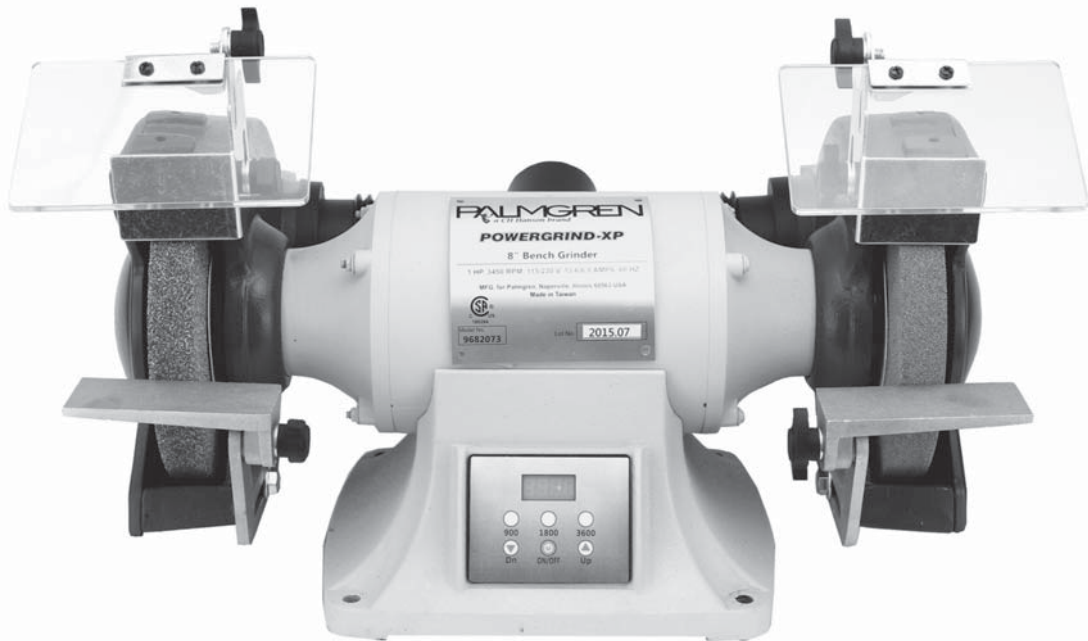


OPERATING MANUAL & PARTS LIST

9682096, 9682097 AND 9682098

# PALMGREN®

## 6", 8" AND 10" VARIABLE SPEED BENCH GRINDERS



***Read carefully and follow all safety rules and operating instructions before first use of this product.***

9642040.01-0117

## DESCRIPTION

Palmgren's variable speed bench grinders with inverter is equipped with a totally enclosed ball bearing motor. Armature assembly is dynamically balanced for smooth operation. Motor housing is compact so long pieces of work can press against both wheel without touching the motor frame. Removable wheel guard covers allow for easy changing of wheels. Tool rests are adjustable for wheel wear and angle grinding. Grinder comes complete with spark guards, safety Eyeshields, and dust collection hose.

## SPECIFICATIONS

	9682096	9682097	9682098
Horsepower	1/2	1	1.5
Voltage	115/240	115/240	115/240
Amperes	7/3.5	12/6	14/7
Hertz	50-60	50-60	50-60
Phase	Single	Single	Single
RPM	900-3600	900-3600	900-2400
Rotation (viewed from left)	Clockwise	Clockwise	Clockwise
Wheel Diameter	6"	8"	10"
Wheel Bore	1/2"	5/8"	1"
Wheel Face	3/4"	1"	1"
Aluminum Oxide Vitrified Wheels			
36 Coarse and 60 Medium	Yes	Yes	Yes
CSA US 180264	Yes	Yes	Yes

## STRUCTURAL REQUIREMENTS

Make sure all supporting structures and load attaching devices are strong enough to hold your intended loads. If in doubt, consult a qualified structural engineer.

## ELECTRICAL REQUIREMENTS

9682096	115/240 Volts	7/3.5 Amps	1Φ	50-60 Hz
9682097	115/240 Volts	12/6 Amps	1Φ	50-60 Hz
9682098	115/240 Volts	14/7 Amps	1Φ	50-60 Hz

The standard allowable voltage variation is plus or minus 10%.

## TOOLS NEEDED:

Standard mechanic's hand tool set.

## UNPACKING

Carton should be handled with care to avoid damage from dropping, bumping, etc. Store and unpack carton with correct side up. If any damage or loss has occurred, claim must be filed with carrier immediately. Check for completeness. Immediately report missing parts to dealer.

To be certain the grinding wheels have not been damaged in shipment, strike the edges slightly with a metal object. A ringing sound indicates a good wheel, but a dull noise may signal a fracture.

**WARNING:** If you suspect a wheel of being fractured, replace it immediately. Fractured wheels may shatter, causing serious injury.

## CONTENTS:

- Bench Grinder
- A 3/8"-16 x 3/4" Hex Bolt (2)
- B 3/8" Flat Washer (4)
- C Tool Rest Bracket (2)
- D Tool Rest (2)
- E 5/16" Flat Washer (2)
- F 5/16"-18 x 1" Knob (2)
- G #10-24 x 3/8" Pan Head Screw (4)
- H Upper Eyeshield Bracket (2)
- I Eyeshield (2)
- J Lower Eyeshield Bracket (2)
- K 1/4"-20 x 1/2" Knob (2)
- L Spark Guard (2)
- M 3/8"-16 x 1/2" Knob (2)
- Dust Collector Hose (1)
- Operating Instructions & Parts Manual (1)

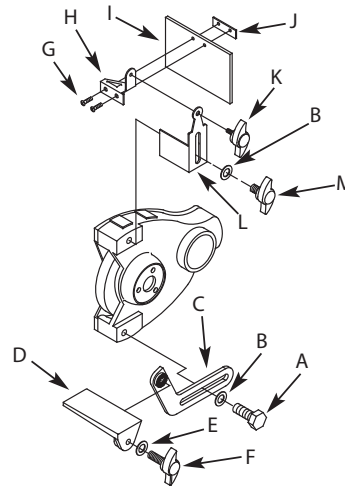


Figure 1 – Left Tool Rest and Eyeshield Assembly

## UNPACK:

- Open carton and carefully remove Bench Grinder components from packing material. Do not discard packing materials until after unit has been inspected for damage and completeness. Locate loose parts and set aside.

## INSPECT:

- After unpacking the unit, carefully inspect for any damage that may have occurred during transit. Check for loose, missing or damaged parts. Shipping damage claims must be filed with the carrier.
- All tools should be visually inspected before use, in addition to regular periodic maintenance inspections.
- Be sure that the voltage labeled on the unit matches your power supply.

## SAFETY RULES

**WARNING:** For your own safety, read all of the instructions and precautions before operating tool.

**PROPOSITION 65 WARNING:** Some dust created by using power tools contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures 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. Always wear **OSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

**WARNING:** Always follow proper operating procedures as defined in this manual even if you are familiar with the use of this or similar tools. Remember that being careless for even a fraction of a second can result in severe personal injury.

### BE PREPARED FOR JOB

- Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry which may get caught in moving parts of machine.
- Wear protective hair covering to contain long hair.
- Wear safety shoes with non-slip soles.
- Wear safety glasses complying with United States ANSI Z87.1. Everyday glasses have only impact resistant lenses. They are **NOT** safety glasses.
- Wear face mask or dust mask if operation is dusty.
- Be alert and think clearly. Never operate power tools when tired, intoxicated or when taking medications that cause drowsiness.

### PREPARE WORK AREA FOR JOB

- Keep work area clean. Cluttered work areas invite accidents.
- Do not use power tools in dangerous environments. Do not use power tools in damp or wet locations. Do not expose power tools to rain.
- Work area should be properly lighted.
- Proper electrical plug should be plugged directly into properly grounded, three-prong receptacle.
- Extension cords should have a grounding prong and the three wires of the extension cord should be of the correct gauge.
- Keep visitors at a safe distance from work area.
- Keep children out of workplace. Make workshop childproof. Use padlocks, master switches or remove switch keys to prevent any unintentional use of power tools.

### TOOL SHOULD BE MAINTAINED

- Always unplug tool prior to inspection.
- Consult manual for specific maintaining and adjusting procedures.
- Keep tool lubricated and clean for safest operation.
- Remove adjusting tools. Form habit of checking to see that adjusting tools are removed before switching machine on.
- Keep all parts in working order. Check to determine that the guard or other parts will operate properly and perform their intended function.

- Check for damaged parts. Check for alignment of moving parts, binding, breakage, mounting and any other condition that may affect a tool's operation.
- A guard or other part that is damaged should be properly repaired or replaced. Do not perform makeshift repairs. (Use parts list provided to order repair parts.)

### KNOW HOW TO USE TOOL

- Use right tool for job. Do not force tool or attachment to do a job for which it was not designed.
- Disconnect tool from power when changing accessories such as grinding wheels, buffing wheels and the like.
- Avoid accidental start-up. Make sure that the switch is in the off position before plugging in.
- Do not force tool. It will work most efficiently at the rate for which it was designed.
- Keep hands away from moving parts and grinding surfaces.
- Never leave a tool running unattended. Turn the power off and do not leave tool until it comes to a complete stop.
- Do not overreach. Keep proper footing and balance.
- Never stand on tool. Serious injury could occur if tool is tipped over.
- Know your tool. Learn the tool's operation, application and specific limitations.
- Use recommended accessories. Understand and obey all safety instructions supplied with accessories. The use of improper accessories may cause risk of injury to persons.
- Do not over tighten wheel nut. Replace cracked wheel immediately. Use only flanges supplied with the grinder.
- Adjust distance between wheel and tool rest to maintain 1/16" or less gap.
- Handle the workpiece correctly. Whenever possible, use tool rest to support workpiece during grinding operation. Turn tool off if it jams.
- Always use guards and eyeshields.
- Clean grinding dust from beneath tool frequently.

**CAUTION:** Think safety! Safety is a combination of operator common sense and alertness at all times when tool is being used.

## ASSEMBLY

Refer to Figure 1, page 2.

Parts to be fastened to the unit should be located and accounted for (See content list and figure 1, page 2).

**CAUTION:** Do not attempt assembly if parts are missing. Use this manual to order repair parts.

### TOOL REST ASSEMBLY

1. Place tool rest (D) over tool rest bracket and secure in position with 5/16" flat washer (E) and 5/16-18 x 1" knob (F).
2. Attach tool rest bracket to the bottom of the left wheel guard using one 3/8"-16 x 3/4" hex head bolt (A) and one 3/8" flat washer (B). Make sure that the slot of the bracket is located over the raised boss on the guard. Tighten bolts finger tight.
3. Position tool rest so that distance between tool rest and grinding wheel is less than 1/16". Reposition angle of tool rest if necessary. Secure all knobs and bolts.
4. Mount right tool rest in a similar manner.

**ASSEMBLY (CONTINUED)****EYESHIELD ASSEMBLY**

1. Attach spark guard (L) to left wheel guard using 3/8"-16 x 1/2" knob (M) and 3/8" flat washer (B).
2. Mount left upper eyeshield bracket (H) to eyeshield (I) using two #10-24 x 3/8" pan head screws (G) and lower eyeshield bracket (J).

**NOTE:** Left upper eyeshield bracket is stamped "L" for identification.

3. Slide 1/4"-20 x 1/2" knob (K) through hole at top of left spark guard (L) into upper eyeshield bracket (H) and secure in position.
4. Locate eyeshield in desired position for protecting operator and secure all knobs and bolts.
5. Mount right eyeshield assembly in a similar manner.

**DUST COLLECTOR HOSE**

A dust collector hose has been provided with grinder. Slide hoses onto sides of T-connector and flanges. Mount the hose by sliding the flanges at each end over the exhaust ports on the left and right wheel guards. Attach 2 1/2" shop vacuum hose to collector hose. Be sure hose is mounted securely.

**DANGER:** Be sure to empty shop vacuum of all flammable material (flammable liquids and vapors, paper, wood, plastic, etc.) before connecting vacuum to grinder. Hot sparks from grinder may ignite flammable materials in shop vacuum.

**OPTIONAL GRINDER LIGHT (MODEL 9682904)**

Position light bracket assembly over bosses provided on wheel guard. Bosses are tapped to receive two 1/4"-20 screws. Fasten bracket assembly to wheel guard with two screws provided with light.

**INSTALLATION****MOUNT GRINDER**

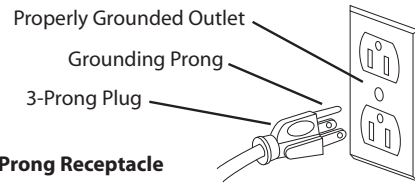
1. Mount grinder to a solid horizontal surface (hardware not provided). If mounted to metal pedestal, align mounting holes with corresponding holes in pedestal. Insert a 1/4"-20 x 1 1/4" hex head bolt with flat washer through base of grinder. From bottom of pedestal, place a 1/4" flat washer and 1/4"-20 hex nut onto the bolt. Tighten only until space between grinder base and pedestal is 1/8". Using second nut on each bolt, jam tighten against the first to prevent loosening by vibration.
2. To mount grinder to wooden bench top, use 1/4" x 1 1/4" wood screws with flat washers beneath heads. Tighten screws until space between grinder base and bench top is 1/8".

**GROUNDING INSTRUCTIONS**

**WARNING:** Improper connection of equipment grounding conductor can result in the risk of electrical shock. Equipment should be grounded while in use to protect operator from electrical shock. Check with a qualified electrician if grounding instructions are not understood or if in doubt as to whether the tool is properly grounded.

This grinder is equipped with an approved 3-conductor cord rated at 300V and a 3-prong, grounding type plug (See Figure 2) for your protection against shock hazards.

Grounding plug should be plugged directly into a properly installed and grounded 3-prong grounding-type receptacle (See Figure 2).

**Figure 2 – 3-Prong Receptacle**

Do not remove or alter grounding prong in any manner. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electrical shock.

**WARNING:** Do not permit fingers to touch the terminals of plug when installing or removing from outlet.

Plug must be plugged into matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify plug provided. If it will not fit in outlet, have proper outlet installed by a qualified electrician.

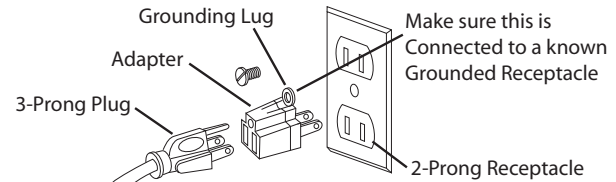
Inspect tool cords periodically, and, if damaged, have repaired by an authorized service facility.

Green (or green and yellow) conductor in cord is the grounding wire. If repair or replacement of the electric cord or plug is necessary, do not connect the green (or green and yellow) wire to a live terminal.

Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with National Electric Code and local codes and ordinances.

**WARNING:** This work should be performed by a qualified electrician.

A temporary 3-prong to 2-prong grounding adapter (See Figure 3) is available for connecting plugs to a two pole outlet if it is properly grounded.

**Figure 3 – 2-Prong Receptacle with Adapter**

Do not use a 3-prong to 2-prong grounding adapter unless permitted by local and national codes and ordinances.

(A 3-prong to 2-prong grounding adapter is not permitted in Canada.) Where permitted, the rigid green tab or terminal on the side of the adapter must be securely connected to a permanent electrical ground such as a properly grounded water pipe, a properly grounded outlet box or a properly grounded wire system.

Many cover plate screws, water pipes and outlet boxes are not properly grounded. To ensure proper ground, grounding means must be tested by a qualified electrician.

**INSTALLATION (CONTINUED)**

**EXTENSION CORDS**

- The use of any extension cord will cause some drop in voltage and loss of power.
- Wires of the extension cord must be of sufficient size to carry the current and maintain adequate voltage.
- Running the unit on voltages which are not within  $\pm 10\%$  of the specified voltage may cause overheating and motor burn-out.
- Use the table to determine the minimum wire size (A.W.G.) extension cord.
- Use only 3-wire extension cords having 3-prong grounding type plugs and 3-pole receptacles which accept the tool plug.
- If the extension cord is worn, cut or damaged in any way, replace it immediately.

**EXTENSION CORD**

Length	9682096	9682097	9682098
Up to 25 ft	18 A.W.G.	16 A.W.G.	14 A.W.G.

**NOTE:** Using extension cords over 25 ft. long is not recommended.

**ELECTRICAL CONNECTIONS**

**⚠ WARNING** All electrical connections must be performed by a qualified electrician. Make sure tool is off and disconnected from power source while motor is mounted, connected, reconnected or anytime wiring is inspected.

Motor is assembled with approved, 3-conductor cord to be used at 120 volts. Motor is prewired at the factory for 120 volts.

**OPERATION**

See Figure 4.

**WARNING:** Always wear safety glasses complying with United States ANSI Z87.1 before commencing power tool operation.

- To turn power on press the "ON/OFF" button
- The control panel indicates 3 power ranges: Low-Medium-High
- To operate grinder at max speed press "High" button.
- To change speeds in the high range press the (UP) or (DOWN).
- Remember you are starting at the max speed within that range.
- You may change ranges while the wheels are rotating.
- You may change speeds within the range while the wheels are rotating.
- To turn the power off press the "ON/OFF" button again.



**Figure 4 – Control Panel**

- Keep a steady, moderate pressure on the work and keep it moving at an even pace for smooth grinding.
- Keep a steady, moderate pressure on the work and keep it moving at an even pace for smooth grinding.
- Pressing too hard overheats the motor and prematurely wears down the grinding wheels.
- Note the original bevel angle on the item to be sharpened and try to maintain that angle. Sharpening a cutting edge requires removing burrs from edge.
- Deburring edge is done best by using the grinder to pull burr from edge across the bevel angle.
- The grinding wheel should rotate into object being sharpened.
- Use slower wheel speed when sharpening tempered tools. Overheating will destroy the temper.
- When grinding at high speed, dip work into a coolant regularly to prevent overheating. Overheating can weaken metals.

**MAINTENANCE**

- As wheels wear, tool rests should be positioned closer to the face of the wheels.
- The gap between the wheel and the tool rest should not be greater than 1/16". When the wheels are worn to the extent that the 1/16" maximum gap cannot be maintained, the wheels should be replaced.
- Models 9682096 and 9682097 replacement wheels should have a minimum rated speed of at least 3600 RPM. Model 9682098 replacement wheels should have a minimum rated speed of at least 2400 RPM.
- Maximum wheel diameter is 6" for 9682096, 8" for 9682097 and 10" for 9682098.
- To loosen nuts holding the wheels, disconnect power and push a wood wedge between the tool rest and the wheel to keep the shaft from turning. The threads on the right side of the grinder (facing unit) are right hand; threads on the left side are left hand. Tighten nuts securely before operating the grinder.
- For grinding efficiency, wheels should be dressed periodically, especially if they become clogged from grinding soft metals. Palmgren Grinding Wheel Dressers, Model 9682901 or 9682902, are recommended (See page 9).

## TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Grinder won't start	<ol style="list-style-type: none"> <li>1. Blown line fuse or tripped circuit breaker</li> <li>2. Low line voltage</li> <li>3. Material wedged between wheel and guard</li> <li>4. Defective switch</li> <li>5. Defective, blown capacitor</li> <li>6. Defective circuit board</li> </ol>	<ol style="list-style-type: none"> <li>1. If fuse is blown, replace with fuse of proper size. If breaker tripped, reset it</li> <li>2. Check power supply for voltage and correct as needed</li> <li>3. Turn grinder off and remove material</li> <li>4. Replace switch</li> <li>5. Replace capacitor</li> <li>6. Replace circuit board</li> </ol>
Excessive vibration	<ol style="list-style-type: none"> <li>1. Improper mounting of grinder or accessories</li> <li>2. Grinding wheel out of balance</li> <li>3. Improper wheel mounting</li> </ol>	<ol style="list-style-type: none"> <li>1. Remount</li> <li>2. Dress wheels or replace wheels</li> <li>3. Remount wheels, but rotate one wheel 90° with respect to its previous position. Other wheel should remain in its original position</li> </ol>
Motor overheating	<ol style="list-style-type: none"> <li>1. Excess pressure required to grind material</li> <li>2. Grinding on side of wheel</li> <li>3. Motor not turning freely (without power)</li> </ol>	<ol style="list-style-type: none"> <li>1. Dress wheel or replace wheel with one of proper grit</li> <li>2. Grind only on face of wheel</li> <li>3. Clean around wheels and shaft and/or replace bearings</li> </ol>
Fuses are being blown or circuit breakers are being tripped	<ol style="list-style-type: none"> <li>1. Overloading due to binding</li> <li>2. Defective plug</li> <li>3. Defective cord</li> <li>4. Defective switch</li> <li>5. Faulty internal wiring</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean around wheels and shaft and/or replace bearings</li> <li>2. Replace plug</li> <li>3. Replace cord</li> <li>4. Replace switch</li> <li>5. Contact authorized Palmgren Service Center</li> </ol>
Grinder will not operate in variable speed mode	<ol style="list-style-type: none"> <li>1. Defective variable speed switch</li> <li>2. Defective sensor</li> <li>3. Defective circuit board</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace switch</li> <li>2. Replace sensor</li> <li>3. Replace circuit board</li> </ol>

**NOTES:**

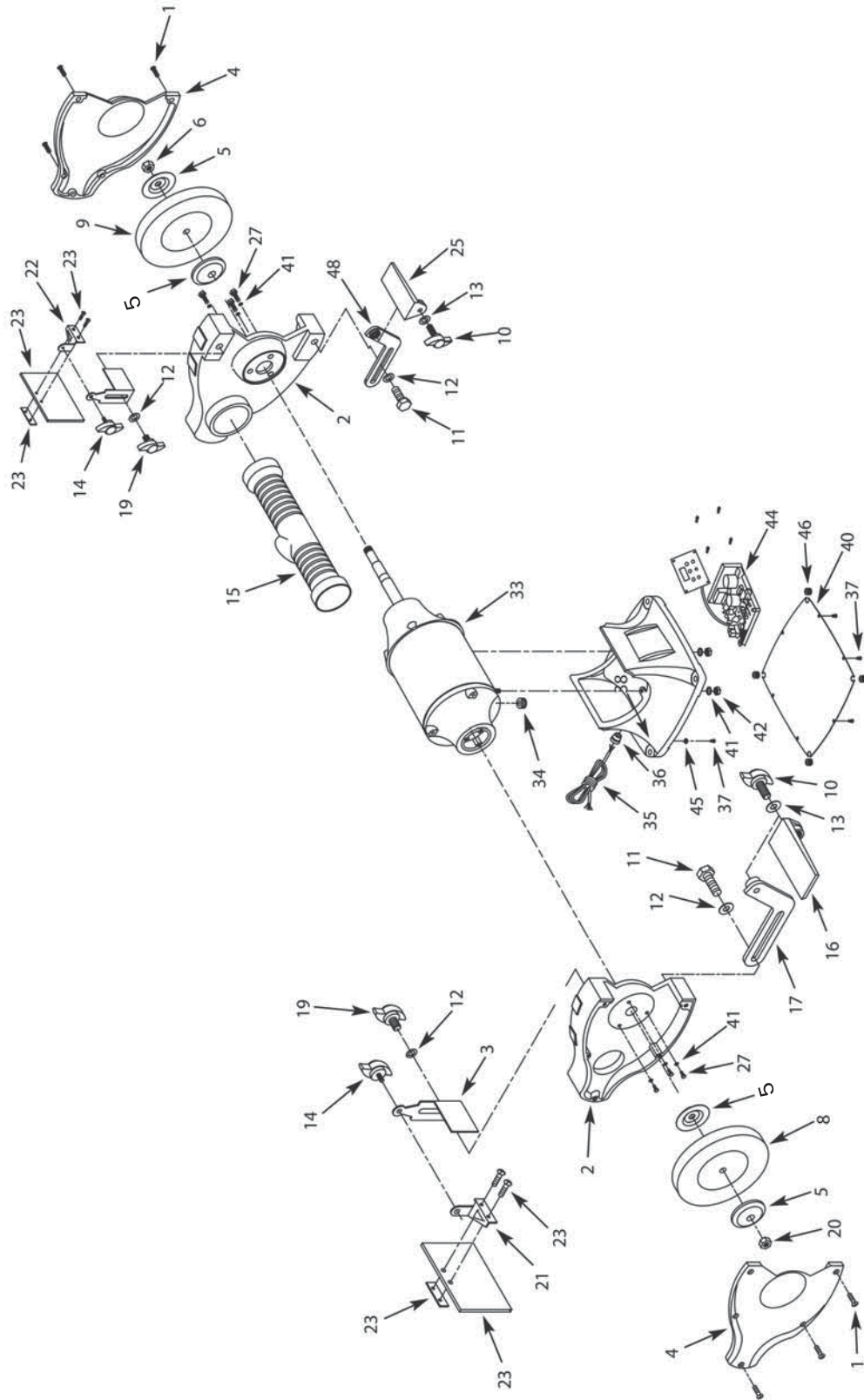


Figure 5 - Repair Parts Illustration for Bench Grinders



**REPAIR PARTS LIST FOR BENCH GRINDERS**

Ref. No.	Description	Part No. for 9682096	Part No. for 9682097	Part No. for 9682098	Qty.	Ref. No.	Description	Part No. for 9682096	Part No. for 9682097	Part No. for 9682098	Qty.
1	1/4"-20 x 3/4" Pan Head Screw			*	10	25	Tool Rest (Right)	9625825.00	9625825.00	9625825.00	1
1	#10-24 x 1/2" Pan Head Screw	*	*	-	10	27	1/4"-20 x 3/8" Flange Screw	*	-	-	6
2	Wheel Guard	9625959.01	9626056.01	9626057.01	2	27	1/4"-20 x 1/2" Hex Head Bolt	-	*	-	6
3	Spark Guard (set of 2)	9625814.00	9625815.00	9625815.00	1	27	5/16"-18 x 5/8" Hex Head Bolt	-	-	*	6
4	Wheel Guard Cover	9624464.03	9624496.03	9616911.03	2	33	Motor	+	+	+	1
5	Flange	9625806.00	9625807.00	9642292.01	2	34	Grommet	9601066.00	9601066.00	9601066.00	2
6	1/2"-12 Hex Nut (RH Thread)	9600548.00		-	1	35	Line Cord	9600067.00	9600090.00	9600090.00	1
6	5/8"-11 Hex Nut (RH Thread)	-	9600088.00	-	1	36	Strain Relief	9604055.00	9601601.00	9601601.00	1
6	1"-8 Hex Nut (RH Thread)	-	-	9600110.00	1	37	#10-24 x 1/4" Flange Screw	*	*	-	6
7	Inner Wheel Flange	9617316.00	9624498.00	9624481.00	2	37	M6 x 10mm Flange Screw	-	-	*	6
8	Grinding Wheel (36 Coarse Grit)	*	*	*	1	38	Base	+	+	+	1
9	Grinding Wheel (60 Medium Grit)	*	*	*	1	40	Base Cover	9623758.00	9624500.00	9616919.00	1
10	5/16"-18 x 1" Knob	9625812.00	9625812.00	9625812.00	2	41	1/4" Lock Washer	*	*	-	10
11	3/8"-16 x 3/4" Hex Head Bolt	*	*	*	2	41	5/16" Lock Washer	-	-	*	10
12	3/8" Flat Washer	*	*	*	4	42	1/4"-20 Hex Nut	*	*	-	4
13	5/16" Flat Washer	*	*	*	2	42	5/16"-18 Hex Nut	-	-	*	4
14	1/4"-20 x 1/2" Knob	9625816.00	9625816.00	9625816.00	2	43	M3 x 10mm Screw	*	*	*	4
15	Dust Collector Hose	9608070.01	9608070.00	9608070.02	1	44	Inverter & Control Panel Assembly	9640118.01	9640118.02	9640118.03	1
16	Tool Rest (Left)	9625813.00	9625813.00	9625813.00	1	45	#10 Serrated Washer	*	*	*	4
17	Bracket (Left)	9625810.00	9631447.00	9626290.00	1	46	Base Bumper	9623391.00	9623991.00	9623991.00	4
19	3/8"-16 x 1/2" Knob	9625817.00	9625817.00	9625817.00	2	48	Bracket (Right)	9625826.00	9631448.00	9626291.00	1
20	1/2"-12 Hex Nut (LH Thread)	9600064.00	-	-	1	<b>Recommended Accessories</b>					
20	5/8"-11 Hex Nut (LH Thread)	-	9600087.00	-	1	<input checked="" type="checkbox"/>	Cast Iron Tool Stand	9670101	9670101	9670101	1
20	1"-8 Hex Nut (LH Thread)	-	-	960111.00	1	<input checked="" type="checkbox"/>	Grinder Light	9682904	9682904	9682904	1
21	Upper Eyesield Bracket (Left)	9625177.00	9625177.00	9625177.00	1	<input checked="" type="checkbox"/>	Grinding Wheel Dresser	9682901	9682901	9682901	1
22	Upper Eyesield Bracket (Right)	9625188.00	9625188.00	9625188.00	1	<input checked="" type="checkbox"/>	Large Grinding Wheel Dresser	9682902	9682902	9682902	1
23	Eyesield Kit (Set of 2)	9632290.00	9632290.00	9632290.00	1						

Not shown.

(+) Not available as repair part.

(\*) Standard hardware item, available locally.

**NOTES:**

**NOTES:**

## WARRANTY

Palmgren warrants their products to be free of defects in material or workmanship. This warranty does not cover defects due directly or indirectly to misuse, abuse, normal wear and tear, failure to properly maintain the product, heated, ground or otherwise altered, or used for a purpose other than that for which it was intended. The warranty does not cover expendable and/or wear parts (i.e. v-belts, coated screws, abrasives), damage to tools arising from alteration, abuse or use other than their intended purpose, packing and freight. The duration of this warranty is expressly limited to one year parts and labor, unless otherwise noted below beginning from the date of delivery to the original user. The Palmgren products carry the following warranties on parts with a 1 year warranty on labor:

- USA Machine vises – Lifetime
- IQ Machine vises – Lifetime
- Bench vises – Lifetime
- Positioning tables – Lifetime
- Bench grinders & buffers – 3 years
- Tapping machines – 2 years
- Drilling machines – 2 years
- Finishing machines – 2 years
- Band saws – 2 years
- Work stands – 2 years
- Arbor presses – 2 years
- Metal forming equipment – 2 years
- Accessories – 1 year

The obligation of Palmgren is limited solely to the repair or replacement, at our option, at its factory or authorized repair agent of any part that should prove deficient. Purchaser must lubricate and maintain the product under normal operating conditions at all times. Prior to operation become familiar with product and the included materials, i.e. warnings, cautions and manuals. **Failure to follow these instructions will void the warranty.**

This warranty is the purchaser's exclusive remedy against Palmgren for any deficiency in its products. Under no circumstances is Palmgren liable for any direct, indirect, incidental, special or consequential damages including lost profits in any way related to the use or inability to use our products. This warranty gives you specific legal rights which may vary from state to state.

### SERVICE & REPAIR

1. If a Palmgren product requires a repair or warranty service **DO NOT** return the product to the place of purchase.
2. All warranty related work must be evaluated and approved by Palmgren.
3. Prior to returning any item the user must obtain factory approval and a valid RGA number.
4. For instructions and RGA number call toll free (800) 827-3398.

**PALMGREN®**