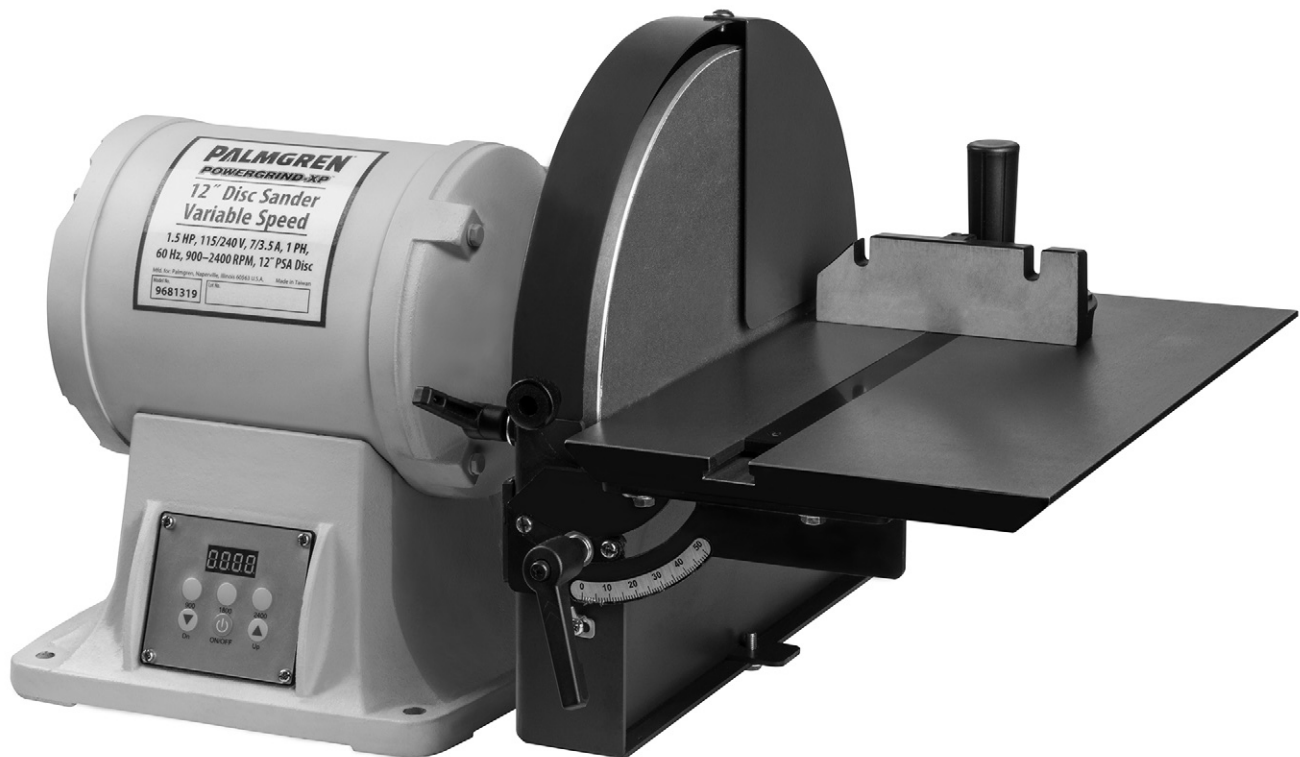


PALMGREN®

12" VARIABLE SPEED DISC SANDER



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

GETTING STARTED

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

Refer to Specifications on page 2 for the tools electrical requirements. The standard allowable voltage variation is plus or minus 10%.

TOOLS NEEDED

Standard mechanic's hand tool set.

DESCRIPTION

Palmgren 12" Disc Sander is constructed of rugged die cast aluminum and cast iron providing stability and vibration-free operation. The sander is used to sand, deburr, bevel and grind large workpieces of wood, plastic and metal.

The 12" diameter disc can be used to sand or bevel surfaces with the use of 50° to 45° scaled cast iron table. Features include a tilting table with miter gauge slot, dust collection chute and disc brake. The adjustable miter gauge can be used to guide the workpiece at any desired angle while sanding.



UNPACKING

UNPACK

Do not discard packing materials until after machine has been inspected for damage and completeness. Locate loose parts and set aside.

CONTENTS

- Disc Sander Unit (1)
- Miter Gauge (1)
- Abrasive Disc (1)
- Operating Instructions & Parts Manual

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.

SPECIFICATIONS

Model 9681319, 12" Variable Speed Disc Sander

Disc Size	12"
HP	1.5 HP
RPM	900 – 2400 RPM (variable)
Voltage	115V / 240V
Amperage	7 A / 3.5 A
Phase	1 Φ
Table Size	15.75" \times 9"
Table Angle Range	0° to 50°
Dust Collection Diameter	2-1/2"
Overall Dimensions	24" \times 16" \times 15"
Base Mounting Dimensions	8-3/4" \times 8-3/4" ; \varnothing 1/2"
Weight	N.W.: 93 lbs / G.W.: 102 lbs

SAFETY RULES

WARNING: For your own safety, read operating instructions manual 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

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

PREPARE WORK AREA FOR JOB

1. Keep work area clean. Cluttered work areas invite accidents.
2. 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.
3. Work area should be properly lighted.

SAFETY RULES (CONTINUED)

4. Proper electrical receptacle should be available for tool. Three-prong plug should be plugged directly into properly grounded, three-prong receptacle.
5. Extension cords should have a grounding prong and the three wires of the extension cord should be of the correct gauge.
6. Keep visitors at a safe distance from work area.
7. 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

1. Always unplug tool prior to inspection.
2. Consult manual for specific maintaining and adjusting procedures.
3. Keep tool lubricated and clean for safest operation.
4. Remove adjusting tools. Form habit of checking to see that adjusting tools are removed before switching machine on.
5. Keep all parts in working order. Check to determine that the guard or other parts will operate properly and perform their intended function.
6. Check for damaged parts. Check for alignment of moving parts, binding, breakage, and mounting or any other condition that may affect a tool's operation.
7. A guard or other damaged part should be properly repaired or replaced. Do not perform makeshift repairs. (Use parts list provided to order repair parts.)

KNOW HOW TO USE TOOL

1. Use right tool for job. Do not force tool or attachment to do a job for which it was not designed.
2. Disconnect tool when changing abrasive disc.
3. Avoid accidental start-up. Make sure that the tool is in the OFF position before plugging in.
4. Do not force a tool. It will work most efficiently at the rate for which it was designed.
5. Keep hands away from moving parts and sanding surfaces.
6. Never leave tool running unattended. Turn the power off and do not leave tool until it comes to a complete stop.
7. Do not overreach. Keep proper footing and balance.
8. Never stand on tool. Serious injury could occur if tool is tipped or if disc is unintentionally contacted.
9. Know your tool. Learn the tool's operation, application and specific limitations.
10. Use recommended accessories. Use of improper accessories may cause risk of injury to persons.
11. Handle workpiece correctly. Protect hands from possible injury.
12. Turn machine off if it jams. Belt jams when it digs too deeply into workpiece. (Motor force keeps it stuck in the work.)
13. Support workpiece with miter gauge or work table.
14. Maintain 1/16" maximum clearance between table and sanding disc.

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

WARNING: Do not attempt to operate tool until it is completely assembled according to instructions.

ASSEMBLY

The unit arrives fully assembled, but needs the abrasive disc applied to the aluminum disc. Before replacing the abrasive disc, make sure the machine is unplugged from the power source!

1. First remove the two screws that hold the panel that covers half of the visible disc. And remove the plate.
2. Remove the lower panel covering the disc by unscrewing the single screw on the bottom of the guard.
3. OPTIONAL: Although not necessary, it will help to remove the table. Do so by unscrewing the two locking handles, and one of the semi-circle slides-by unscrewing two screws.
4. Remove the backing on the replacement abrasive disc, and press it firmly to the aluminum disc. Start at one side to make sure no air bubbles get trapped beneath the abrasive disc.
5. Re-attach the table (if removed), lower panel, and upper panel.

INSTALLATION

Refer to Figures 1, 2 and 3.

The disc sander must be installed on a structurally stable work surface. If in doubt, consult a qualified structural engineer.

When determining a final location, ensure there is enough clearance for the work piece, which may require extra space around the machine. Mounting dimensions in figure 1.

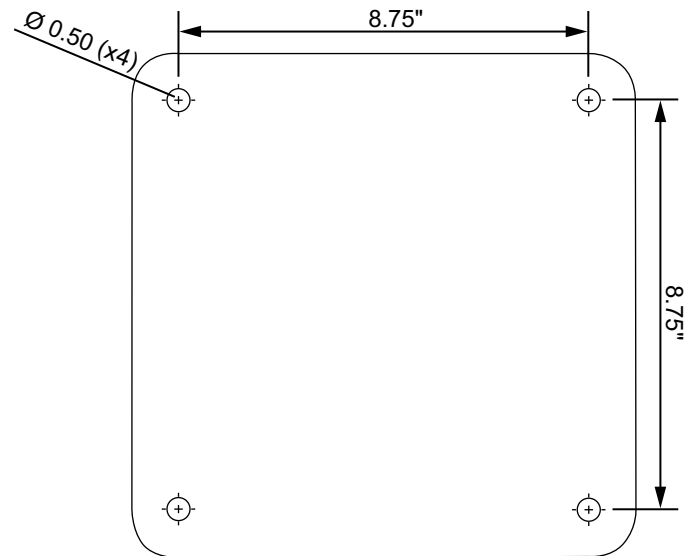


Figure 1 – Mounting dimensions.

WARNING: All electrical connections must be performed by a qualified electrician.

POWER SOURCE

The motor is designed for operation on the voltage and frequency specified. Normal loads will be handled safely on voltages not more than 10% above or below the specified voltage.

Running the unit on voltages which are not within the range may cause overheating and motor burn-out. Heavy loads require that the voltage at motor terminals be no less than the voltage specified. Power supply to the motor is controlled by a single pole locking rocker switch. Remove the key to prevent unauthorized use.

INSTALLATION (CONTINUED)

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 tool is equipped with an approved 3-conductor cord rated at 150V 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, as shown (Figure 2).

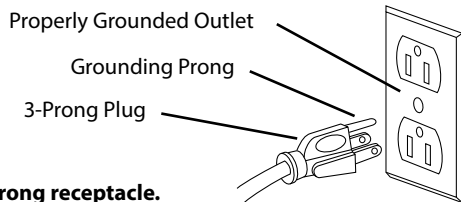


Figure 2 – 3-Prong receptacle.

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.

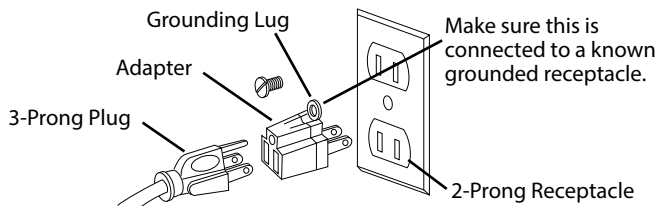


Figure 3 – 2-Prong receptacle with adapter.

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.

EXTENSION CORDS

Use proper extension cord. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Extension Cord Table						
		Volts	Total Length of Cord in Feet			
Ampere Rating		120	25	50	100	150
More Than	Not More Than	240	50	100	150	300
		Minimum Gage for Cord				
0	6	18	16	16	14	
6	10	18	16	14	12	
10	12	16	16	14	12	
12	16	14	12	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.

IMPORTANT: A GFCI is built into this tool and cannot be disengaged. This unit can ONLY be used with a non-GFCI outlet. Plugging this unit into a GFCI outlet will cause the outlet breaker to pop and the tool will not function

NOTE: A ground-fault circuit interrupter, or GFCI, is a fast-acting circuit breaker designed to shut off electrical power in the event of a ground-fault.

OPERATION

Refer to figure 4.

To turn on press the bottom center “ON/OFF” button. The wheel will begin to spin. Pressing it again turns off the machine.

When on, pressing any of the top set of three buttons: “900”, “1800”, and “2400”, the screen will show the selected rpm, then switch to current rpm while the wheels spin up or slow down to match the selected rpm.

Pressing the “Dn” (Down) will increment the speed down by 100 rpm. Cannot go below 900 rpm.

Pressing the “Up” will increment the speed up by 100 rpm. Cannot go above 2400 rpm.



Figure 4 – Control buttons from left to right; top row: 900 RPM, 1800 RPM, and 2400 RPM; bottom row: Dn – “Down”, ON/OFF, and Up.

MAINTENANCE

WARNING: Make certain that the unit is disconnected from power source before attempting to service or remove any component.

CLEANING

- Keep machine and workshop clean. Do not allow sawdust to accumulate on the tool.
- Keep wheels clean. Dirt on wheels will cause poor tracking and belt slippage.
- Operate tool with dust collector to keep dust from accumulating.

WARNING: After sanding wood or non-metallic material, always clean dust collector and guards of sawdust before grinding metal. Sparks could ignite debris and cause a fire.

- Be certain motor is kept clean and is frequently vacuumed free of dust.
- Use soap and water to clean painted parts, rubber parts and plastic guards.

KEEP TOOL IN REPAIR

- If power cord is worn, cut or damaged, replace it immediately.
- Replace worn abrasives when needed.
- Replace any damaged or missing parts using the parts list to order parts.
- Ensure that replacement is performed by a qualified service technician.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Motor will not start	<ol style="list-style-type: none"> 1. Blown line fuse or tripped circuit breaker 2. Low line voltage 3. Defective switch 4. Defective, blown capacitor 	<ol style="list-style-type: none"> 1. If fuse is blown, replace with fuse of proper size. If breaker tripped, reset it 2. Check power supply for voltage and correct as needed 3. Replace switch 4. Replace capacitor
Motor will not start; fuses blown or circuit breakers tripped	<ol style="list-style-type: none"> 1. Overloading due to binding 2. Defective plug 3. Defective cord 4. Defective switch 5. Unit is plugged into GFCI circuit 	<ol style="list-style-type: none"> 1. Clean around wheels and shaft and/or replace bearings 2. Replace plug 3. Replace cord 4. Replace switch 5. Plug into a circuit without a GFCI
Motor fails to develop full power (power output of motor decreases rapidly with decrease in voltage at motor terminals)	<ol style="list-style-type: none"> 1. Power line overloaded with lights, appliances and other motors 2. Undersized wires or circuits too long 3. General overloading of power company's facilities 	<ol style="list-style-type: none"> 1. Reduce load on power line 2. Increase wire sizes, or reduce length of wiring 3. Request a voltage check from power company
Motor overheats	Motor overloaded	Reduce load on motor.
Motor stalls (resulting in blown fuses or tripped circuit breakers)	<ol style="list-style-type: none"> 1. Short circuit in motor or loose connections 2. Low voltage 3. Motor wired for different line voltage 4. Incorrect fuses or circuit breakers in power line 5. Motor overloaded 	<ol style="list-style-type: none"> 1. Inspect connections in motor for loose or shorted terminals or worn insulation on lead wires 2. Correct the low line voltage conditions 3. Rewire motor as per line voltage 4. Install correct fuses or circuit breakers 5. Reduce load on motor
Machine slows down while operating	Applying too much pressure to workpiece	Ease up on pressure
Excessive vibration	1. Improper wheel mounting	1. Remount the wheel

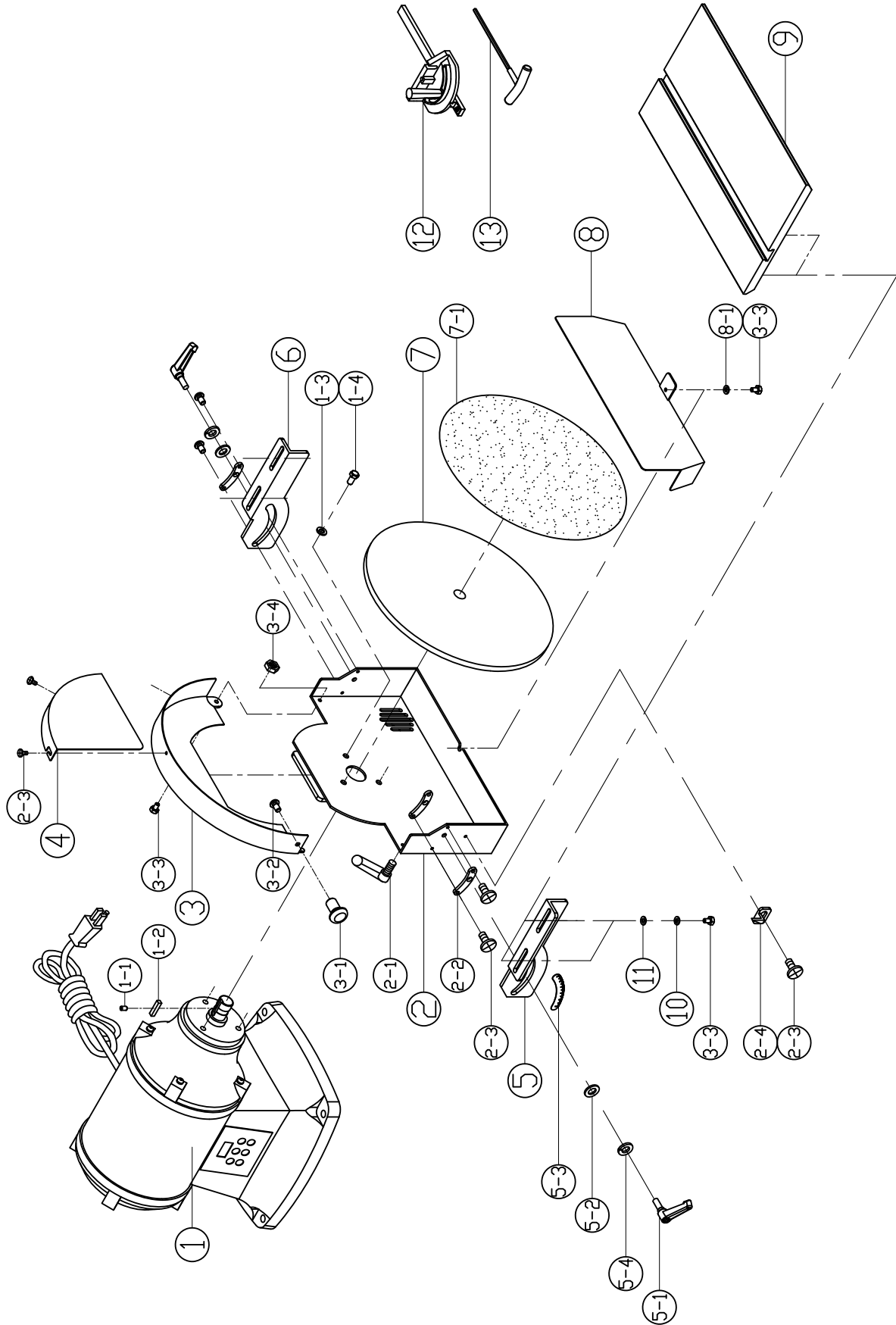


Figure 5 – Repair Parts Illustration for Model 9681319, 12" Variable Speed Disc Sander.

REPAIR PARTS LIST FOR MODEL 9681319, 12" VARIABLE SPEED DISC SANDER.

Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Motor	965079201	1	4	Half-Disc Guard	965080001	1
1-1	Set Screw, 5/16" x 3/8" L	*	1	5	Side Plate (L)	965080101	1
1-2	Key, 6 X 6 X 30L (mm)	*	1	5-1	Lock Lever, 5/16" x 1" L	965080201	2
1-3	Spring Washer, 5/16"	*	3	5-2	Washer, 5/16"	*	2
1-4	Hex Screw, 5/16" x 5/8" L	*	3	5-3	Label	965080301	1
2	Disc Guard	965079301	1	5-4	Spring Washer, 5/16"	*	2
2-1	Lock Lever, M6 x 16l	965079401	1	6	Side Plate(R)	965080401	1
2-2	Plate	965079501	2	7	Sanding Disc Platen	965080501	1
2-3	Screw, M5 x 8l	*	7	7-1	Sanding Disc, 12"	965080601	1
2-4	Index	965079601	1	8	Dust Chute	965080701	1
3	Upper Guard	965079701	1	9	Disc Table	965080801	1
3-1	Knob, 1/4"	965079801	1	10	Spring Washer, 1/4"	*	4
3-2	Phillips Head Screw, 1/4" x 3/8" L	*	1	11	Washer, 1/4"	*	5
3-3	Hex Screw, M6 x 16L	*	6	12	Mitre Gauge	965080901	1
3-4	Nylon Hex Nut, M6	965079901	1	13	T-Handle Hex Wrench	965081001	1

(Δ) Not shown. (N/A) Not available as repair part. (*) Standard hardware item, available locally. (Φ) Not included.

PALMGREN WARRANTY

C.H. Hanson / 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 part (i.e. v-belts, screws, abrasives, jaws), 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 the terms noted below beginning from the date of delivery to the original user.

The Palmgren branded items carry the following warranties on parts:

All arbor presses, vises, clamps, positioning tables, tombstones, jack screws and vise accessories - LIFETIME.

All bench grinders, drill presses, tapping machines, band saws, lathes, milling machines, abrasive finishing machines and work stands - 3 YEARS.

The obligation of C.H. Hanson / 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 inoperable. 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 C.H. Hanson for any inoperable parts in its product. Under no circumstances is C.H. Hanson liable for any direct, indirect, incidental, special or consequential damages including loss of 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.

PALMGREN®

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