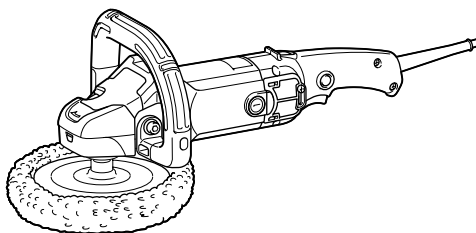


INSTRUCTION MANUAL

# Polisher

9237C



014946

**IMPORTANT:** Read Before Using.

## SPECIFICATIONS

Model		9237C
Max capacities	Wool pad	180 mm (7")
	Wool bonnet	180 mm (7")
Spindle thread		5/8"
Rated speed (RPM)		3,200 /min
Overall length		431 mm (17")
Net weight		3.4 kg (7.5 lbs)

- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Specifications may differ from country to country.
- Weight according to EPTA-Procedure 01/2003

GEA007-1

## General Power Tool Safety Warnings

**⚠ WARNING** Read all safety warnings and all instructions. Failure to follow the warnings and instructions 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

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **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.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

### Electrical safety

4. **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.
5. **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.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **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.

8. **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.
9. **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

10. **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.
11. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
12. **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 energising power tools that have the switch on invites accidents.
13. **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.
14. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
15. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
16. **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.

**Power tool use and care**

17. **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.
18. **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.
19. **Disconnect the plug from the power source and/or the battery pack 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.
20. **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.
21. **Maintain power tools. 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.
22. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges

are less likely to bind and are easier to control.

23. **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.

**Service**

24. **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.
25. **Follow instruction for lubricating and changing accessories.**
26. **Keep handles dry, clean and free from oil and grease.**

**USE PROPER EXTENSION CORD.** Use only three-wire extension cords that have three-prong grounding-type plugs and three-pole receptacles that accept the tool's plug. Make sure your extension cord is in good condition. Replace or repair damaged or worn cord immediately. 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 1 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.

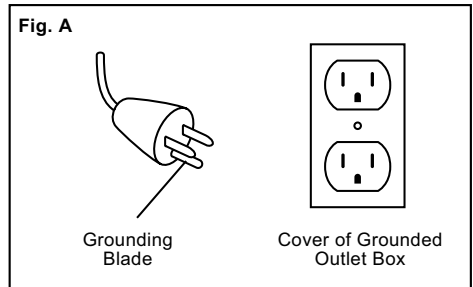
**Table 1: Minimum gage for cord**

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft.	50 ft.	100 ft.	150 ft.
More Than	Not More Than	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	

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**GROUNDING INSTRUCTIONS:**

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with a three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal. Your unit is for use on 120 volts and has a plug that looks like Fig. "A".



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## POLISHER SAFETY WARNINGS

### Safety Warnings Common for Polishing Operation:

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **Threaded mounting of accessories must match the tool 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.
7. **Do not use a damaged accessory. Before each use inspect the accessory such as backing pad for cracks, tear or excess wear. 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.
8. **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 filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
9. **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.
10. **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.
11. **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.
12. **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.
13. **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.
14. **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
15. **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.

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.

- a) **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.
- b) **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- c) **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.

d) 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.

e) 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:**

a) 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:**

- 16. Do not leave the tool running. Operate the tool only when hand-held.
- 17. Check that the workpiece is properly supported.
- 18. If working place is extremely hot and humid, or badly polluted by conductive dust, use a short-circuit breaker (30 mA) to assure operator safety.
- 19. Do not use the tool on any materials containing asbestos.

## SAVE THESE INSTRUCTIONS.


**⚠WARNING:**

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

USD210-1

## Symbols

The followings show the symbols used for tool.

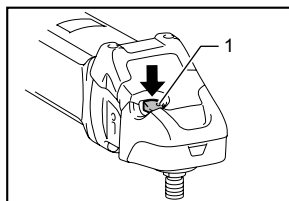
- v · volts
- A · amperes
- Hz · hertz
-  · alternating current
- n · rated speed
- n<sub>0</sub> · no load speed
- ... /min · revolutions or reciprocation per minute
- r/min

## FUNCTIONAL DESCRIPTION

**⚠CAUTION:**

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

### Shaft lock



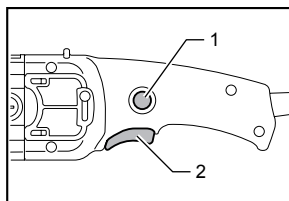
1. Shaft lock

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**⚠CAUTION:**

- Never actuate the shaft lock when the spindle is moving. The tool may be damaged.
- Press the shaft lock to prevent spindle rotation when installing or removing accessories.

### Switch action



1. Lock button  
2. Switch trigger

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**⚠CAUTION:**

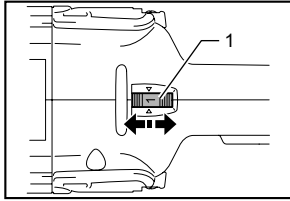
- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.
- Switch can be locked in "ON" position for ease of operator comfort during extended use. Apply caution when locking tool in "ON" position and maintain firm grasp on tool.

To start the tool, simply pull the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.

For continuous operation, pull the switch trigger and then push in the lock button.

To stop the tool from the locked position, pull the switch trigger fully, then release it.

## Speed adjusting dial



1. Speed adjusting dial

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The tool speed can be changed by turning the speed adjusting dial to a given number setting from 1 to 6. (At the time when the switch trigger is fully pulled.) Higher speed is obtained when the dial is turned in the direction of number 6. And lower speed is obtained when it is turned in the direction of number 1.

Refer to the table for the relationship between the number settings on the dial and the approximate tool speed.

Number	min <sup>-1</sup> (RPM)
1	600
2	900
3	1,500
4	2,100
5	2,700
6	3,200

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### ⚠CAUTION:

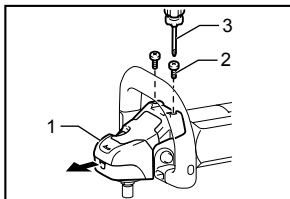
- If the tool is operated continuously at low speeds for a long time, the motor will get overloaded, resulting in tool malfunction.
- The speed adjusting dial can be turned only as far as 6 and back to 1. Do not force it past 6 or 1, or the speed adjusting function may no longer work.

## ASSEMBLY

### ⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.
- Always install the loop handle or the side grip.

### Removing or installing head cover



1. Head cover
2. Screw
3. Screwdriver

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To remove the head cover, perform the following steps:

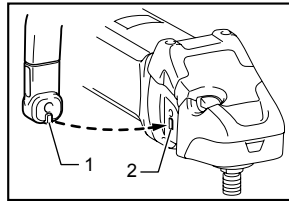
1. Remove the screw on the head cover with screwdriver.
2. Remove the head cover as shown in the figure.

To install the head cover, perform the above steps in reverse.

### Installing loop handle

#### ⚠CAUTION:

- Always be sure that the loop handle is installed securely before operation.



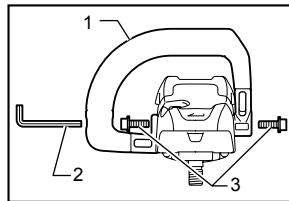
1. Protrusion of loop handle
2. Matching hole in gear housing

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Always install the loop handle on the tool before operation. Hold the tool's switch handle and the loop handle firmly with both hands during operation.

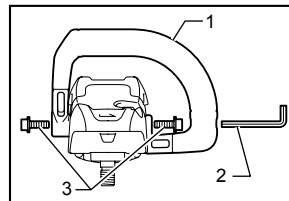
Install the loop handle so that its protrusion will fit into the matching hole in the gear housing.

Install the bolts and tighten them with the hex wrench. The loop handle can be installed in two different directions as shown in the figures whichever is convenient for your work.



1. Loop handle
2. Hex wrench
3. Bolt

014934

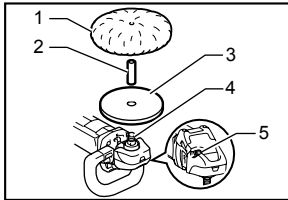


1. Loop handle
2. Hex wrench
3. Bolt

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For tools which are equipped with a backing pad.

### Installing or removing the wool pad (optional accessory)



1. Wool pad
2. Sleeve 18
3. Backing pad
4. Spindle
5. Shaft lock

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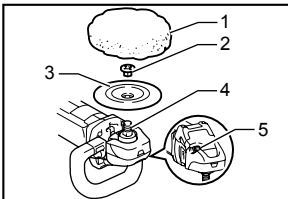
To install the wool pad, first remove all dirt or foreign matter from the backing pad. Press the shaft lock and screw the backing pad onto the spindle. Insert the sleeve 18 into the center hole of the backing pad.

Using the sleeve 18 as a positioning guide, install the wool pad on the backing pad with the sleeve 18 inserted through the center hole of the wool pad. Then remove the sleeve 18 from the backing pad.

To remove the wool pad, just tear it off the backing pad. Then unscrew the backing pad while pressing the shaft lock.

For tools which are equipped with a rubber pad.

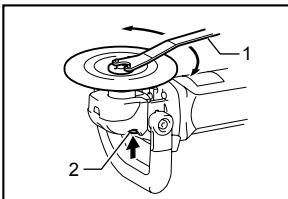
### Installing or removing the wool bonnet (optional accessory)



1. Wool bonnet
2. Lock nut
3. Rubber pad
4. Spindle
5. Shaft lock

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Mount the rubber pad onto the spindle. Screw the lock nut onto the spindle.

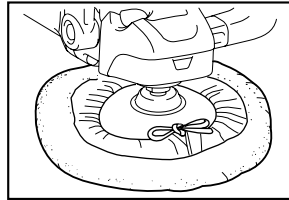


1. Lock nut wrench
2. Shaft lock

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To tighten the lock nut, press the shaft lock firmly so that the spindle cannot revolve, then use the lock nut wrench and securely tighten clockwise.

To remove the rubber pad, follow the installation procedure in reverse.



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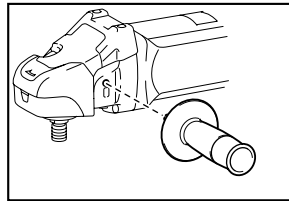
Fit the wool bonnet over the rubber pad. Tie a bow knot and tuck the knot and any loose strings between the wool bonnet and the rubber pad.

### Installing side grip (handle) (optional accessory)

#### ⚠CAUTION:

- Always be sure that the side grip is installed securely before operation.

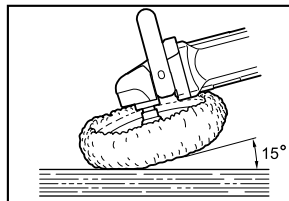
Screw the side grip securely on the position of the tool as shown in the figure.



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## OPERATION

### Polishing operation



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#### ⚠CAUTION:

- Always wear safety glasses or a face shield during operation.

Hold the tool firmly. Turn the tool on and then apply the wool pad/bonnet to the workpiece.

In general, keep the wool pad/bonnet at an angle of about 15 degrees to the workpiece surface.

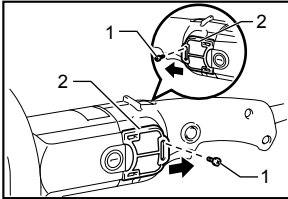
Apply slight pressure only. Excessive pressure will result in poor performance and premature wear to wool pad/bonnet.

## MAINTENANCE

### ⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.
- Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.

### Cleaning the dust cover



1. Screw
2. Dust cover

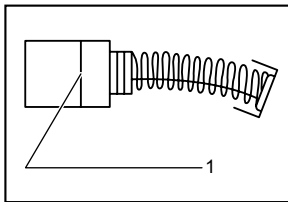
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Clean the dust cover when necessary as following steps:

1. Remove the screw on the dust cover.
2. Remove the dust cover.
3. Wipe the dust cover to remove dirt.
4. Align the hook of the dust cover with groove on the handle.
5. Tighten the dust cover with the screw.

If the dust cover is broken or becomes extremely dirty, replace it.

### Replacing carbon brushes

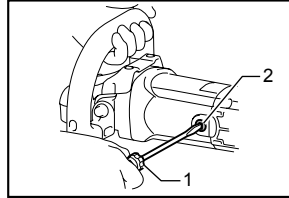


1. Limit mark

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Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.



1. Screwdriver
2. Brush holder cap

014938

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

## OPTIONAL ACCESSORIES

### ⚠CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Wool bonnet 180 (Hook & loop)
- Rubber pad 170
- Lock nut 48
- Lock nut wrench 28
- Sponge pad (Hook & loop)
- Wool pad 180 (Hook & loop)
- Backing pad 165 (Hook & loop)
- Sleeve 18
- Side grip (auxiliary handle)
- Loop handle
- Head cover

### NOTE:

- Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.



< USA only >

# WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains 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, 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.