shaft and secure with retaining ring.
9. Mount new contact wheel to machine. Refer to sect. 7-1 for instructions on completing the installation.

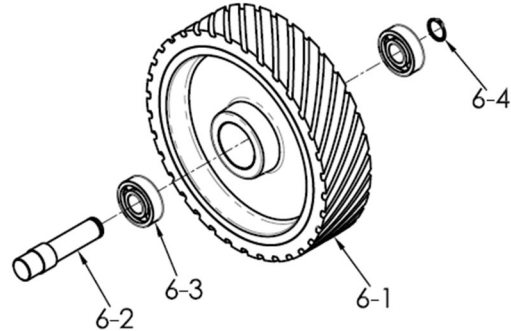


Figure 9-1: contact wheel replacement

### 9.4 Additional servicing

Any additional servicing should be performed by authorized service personnel.

## 10.0 Optional accessories

578173 DBG Stand

414852 3" Hose Clamps (2 pcs)



## 11.0 Troubleshooting SWG-series Square Wheel Grinders

Table 2

\* **WARNING:** Some corrections may require a qualified electrician.

Symptom	Possible Cause	Correction *
Machine won't start.	No incoming power.	Verify machine connections.
	Cord damaged.	Replace cord.
	Building circuit breaker trips or fuse blows.	Verify that machine is on a circuit of correct size, preferably a dedicated circuit. If circuit size is correct, there may be a loose electrical lead.
	Motor overloaded.	Vacuum motor fan area to promote proper air circulation. (Do NOT use compressed air.) Allow machine to cool, then restart.
	Motor or switch failure.	Have tested by qualified electrician or motor repair shop, replace if needed.
Machine won't attain full speed.	Extension cord too light or too long.	Replace with adequate size extension cord.
	Low current.	Have voltage checked by qualified electrician.
Poor tracking.	Low voltage.	Check power line for proper voltage.
	Incorrect belt tension.	Set tension so belt is just taut.
	Worn contact surfaces.	Check contact wheels for wear. Replace worn or warped wheels.
	Misaligned contact surfaces.	Check alignment of drive wheel and contact wheel - they must be aligned. To adjust drive wheel, loosen set screws and move drive wheel in or out on motor shaft as required. To adjust contact wheel, loosen shaft clamping screw and move contact wheel in or out as required.
	Lack of crown on drive wheel.	Check for 1/16-inch crown. Replace drive wheel if crown is not present.
	Worn bearings.	Check all bearings for overheating or damage. Replace worn or damaged bearings.
Slack belt.	Insufficient belt tension.	Set tension so belt is just taut.
Contact wheel wear.	Excessive belt tension.	Set tension so belt is just taut.
	Grinding in one area on belt.	Use entire width of belt whenever possible.
	Excessive grinding deposits on belt and debris in machine.	Clean abrasive belt and grinder interior.
Short belt life.	Excessive grinding pressure.	Allow the belt to do the cutting. Excessive pressure dulls the belt and removes the grit.

## 12.0 Replacement Parts

Replacement parts are listed on the following pages. Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET. Some parts are shown for reference only, and may not be available individually.

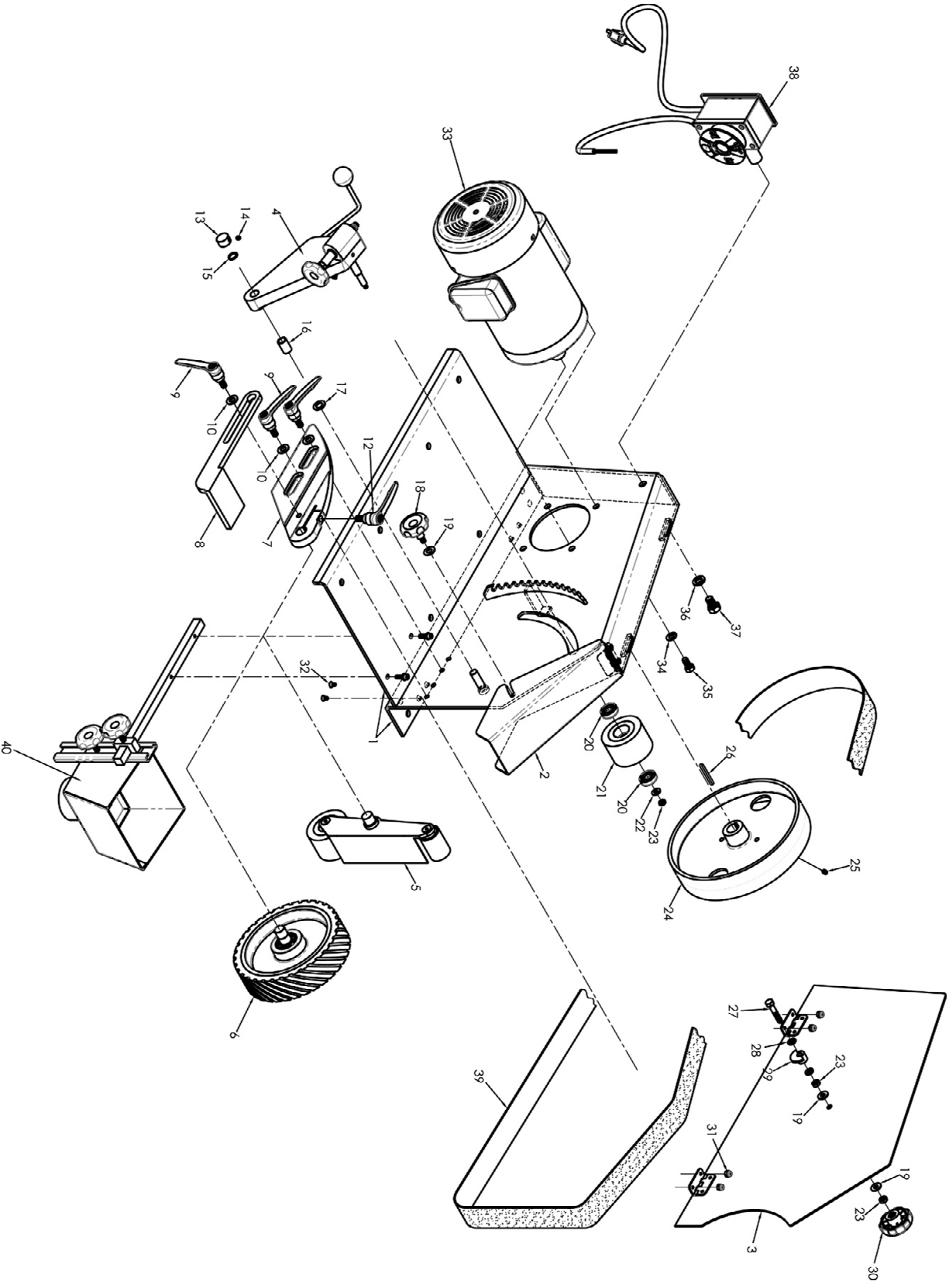
To order replacement parts, use one of the methods below. Have the Model Number and Serial Number of your machine available when you contact us for quick and accurate service.

Website: [store.jettools.com](http://store.jettools.com) (accessible 24 hours daily, 7 days per week)

Phone: 1-800-274-6846 (M - F, 8:00 a.m. to 5:00 p.m. CST)

E-mail: [customerservice@jpwindustries.com](mailto:customerservice@jpwindustries.com)

12.1.1 SWG-272 Square Wheel Belt Grinder – Exploded View



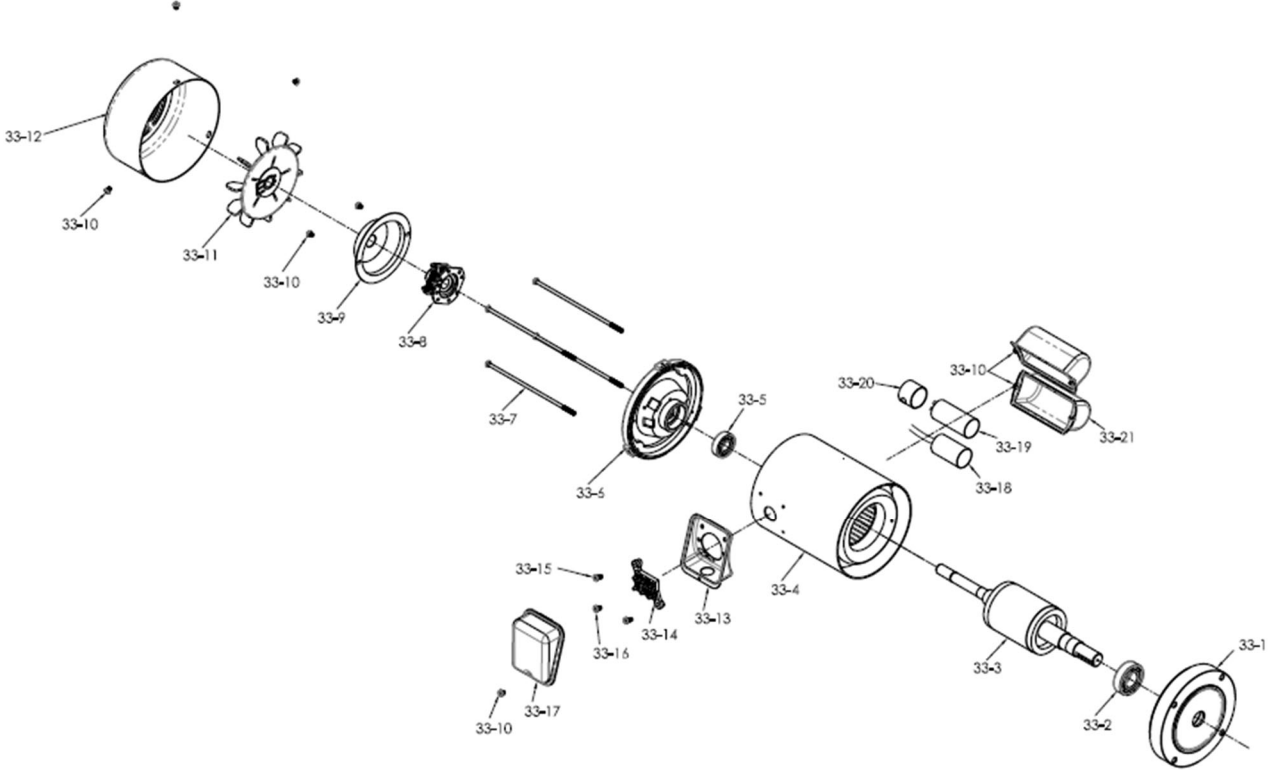


## 12.1.2 SWG-272 Square Wheel Belt Grinder – Parts List

Index No	Part No	Description	Size	Qty
1	SWG272-01	Main Frame		1
2	SWG272-02	Guard Flap		1
3	SWG272-03	Door		1
4	SWG272-04	Idler Housing Casting Assembly		1
5	SWG272-05	Platen Assembly		1
6	SWG272-06	Contact Wheel Assembly	8"x2" Serrated,90Duro	1
7	SWG272-07	Head Casting		1
8	SWG272-08	Work Rest		1
9	SWG272-09	Adjustable Handle	3/8 x 3/4	3
10	TS-0680041	Flat Washer	3/8	3
12	SWG272-12	Adjustable Handle	3/8 x 1	1
13	SWG272-13	Idler Housing Pin Cap		1
14	TS-0267021	Set Screw	1/4 x 1/4	1
15	SWG272-15	O-Ring	1/2	1
16	SWG272-16	Oilite Bushing		1
17	SWG272-17	Nylon Flat Washer	1/2	1
18	SWG272-18	Hand Knob	5/16 x 1	1
19	SWG272-19	Nylon Flat Washer	5/16	3
20	BB-6200ZZ	Ball Bearing	6200ZZ	2
21	SWG272-21	Idler Wheel	OD3" x W2"	1
	SWG272-21E	Idler Wheel Assembly (include #20)		1
22	TS-0680021	Flat Washer	1/4	1
23	TS-0561021	Hex Nut	5/16	3
24	SWG272-24	Drive Wheel	OD10" x B7/8"	1
25	TS-0267041	Set Screw	1/4 x 3/8	1
26	SWG272-26	Key	5 x 5 x 40 mm	1
27	TS-0051091	Hex Cap Screw	5/16 x 2	1
28	TS-0720081	Lock Washer	5/16	2
29	SWG272-29	Cam Latch		1
30	SWG272-30	Hand Knob	5/16	1
31	TS-1541011	Nylon Lock Hex Nut	M5	6
32	TS-1513021	Socket HD Flat Screw	M5 x 12	6
33	SWG272-33	Motor Assembly	1HP, 115/230V	1
34	TS-0720091	Lock Washer	3/8	4
35	TS-0060031	Hex Cap Screw	3/8 x 3/4	4
36	TS-0720111	Lock Washer	1/2	1
37	F007488	Hex Cap Screw	1/2-13 x 3/4	1
38	SWG272-38	Push Button Switch Assembly		1
39	SWG272-39	Abrasive Belt	2 x 72, 50 Grit	1
40	SWG272-40	Dust Hood Assembly		1

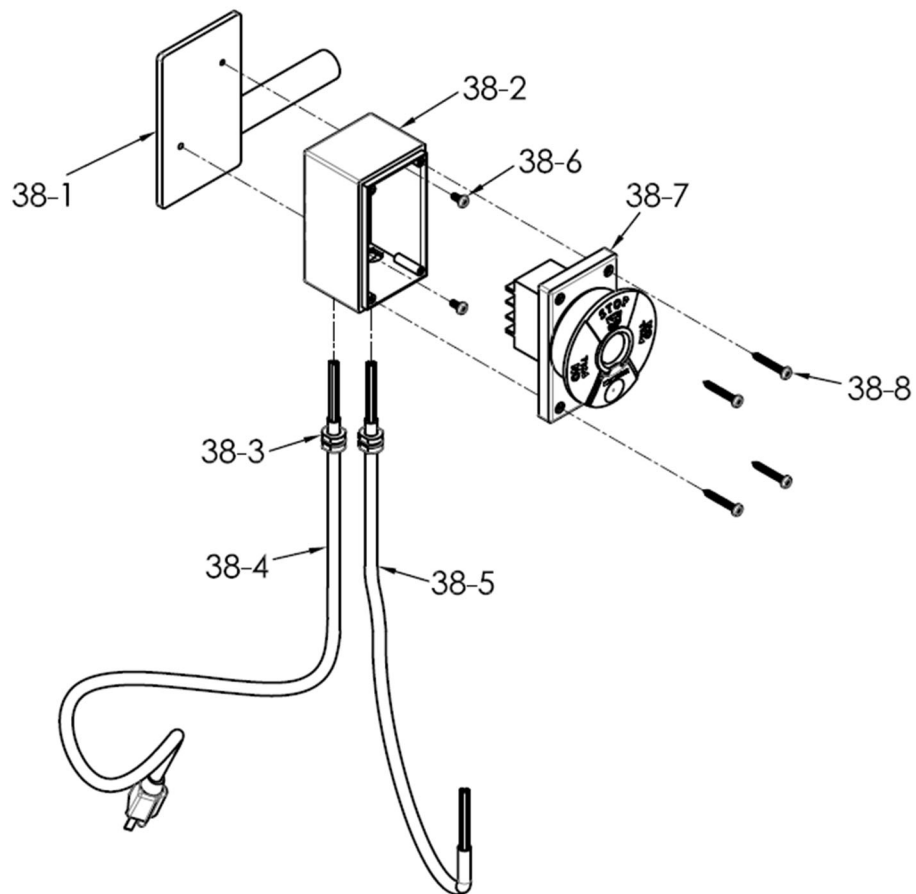
### 12.2.1 SWG-272 Motor Assembly – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
33-1	SWG272-331	End Cover		1
33-2	BB-6205ZZ	Ball Bearing	6205ZZ	1
33-3	SWG272-333	Shaft w/ Rotor		1
33-4	SWG272-334	Motor Housing w/ Stator		1
33-5	BB-6203ZZ	Ball Bearing	6203ZZ	1
33-6	SWG272-336	End Cover		1
33-7	IBG8-42	Screw	M5 x 205	4
33-8	SWG272-338	Centrifugal Switch Assembly	4P	1
33-9	SWG272-339	Dust Cover		1
33-10	F001235	Phillips Pan Head Machine Screw	#10-24 x 1/4	10
33-11	SWG272-3311	Cooling Fan		1
33-12	SWG272-3312	Fan Cover		1
33-13	SWG272-3313	Junction Box Seat		1
33-14	SWG272-3314	Terminal Block		1
33-15	F000233	Phillips Pan Head Machine Screw	#10-24 x 1/2	2
33-16	F000231	Phillips Pan Head Machine Screw	#10-24 x 3/8	1
33-17	SWG272-3317	Junction Box Cover		1
33-18	IBG10-51	Running Capacitor	45uF, 350VAC	1
33-19	IBG10-06	Start Capacitor	400MFD, 125VAC	1
33-20	IBG10-07	Capacitor Cover		1
33-21	SWG272-3321	Capacitor Protective Cover		2

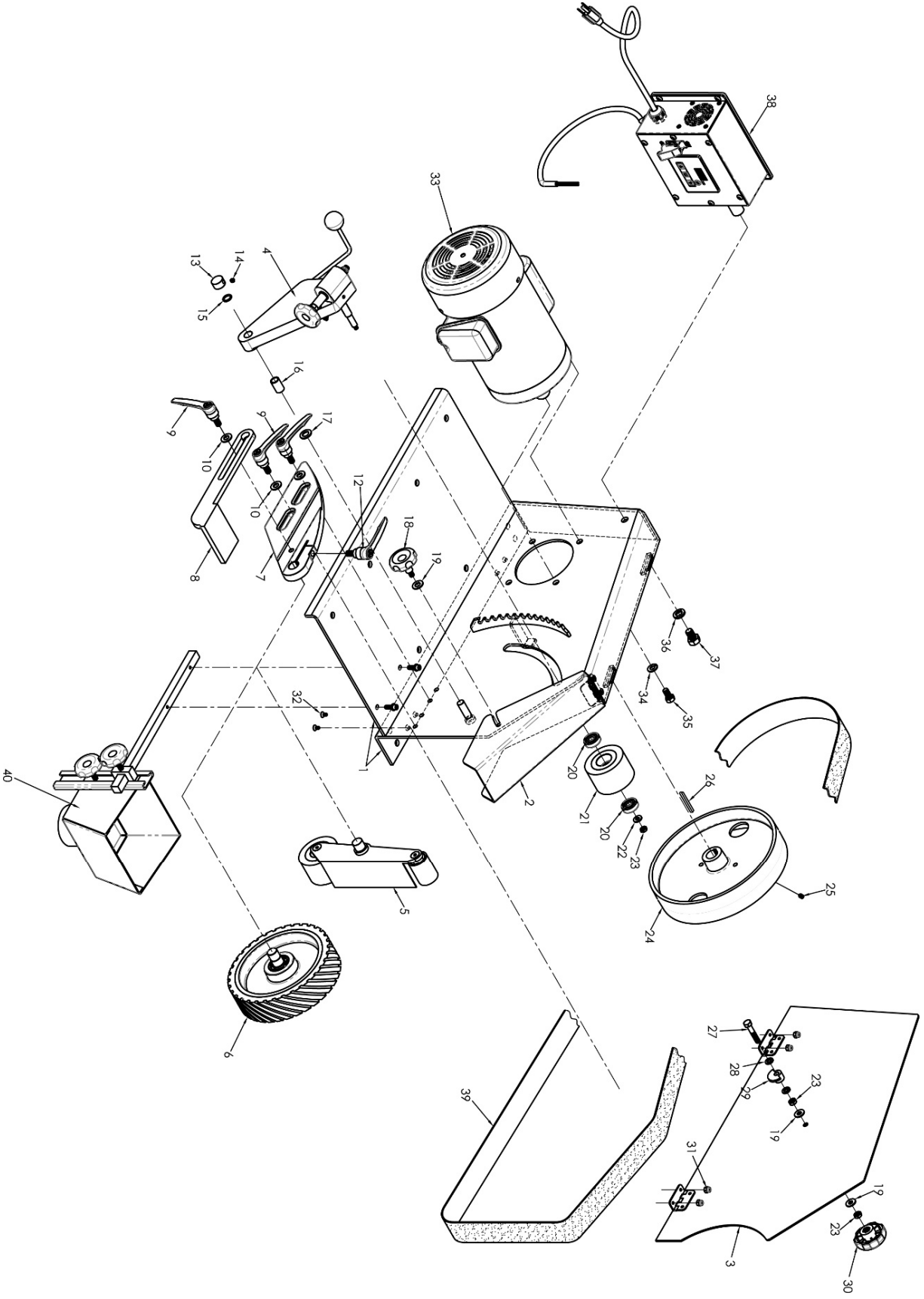


### 12.3.1 SWG-272 Push Button Switch Assembly – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
38-1	SWG272-381	Switch Bracket		1
38-2	SWG272-382	Switch Box		1
38-3	SWG272-383	Strain Relief		2
38-4	SWG272-384	Power Cord	16AWG x 3C	1
38-5	SWG272-385	Motor Cord	16AWG x 3C	1
38-6	TS-081C022	Phillips Pan Head Machine Screw	#10-24 x 3/8	2
38-7	SWG272-387	Push Button Switch		1
	JDC-500022-SC	Safety Key (not shown)		1
38-8	SWG272-388	Pan Head Tapping Screw	M3 x 20	4



12.4.1 SWG-272VS Square Wheel Belt Grinder – Exploded View

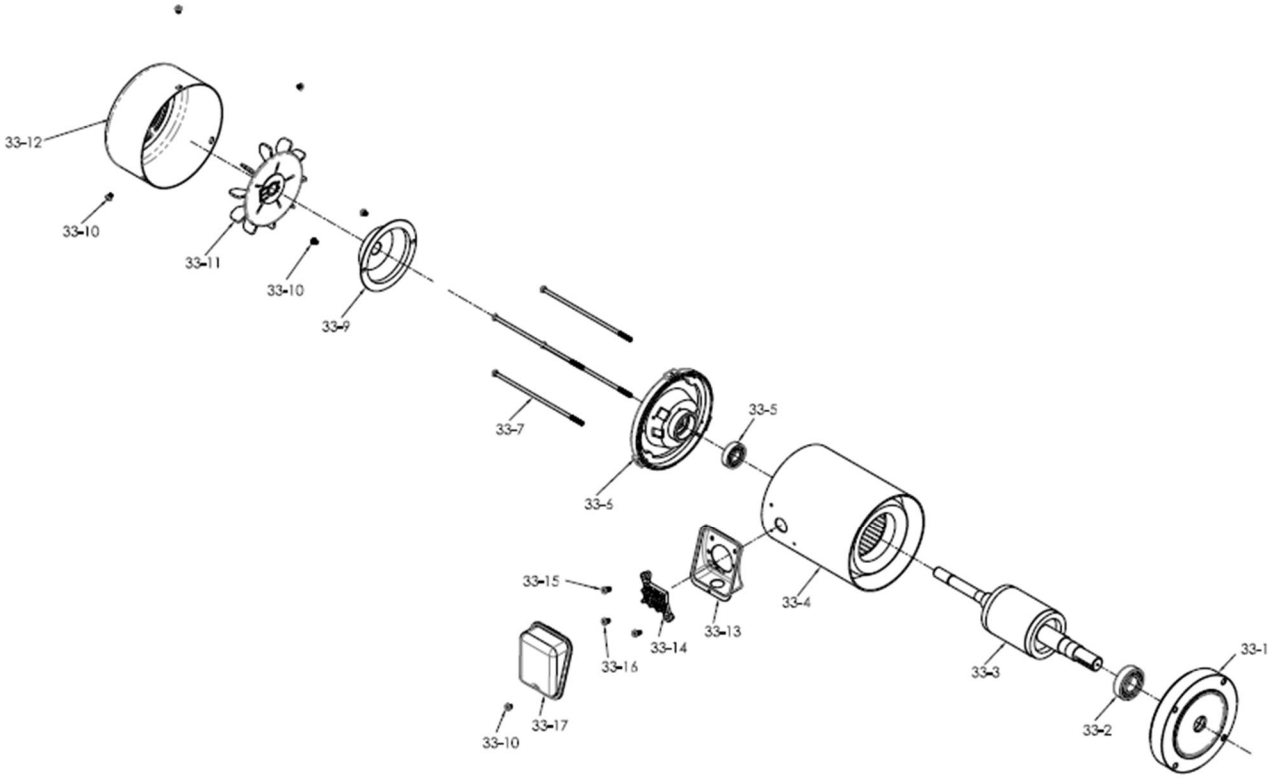


## 12.4.2 SWG-272VS Square Wheel Belt Grinder – Parts List

Index No	Part No	Description	Size	Qty
1	SWG272-01	Main Frame		1
2	SWG272-02	Guard Flap		1
3	SWG272-03	Door		1
4	SWG272-04	Idler Housing Casting Assembly		1
5	SWG272-05	Platen Assembly		1
6	SWG272-06	Contact Wheel Assembly	8"x2" Serrated,90Duro	1
7	SWG272-07	Head Casting		1
8	SWG272-08	Work Rest		1
9	SWG272-09	Adjustable Handle	3/8 x 3/4	3
10	TS-0680041	Flat Washer	3/8	3
12	SWG272-12	Adjustable Handle	3/8 x 1	1
13	SWG272-13	Idler Housing Pin Cap		1
14	TS-0267021	Set Screw	1/4 x 1/4	1
15	SWG272-15	O-Ring	1/2	1
16	SWG272-16	Oilite Bushing		1
17	SWG272-17	Nylon Flat Washer	1/2	1
18	SWG272-18	Hand Knob	5/16 x 1	1
19	SWG272-19	Nylon Flat Washer	5/16	3
20	BB-6200ZZ	Ball Bearing	6200ZZ	2
21	SWG272-21	Idler Wheel	OD3" x W2"	1
	SWG272-21E	Idler Wheel Assembly (include #20)		1
22	TS-0680021	Flat Washer	1/4	1
23	TS-0561021	Hex Nut	5/16	3
24	SWG272-24	Drive Wheel	OD10" x B7/8"	1
25	TS-0267041	Set Screw	1/4 x 3/8	1
26	SWG272-26	Key	5 x 5 x 40 mm	1
27	TS-0051091	Hex Cap Screw	5/16 x 2	1
28	TS-0720081	Lock Washer	5/16	2
29	SWG272-29	Cam Latch		1
30	SWG272-30	Hand Knob	5/16	1
31	TS-1541011	Nylon Lock Hex Nut	M5	6
32	TS-1513021	Socket HD Flat Screw	M5 x 12	6
33	SWG272VS-33	Motor Assembly	1HP, 115/230V	1
34	TS-0720091	Lock Washer	3/8	4
35	TS-0060031	Hex Cap Screw	3/8 x 3/4	4
36	TS-0720111	Lock Washer	1/2	1
37	SWG272VS-37	Hex Cap Screw	1/2-12 x 3/4	1
38	SWG272VS-38	Control Switch Assembly		1
39	SWG272-39	Abrasive Belt	2 x 72, 50 Grit	1
40	SWG272-40	Dust Hood Assembly		1

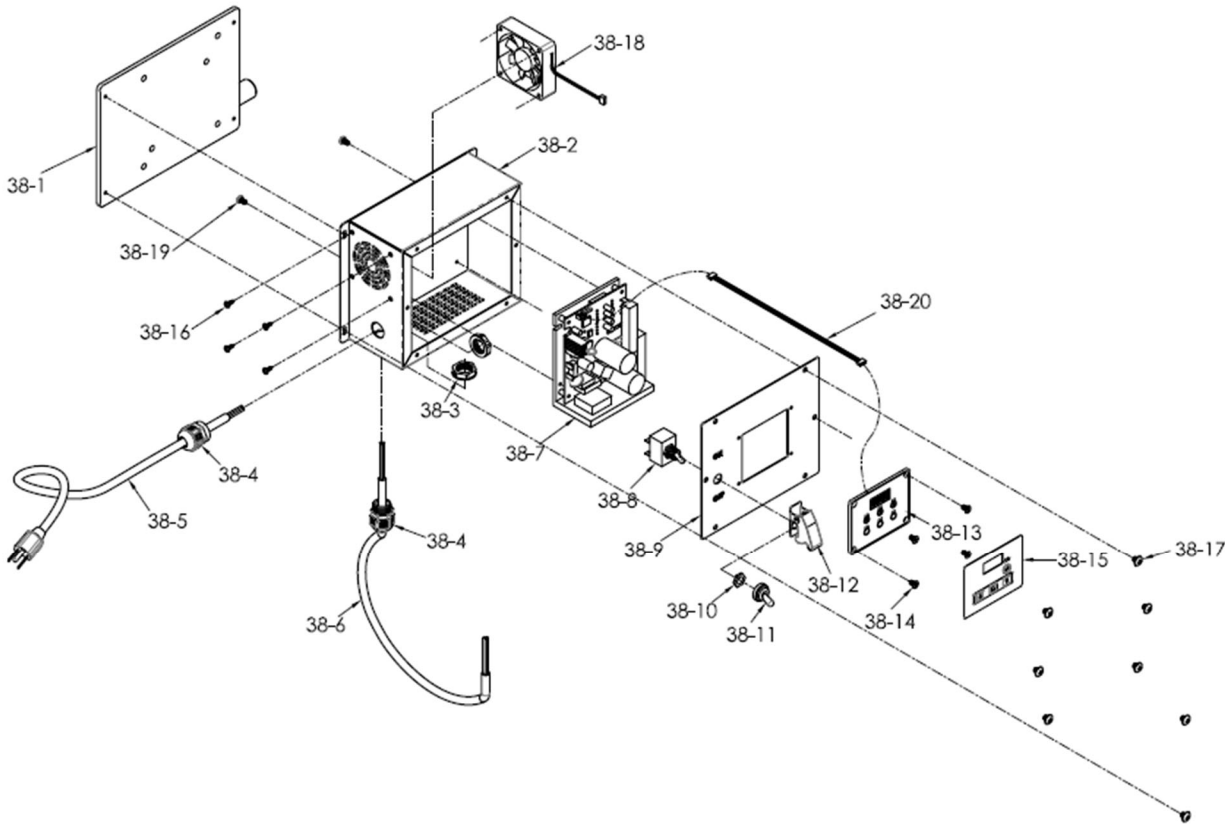
### 12.5 SWG-272VS Motor Assembly – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
33-1	SWG272-331	End Cover		1
33-2	BB-6205ZZ	Ball Bearing	6205ZZ	1
33-3	SWG272VS-333	Shaft w/ Rotor		1
33-4	SWG272VS-334	Motor Housing w/ Stator		1
33-5	BB-6203ZZ	Ball Bearing	6203ZZ	1
33-6	SWG272-336	End Cover		1
33-7	IBG8-42	Screw	M5 x 205	4
33-9	SWG272-339	Dust Cover		1
33-10	F001235	Phillips Pan Head Machine Screw	#10-24 x 1/4	6
33-11	SWG272-3311	Cooling Fan		1
33-12	SWG272-3312	Fan Cover		1
33-13	SWG272-3313	Junction Box Seat		1
33-14	SWG272-3314	Terminal Block		1
33-15	F000233	Phillips Pan Head Machine Screw	#10-24 x 1/2	2
33-16	F000231	Phillips Pan Head Machine Screw	#10-24 x 3/8	1
33-17	SWG272-3317	Junction Box Cover		1



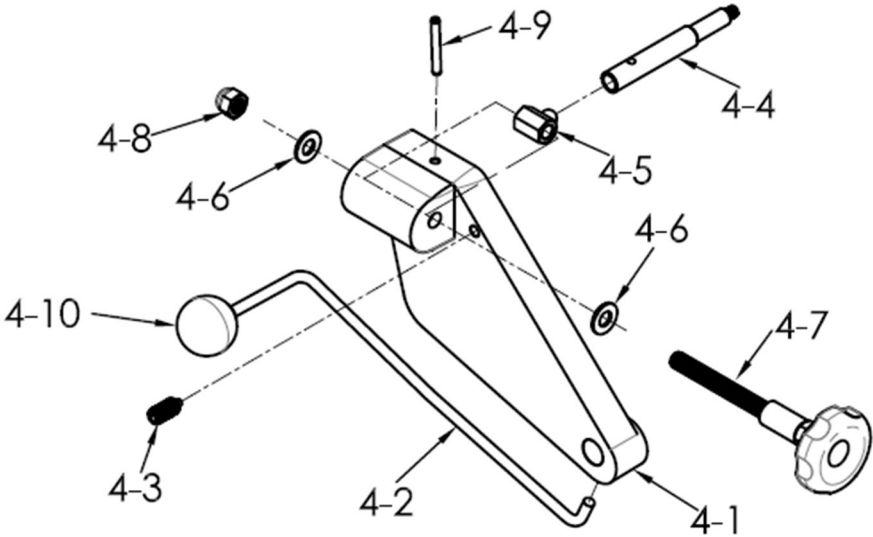
### 12.6 SWG-272VS Control Switch Assembly – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
38-1	SWG272VS-381	Switch Bracket		1
38-2	SWG272VS-382	Control Box		1
38-3	SWG272VS-383	Nylon Nut		2
38-4	SWG272VS-384	Nylon Cable Gland		2
38-5	SWG272VS-385	Power Cord	16AWG x 3C	1
38-6	SWG272VS-386	Motor Cord	16AWG x 4C	1
38-7	SWG272VS-387	Inverter PCB		1
38-8	SWG272VS-388	Toggle Switch	4P	1
38-9	SWG272VS-389	Cover Plate		1
38-10	SWG272VS-3810	Nut		1
38-11	SWG272VS-3811	Dustproof Rubber Sleeve		1
38-12	SWG272VS-3812	Safety Cover for Toggle Switch		1
38-13	SWG272VS-3813	Control Panel w/ Digital Readout (includes #15)		1
38-14	F001472	Flat Head Screw	M4-0.7 x 6	4
38-15	SWG272VS-3815	Panel Decal		1
38-16	F000231	Phillips Pan Head Machine Screw	#10-24 x 3/8	4
38-17	F001235	Phillips Pan Head Machine Screw	#10-24 x 1/4	10
38-18	IBGB248VS-68	Cooling Fan		1
38-19	TS-2171012	Phillips Pan Head Machine Screw	M4-0.7 x 6	2
38-20	IBGB248VS-95	Signal Line		1



### 12.7 Idler Housing Casting Assembly (all models) – Parts List and Exploded View

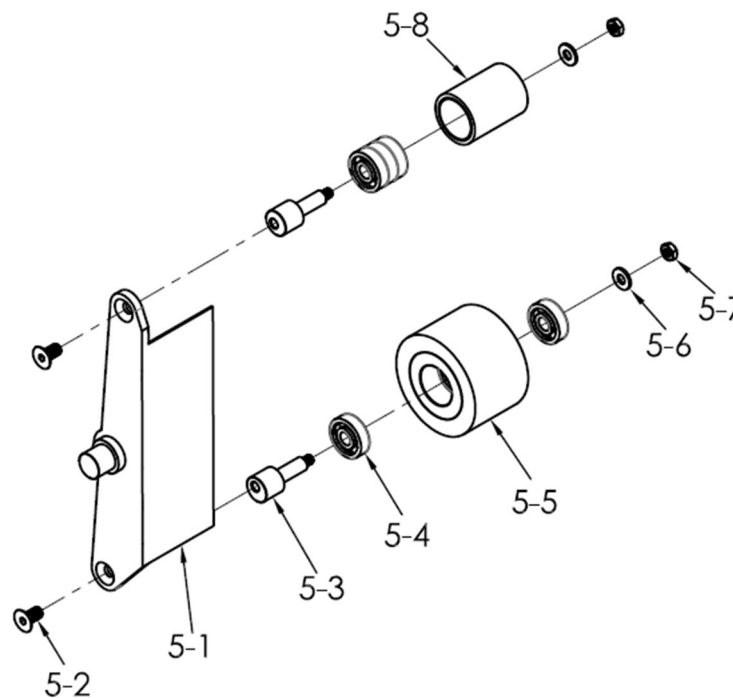
Index No	Part No	Description	Size	Qty
4-1	SWG272-401	Idler Housing Casting		1
4-2	SWG272-402	Tension Lever		1
4-3	SWG272-403	Nylon Tipped Set Screw	M8 x 20	1
4-4	SWG272-404	Idler Pulley Shaft		1
4-5	SWG272-405	Tracking Leader Assembly		1
4-6	SWG272-406	Nylon Flat Washer	3/8	2
4-7	SWG272-407	Hand Knob	3/8 x 3	1
4-8	TS-0640091	Nylon Lock Hex Nut	3/8-16	1
4-9	SWG272-409	Roll Pin	5 x 38 mm	1
4-10	SWG272-410	Knob	35-3/8	1





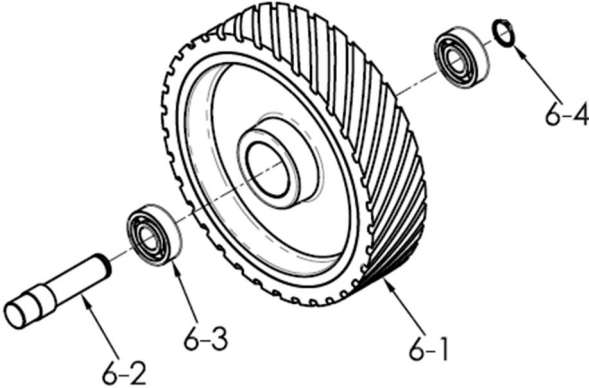
## 12.8 Platen Assembly (all models) – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
5-1	SWG272-501	Platen		1
5-2	F010725	Socket HD Flat Screw	5/16-18 x 5/8	2
5-3	SWG272-503	Contact Wheel Shaft		2
5-4	BB-6200ZZ	Ball Bearing	6200ZZ	5
5-5	SWG272-505	Contact Wheel	3" x 2" 70 Duro	1
5-6	TS-0680061	Flat Washer	1/2	2
5-7	TS-0561051	Hex Nut	1/2-20	2
5-8	SWG272-508	Contact Wheel	1-1/2" x 2" 70 Duro	1



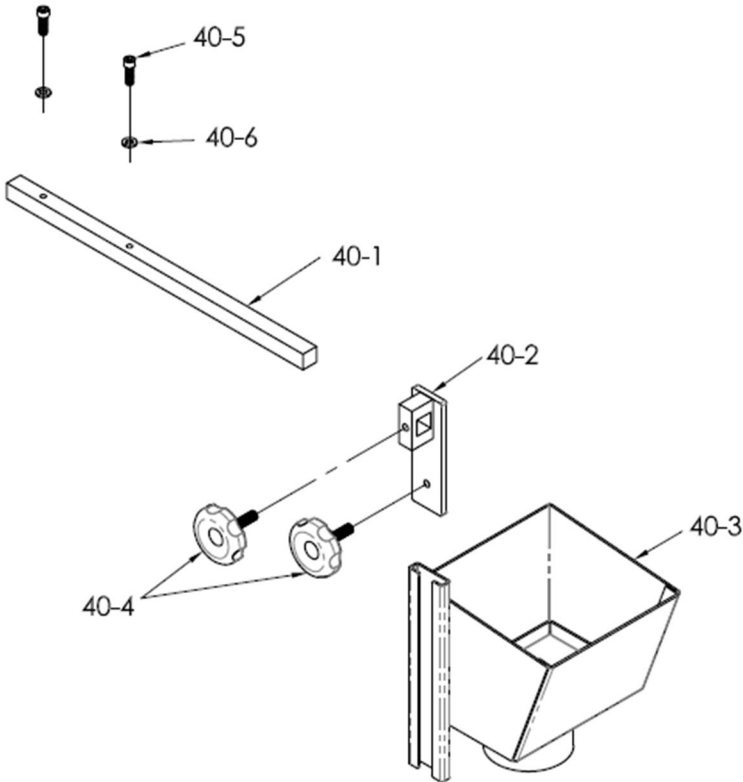
### 12.9 Contact Wheel Assembly (all models) – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
6-1	SWG272-601	Contact Wheel	8"x2" Serrated,90Duro	1
6-2	SWG272-602	Shaft		1
6-3	BB-6203VV	Ball Bearing	6203VV	2
6-4	F006045	C-Retaining Ring Ext	S17	1



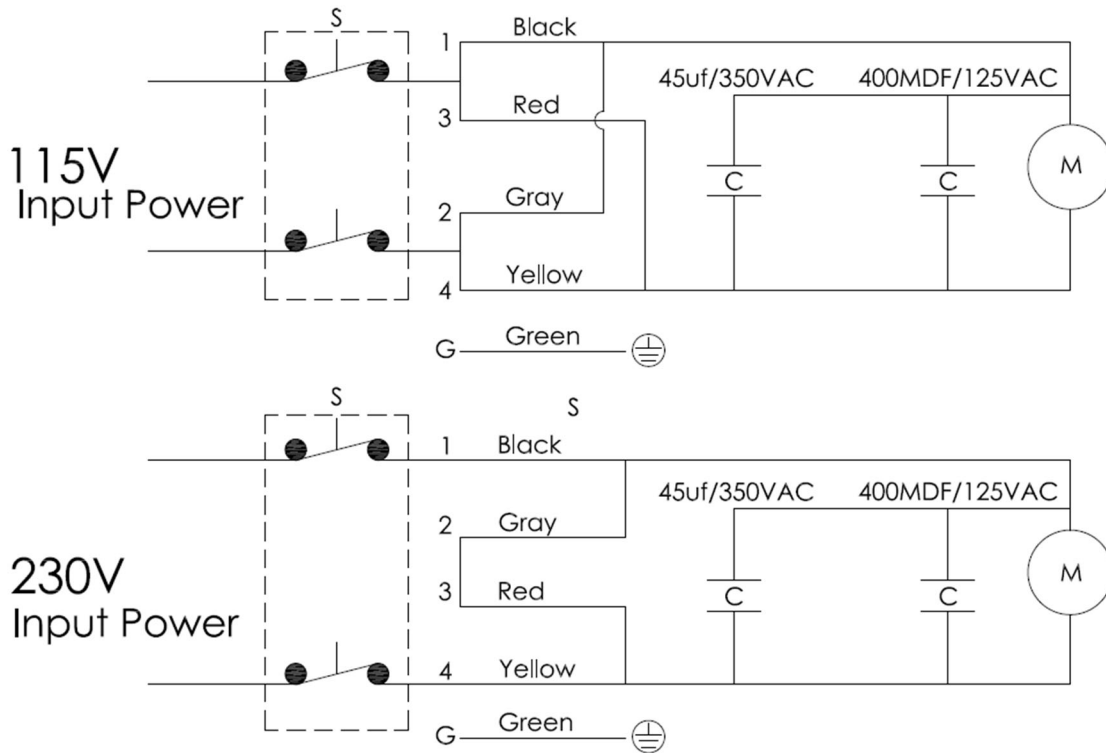
### 12.10 Dust Hood Assembly (all models) – Parts List and Exploded View

Index No	Part No	Description	Size	Qty
40-1	SWG272-4001	Rail		1
40-2	SWG272-4002	Channel		1
40-3	SWG272-4003	Scoop		1
40-4	SWG272-4004	Hand Knob	5/16 x 1	2
40-5	TS-0207021	Socket Cap Screw	1/4-20 x 1/2	2
40-6	TS-0720071	Lock Washer	1/4	2

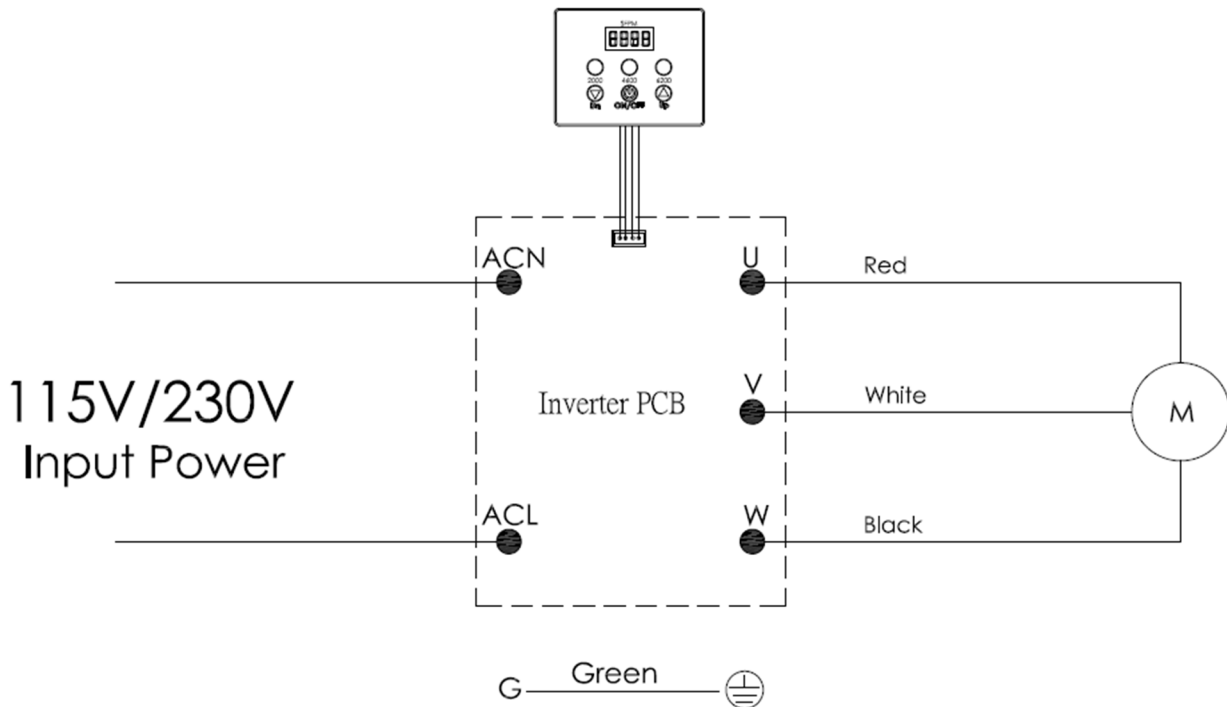


# 13.0 Electrical Connections

## 13.1 Wiring diagram for SWG-272



## 13.2 Wiring diagram for SWG-272VS



# 14.0 Warranty and Service

JET® warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

### Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

### Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

### What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

### Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

### How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

### More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

### How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

### Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

### Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.