



OPERATOR'S MANUAL



Cat. No. 5455,
5460, 5540

POLISHERS



WARNING To reduce the risk of injury, user must read and understand operator's manual.

GENERAL POWER TOOL SAFETY WARNINGS

WARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference. The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

WORK AREA SAFETY

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Use of an GFCI reduces the risk of electric shock.

PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left

attached to a rotating part of the power tool may result in personal injury.

- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

SERVICE

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES FOR POLISHER

Safety Warnings Common for Polishing Operations:
• This power tool is intended to function as a polisher. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed

below may result in electric shock, fire and/or serious injury.

- **Operations such as grinding, sanding, wire brushing or cutting-off are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their rated speed can break and fly apart.
- **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately guarded or controlled.
- **Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
- **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.** The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- **Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire may also make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **Position the cord clear of the spinning accessory.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- **Never lay the power tool down until the accessory has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
- **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning accessory

could snag your clothing, pulling the accessory into your body.

- **Regularly clean the power tool's air vents.** The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

Kickback and Related Warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** The operator can control torque reactions or kickback forces, if proper precautions are taken.
- **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- **Do not position your body in the area where power tool will move if kickback occurs.** Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.** Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- **Do not attach a saw chain woodcarving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.

Safety Warnings Specific for Polishing Operations:

- **Do not allow any loose portion of the polishing bonnet or its attachment strings to spin freely. Tuck away or trim any loose attachment strings.** Loose and spinning attachment strings can entangle your fingers or snag on the workpiece.

Additional Safety Warnings

- **Maintain labels and nameplates.** These carry important information. If unreadable or missing, contact a MILWAUKEE service facility for a free replacement.

- **⚠WARNING** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - lead from lead-based paint
 - crystalline silica from bricks and cement and other masonry products, and
 - 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, such as those dust masks that are specially designed to filter out microscopic particles.

SYMBOLOLOGY



Double Insulated



Volts



Alternating Current



Alternating Current/Direct Current



Amps

n XXXX min⁻¹ Rated Revolutions per Minute (RPM)



UL Listing Mark for Canada and U.S.

FUNCTIONAL DESCRIPTION



1. Handle
2. Speed control dial
3. Tool rest
4. Side handle
5. Polishing pad
6. Backing pad
7. Spindle lock button
8. Trigger
9. Cord

SPECIFICATIONS

Cat. No.	5455
Volts.....	120 AC/DC
Rated RPM.....	2000
Pad Diameter.....	7"/9"
Spindle Thread Size	5/8"-11
Cat. No.	5460
Volts.....	120 AC
Rated RPM.....	0 - 2000
Pad Diameter.....	7"/9"
Spindle Thread Size	5/8"-11
Cat. No.	5540
Volts.....	120 AC
Rated RPM.....	0 - 3000
Pad Diameter.....	7"
Spindle Thread Size	5/8"-11

EXTENSION CORDS

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. Refer to the table shown to determine the required minimum wire size.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

Guidelines for Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Recommended Minimum Wire Gauge For Extension Cords*

Nameplate Amps	Extension Cord Length				
	25'	50'	75'	100'	150'
0 - 2.0	18	18	18	18	16
2.1 - 3.4	18	18	18	16	14
3.5 - 5.0	18	18	16	14	12
5.1 - 7.0	18	16	14	12	12
7.1 - 12.0	16	14	12	10	--
12.1 - 16.0	14	12	10	--	--
16.1 - 20.0	12	10	--	--	--

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

GROUNDING

⚠WARNING Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a MILWAUKEE service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounded Tools (Three-Prong Plugs)

Tools marked "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet (See Figure A). If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure A.

Fig. A



Double Insulated Tools (Two-Prong Plugs)

Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association and the National Electrical Code. Double Insulated tools may be used in either of the 120 volt outlets shown in Figures B and C.

Fig. B



Fig. C

ASSEMBLY

⚠WARNING To reduce the risk of injury, always unplug tool before changing or removing accessories. Only use accessories specifically recommended for this tool. Others may be hazardous.

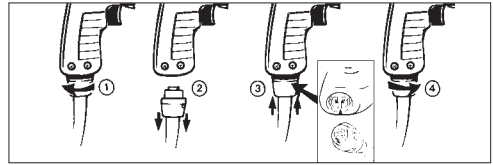
To reduce the risk of injury, always use a side handle when using this tool. Hold securely.

Installing Side Handle

The side handle may be installed on either side of the gear case. Position the side handle in the location which offers best control and protection. To install, thread side handle into side handle socket and tighten securely.

Removing and Replacing Quik-Lok® Cords

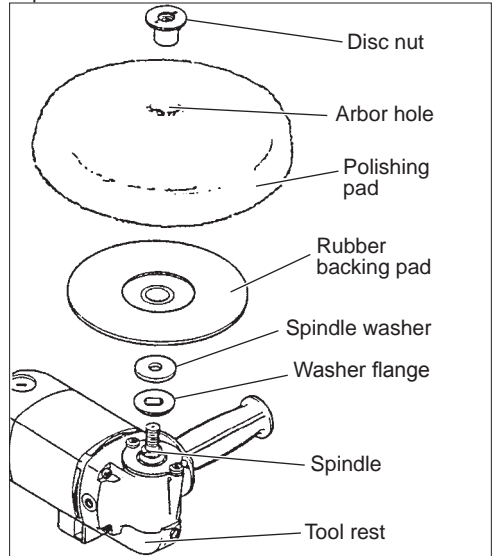
MILWAUKEE's exclusive Quik-Lok® Cords provide instant field replacement or substitution.



1. To remove the Quik-Lok® Cord, turn the cord nut 1/4 turn to the left and pull it out.
2. To replace the Quik-Lok® Cord, align the connector keyways and push the connector in as far as it will go. Turn the cord nut 1/4 turn to the right to lock.

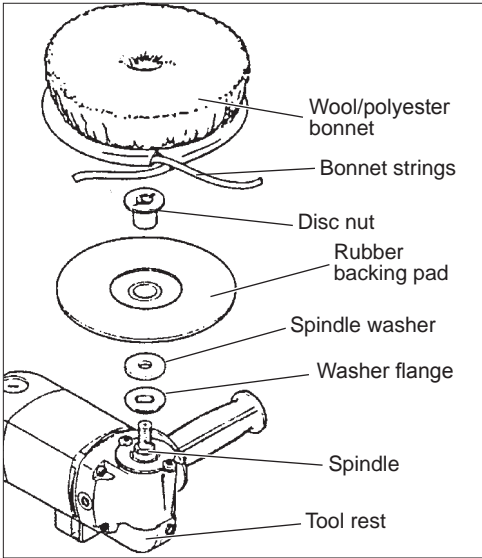
Polishing Pads

MILWAUKEE polishing pads are available in two different materials. 100% lambswool pads are ideal for compounding on non-clearcoat finishes. Wool/polyester blend pads are softer, making them acceptable for clearcoat finishes.



1. To install polishing pads, unplug the tool and place it on its tool rest with the spindle upright.
2. Make sure the washer flange and spindle washer are installed on spindle. Then, slide the disc nut through the arbor hole in both the polishing pad and the rubber backing pad, making sure to spread the fibers in the pad so the disc nut seats on pad backing.
3. Push in the spindle lock button (located on left side of gear case) and simultaneously screw the disc nut & polishing pad assembly clockwise onto the spindle. Securely hand-tighten the disc nut and polishing pad.
4. To remove the polishing pad, push in the spindle lock button and turn the disc nut counterclockwise to unscrew the assembly.

Wool/Polyester Bonnets



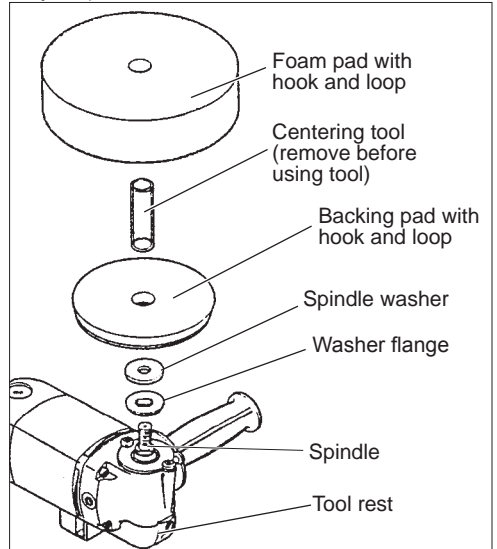
1. To **install** wool/polyester bonnets, unplug the tool and place it on a tool rest with the spindle upright.
2. Make sure the washer flange and spindle washer are installed on spindle. Then, slide the rubber backing pad onto the spindle.
3. Push in the spindle lock button and screw the disc nut onto the spindle clockwise. Securely hand-tighten the disc nut.
4. Cover the rubber backing pad with the bonnet. Securely tie bonnet strings and tuck the strings into the bonnet so they do not interfere with polishing.
5. To **remove**, untie and remove the bonnet. Push in the spindle lock button and turn the disc nut and rubber backing pad counterclockwise.

Hook and Loop Pads

Hook & loop pads are available in both wool/polyester and foam. Foam pads should be used on slower/low speed dial settings when using polisher Cat. Nos. 5540 and 5460. Foam pads are not recommended for the inexperienced operator.

Foam pad Cat. No. 49-36-1550 is ideal for use with clearcoat finishes and micro-fine rubbing compounds. It will remove light surface scratches, environmental pollutants, wet-sanding scratches and hazy paint.

Foam pad Cat. No. 49-36-0650 is ideal for glazing and finishing on clearcoat finishes. It will remove buffing swirls, hard water spots, carwash brush swirls and mild hazing. A centering tool, Cat. No. 49-67-0130, is supplied with hook and loop backing pads, Cat. No. 49-36-2150, to properly align the backing pad with the polishing pad, providing the proper balance for your polisher.



1. To **install** hook and loop pads, unplug the tool and place it on tool rest with spindle upright.
2. Make sure washer flange and spindle washer are installed on spindle. Then slide hook and loop backing pad onto spindle.
3. Push in the spindle lock button and spin the backing pad clockwise until it is securely hand-tightened.
4. Insert the centering tool (supplied with the backing pad) into the center hole in the hook and loop backing pad. Push desired hook and loop polishing pad over the centering tool so that the polishing pad fastens to the hook and loop backing pad. **Remove centering tool.**
5. To **remove**, "peel" off the polishing pad. Push in the spindle lock button and rotate backing pad counterclockwise to remove.

NOTE: Use side handles for better control and safety.

OPERATION

⚠WARNING To reduce the risk of injury, always unplug tool before attaching or removing accessories or making adjustments. Use only specifically recommended accessories. Others may be hazardous.

To reduce the risk of injury, wear safety goggles or glasses with side shields.

Starting, Stopping and Controlling Speed

Cat. No. 5455: To start the tool, pull the trigger. To stop the tool, release the trigger.

Cat. Nos. 5540 & 5460 feature a dial speed control, which controls the polisher's maximum rotations per minute. The speed will remain variable to the chosen dial setting by use of the trigger switch. Dial settings range from 1 through 5. Lower numbers correspond to lower speeds and higher numbers correspond to higher speeds. Generally, lower speeds are recommended for tight work areas and higher speeds are ideal for large surface areas. Use the setting that best suits your job.

To control the speed, set the dial to the desired number. Then pull the trigger. Increase or decrease pressure on the trigger to vary the speed. To stop the tool, release the trigger.

⚠WARNING To reduce the risk of injury, keep the cord set away from the path of the polisher. Otherwise the cord set may become caught by the pad and wrap around the spindle; this may cut through the cord and expose live wires or make the gear box electrically "live."

Polishing

Always use side handle for proper control. Move the polisher back and forth in long, sweeping strokes. Too much pressure, the wrong angle or improper motion may cause swirl marks or burning.

For detailed polishing instructions, read the instructions provided with your finishes, waxes and polishes.

Preventing Burning Through Paint

It is easy to burn through the paint on a surface. This can occur if you polish at too high a speed or if you allow the polishing pad to stay in one spot for even a short period of time. To prevent burning through paint, use very light pressure and keep the polisher moving constantly, especially when working near edges or where there are abrupt changes in the contour of the work surface.

Be particularly careful when using Cat. No. 5540, which are high RPM polishers and are more likely to burn through paint.

⚠WARNING To reduce the risk of injury, follow instructions for preventing snagging. Snagging may cause the tool to kick back and the operator to suddenly lose control of the tool. Always use side handle to maintain control.

Preventing Snagging

Snagging occurs when polishing pads get caught on rough edges of a work surface. Snagging can cause the tool to suddenly "kick back" and it may cause the pad to burn through the paint. To reduce the risk of snagging, use the polisher at low speeds when polishing rough surfaces. For tricky areas such as near trim or between a mirror and window on a car, do not take chances with a polisher. Polish these surfaces by hand.

When using Cat. Nos. 5460 and 5540 with the trigger speed control, release the trigger slightly so the rotation of the pad is slowed.

To prevent snagging while using Cat. No. 5455 without trigger speed control, it is best to use the "coast-down" technique to avoid snagging. To coast-down, turn the motor ON for a few seconds, then turn it OFF and apply the polishing pad to the surface. This way, when the pad touches the work surface, it will be rotating more slowly than it is when the motor is ON. Use coast-down when working in areas where crevices or pockets are present.

MAINTENANCE

⚠WARNING To reduce the risk of injury, always unplug the tool before performing any maintenance. Never disassemble the tool. Contact a MILWAUKEE service facility for ALL repairs.

Maintaining Tools

Keep your tool in good repair by adopting a regular maintenance program. Inspect your tool for issues such as undue noise, misalignment or binding of moving parts, breakage of parts, or any other condition that may affect the tool operation. Return the tool to a MILWAUKEE service facility for repair. After six months to one year, depending on use, return the tool to a MILWAUKEE service facility for inspection.

⚠WARNING To reduce the risk of personal injury, electric shock and damage, never immerse your tool in liquid or allow a liquid to flow inside it.

Cleaning

Clean dust and debris from vents. Keep handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean, since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

Repairs

For repairs, return the tool to the nearest service center.