

Mastercraft

MAXIMUM

HEAVY-DUTY ANGLE GRINDER



model no. 054-7221-4

IMPORTANT:

Read and understand this instruction manual
thoroughly before using the product.

**INSTRUCTION
MANUAL**

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NOTE: If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928

**SAVE THESE INSTRUCTIONS**

- This manual contains important safety and operating instructions. Read all instructions and follow them with use of this product.

Rated Voltage	120V~, 60Hz
Rated Power Input	12A
Single speed	11,000 RPM
Disc size	5" (125 mm)
Arbor size	5/8" (16 mm)
Weight	8 lb 3 oz (3.7 kg)

RULES FOR SAFE OPERATION

KNOW YOUR TOOL

To operate this angle grinder, carefully read this Instruction Manual and all labels affixed to the tool. Keep this Manual available for future reference.

IMPORTANT

This angle grinder should only be serviced by a qualified service technician. For more information, call the toll free helpline at 1-800-689-9928.

READ ALL INSTRUCTIONS CAREFULLY

SAVE THESE INSTRUCTIONS

GENERAL POWER TOOL SAFETY WARNINGS



WARNING!

Read all safety warnings and 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

- **Keep the 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 the 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 the 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 a 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 the tool while 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 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 energising 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 jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure that these are connected and properly used.** Use of these devices can reduce dust-related hazards.

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 more safely 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 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.

- **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.** 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, 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

- **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.

SAFETY WARNINGS FOR GRINDING

- **This power tool is intended to function as a grinder.** 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 sanding, wire brushing, polishing 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 that 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.
- **The arbors of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool.** Accessories with arbor holes 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. If the power tool or accessory is dropped, inspect it 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 the application, use a face shield, safety goggles or safety glasses. As appropriate, wear a dust mask, hearing protectors, gloves and a workshop apron capable of stopping small abrasive or workpiece fragments. 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 the work area.** Anyone entering the work area must wear personal protective equipment. Fragments of a workpiece or of a broken accessory may fly away and cause injury beyond the immediate area of operation.
- **Hold the power only tool by the insulated gripping surfaces when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** If a cutting accessory contacts a "live" wire, it may cause the exposed metal parts of the power tool to become "live" and shock the operator.
- **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 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.

- **The label on your tool may include the following symbols. The symbols and their definitions are as follows:**

V	Volts
A	Amperes
Hz	Hertz
W	Watts
min	Minutes
~	Alternating current
—	Direct current
n_0	No-load speed
	Class II Construction
.../min	Revolutions or reciprocation per minute
	Grounding terminal
BPM	Beats per minute
	WARNING – To reduce the risk of injury, user must read instruction manual.

ADDITIONAL SAFETY INSTRUCTIONS FOR GRINDING OPERATIONS

- **Use only wheel types that are recommended for your power tool and use only the specific guard designed for the selected wheel.** Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- **The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator.** The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.
- **Wheels must be used only for recommended applications.** For example: do not grind with the side of a cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding; side forces applied to these wheels may cause them to shatter.
- **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel.** Proper wheel flanges support the wheel, thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
- **Do not use worn down wheels from larger power tools.** Wheels intended for larger power tools are not suitable for the higher speed of a smaller tool and may burst.

KICKBACK AND RELATED WARNINGS

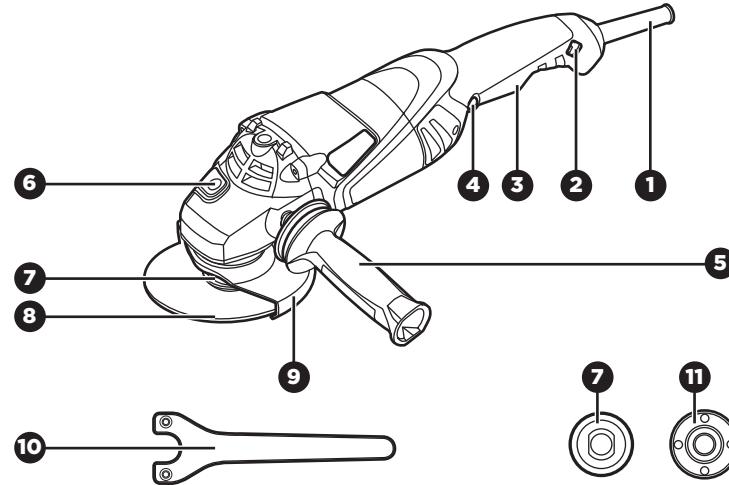
Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions, as given below.

- **Maintain a firm grip on the power tool and position your body and arms to allow you to resist kickback forces.** Always use the 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.** The accessory may kickback over your hand.
- **Do not position your body in the area where the power tool will move if kickback occurs.** Kickback will propel the tool in the 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, wood carving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.

PACKAGE CONTENTS

Angle grinder, side handle, wrench, instruction manual

KEY PARTS DIAGRAM



NO.	PART	NO.	PART
1	Cord guard	7	Inner flange
2	Power-supply indicator light	8	Grinding disc
3	ON/OFF trigger switch	9	Disc guard
4	Lock-off/Lock-on button	10	Wrench
5	Side handle	11	Outer flange
6	Spindle-lock button		



WARNING!

- Remove the grinder from the carton and examine it carefully. Do not discard the carton or any packaging material until all parts are examined.

IMPORTANT INFORMATION

Before attempting to use this tool, become familiar with all of its operating features and safety requirements. For optimum performance and safety, read the following operating instructions carefully before using.

POWER-SUPPLY INDICATOR LIGHT

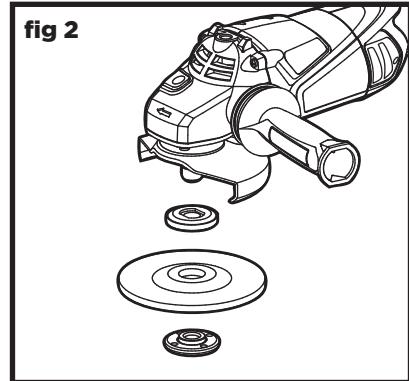
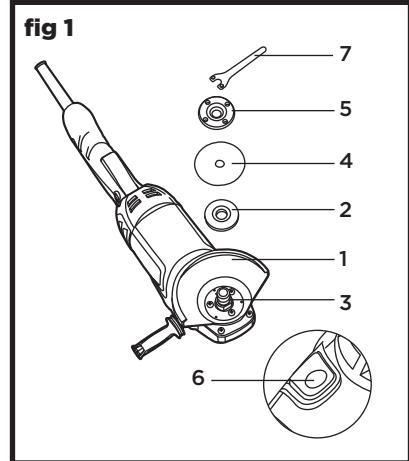
The indicator light will be lit when the plug is connected to the socket, and will be off when it is unplugged.

**WARNING!**

- Do not allow familiarity with the angle grinder to make you careless. A fraction of a second of carelessness is enough to cause severe injury.
- To avoid injury, always turn the tool off and disconnect the angle grinder from the power outlet before installing or changing the grinding disc.

ASSEMBLY INSTRUCTIONS**INSTALLING AND REMOVING THE GRINDING DISC****TO INSTALL A DISC (fig 1 and 2):**

- Disconnect the plug from the electrical outlet. Make sure that the guard (1) is securely in place.
- Remove the outer flange (5).
- Check that the inner flange (2) is properly seated on the spindle. It will click into place on the spindle and will cause the spindle to rotate when the inner flange is rotated.
- Check the rated speed on the grinding disc (4). Do not use a disc with a rated speed lower than the speed shown on the grinder's nameplate.
- Place the disc on the spindle.
- Replace the outer flange, with the flat side of the flange facing the disc.
- Press the spindle-lock button (6) to prevent the spindle from moving.
- While pressing the spindle-lock button, tighten the threaded outer flange (5) by turning it clockwise with the wrench supplied (7).

**NOTE:**

- The maximum disc thickness is 1/4" (6.5 mm), and the spindle opening is 7/8" (22.3 mm).

**WARNING!**

- Use only grinding wheels for which the maximum safe operating speed is rated at or above 12200 rpm. Never use damaged or imbalance grinding wheels. Grinding wheel type 27 is recommended for use with this grinder (fig 2).

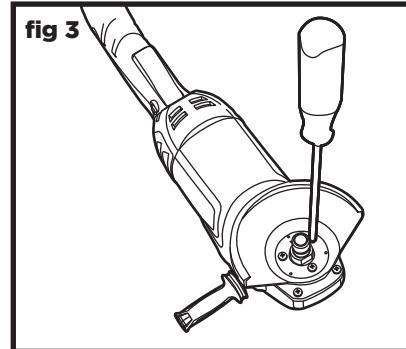
TO REMOVE A DISC (fig 1 and 2):

1. Disconnect the plug from the electrical outlet.
2. While pressing the spindle-lock button, loosen the threaded outer flange (5) by turning it counter-clockwise with the wrench supplied (7).
3. Remove the threaded outer flange.
4. Remove the disc (4) from the spindle (3).

ADJUSTING THE GRINDING DISC GUARD (fig 3)

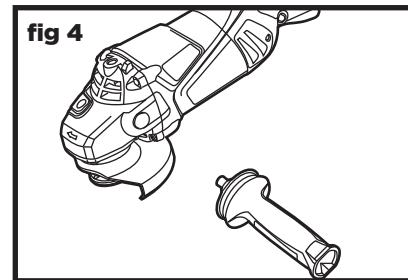
Adjust the guard to protect the operator's hands and to direct grinding debris away from the operator.

1. Disconnect the plug from the electrical outlet.
2. Loosen the clamp screws.
3. Position the guard at the required angle.
4. Tighten the clamp screws.

**INSTALLING THE SIDE HANDLE (fig 4)**

The side handle should always be used during operation.

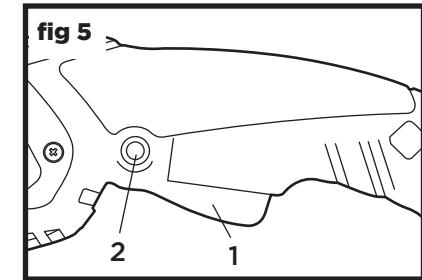
The side handle can be used in any of three positions. Note the positions of the threaded openings. Screw the side handle into the right side, the left side, or the top of the grinder.

**WARNING!**

- Do not depress the spindle lock until the spindle has completely stopped moving.

OPERATING INSTRUCTIONS**ON/OFF SWITCH AND LOCK BUTTON (ON/OFF): (fig 5)****TO TURN THE TOOL ON:**

1. To start the tool, push the Lock button (2), and while holding it in, apply pressure to the trigger switch (1). Release the Lock button (2).
2. To stop the tool, release the trigger switch (1). The switch reverts to the Locked OFF position.

**TO TURN THE TOOL ON AND LOCK THE SWITCH ON FOR CONTINUOUS OPERATION:**

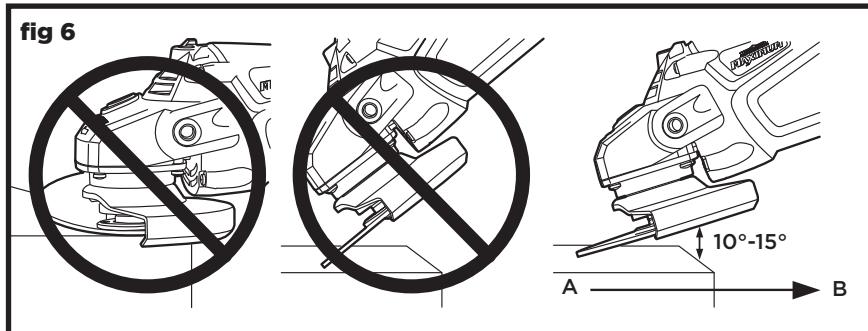
1. To start the tool, push the Lock button (2), and while holding it in, apply pressure to the trigger switch (1) to start the tool.
2. Push the lock button (2) in all the way to engage the Lock ON function.
3. To stop the tool, press and then release the trigger switch (1). The switch reverts to the Locked OFF position.

NOTICE:

- The tool is always locked OFF unless the lock button and trigger switch are engaged to turn it on.
- The starting torque creates a sudden jerk.
- Do not turn the angle grinder "ON" or "OFF" while the grinder is in contact with the workpiece. It will decrease the life of the trigger switch and could cause damage to the workpiece.

GENERAL OPERATION

1. For best control, hold the angle grinder firmly with one hand gripping the side handle and the other gripping the rubber-coated grip on the body of the angle grinder.
2. Always position the guard so that the exposed grinding disc is pointing away from the operator.
3. After starting the tool, apply the grinding disc to the workpiece.
4. Tilt the angle grinder at a 10° to 15° angle for easy handling and smooth grinding (fig 6). This will make it easier to remove the disc from the workpiece and will prevent unnecessary overloading.
5. Apply the grinding disc to the work surface using light, steady pressure for grinding efficiency.
6. When using a new grinding disc, do not move the disc in a forward direction (A) on the workpiece. Doing so will cause the edge of the disc to cut into the surface of the workpiece. While grinding, the direction of movement should be backward, toward the operator (B in fig 6).

**WARNING!**

- Do not apply unnecessary pressure. The weight of the tool applies adequate pressure. Excessive or sudden pressure will overload the motor, cause a drop in the speed and put dangerous stress on the grinding disc, possibly causing breakage and injury.

MAINTENANCE

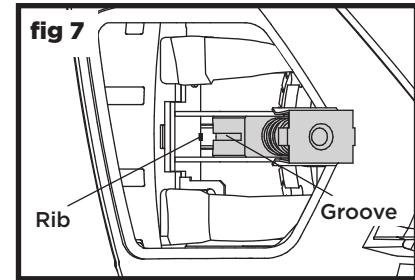
Before cleaning or performing any maintenance, the tool should be unplugged from the power supply. Using compressed air may be the most effective cleaning method. Always wear safety goggles when cleaning tools using compressed air.

Do not let brake fluid, gasoline, petroleum-based products, penetrating oil, etc., come into contact with plastic parts. These substances contain chemicals that can damage, weaken or destroy plastic.

CHANGING CARBON BRUSHES

When brushes become worn, the tool will automatically stop, preventing damage to the motor. Brush replacement should be performed by a qualified service technician.

When replacing the brushes, make sure that the rib of the brush holder aligns with the groove on the side of the brush (fig 7).

**WARNING!**

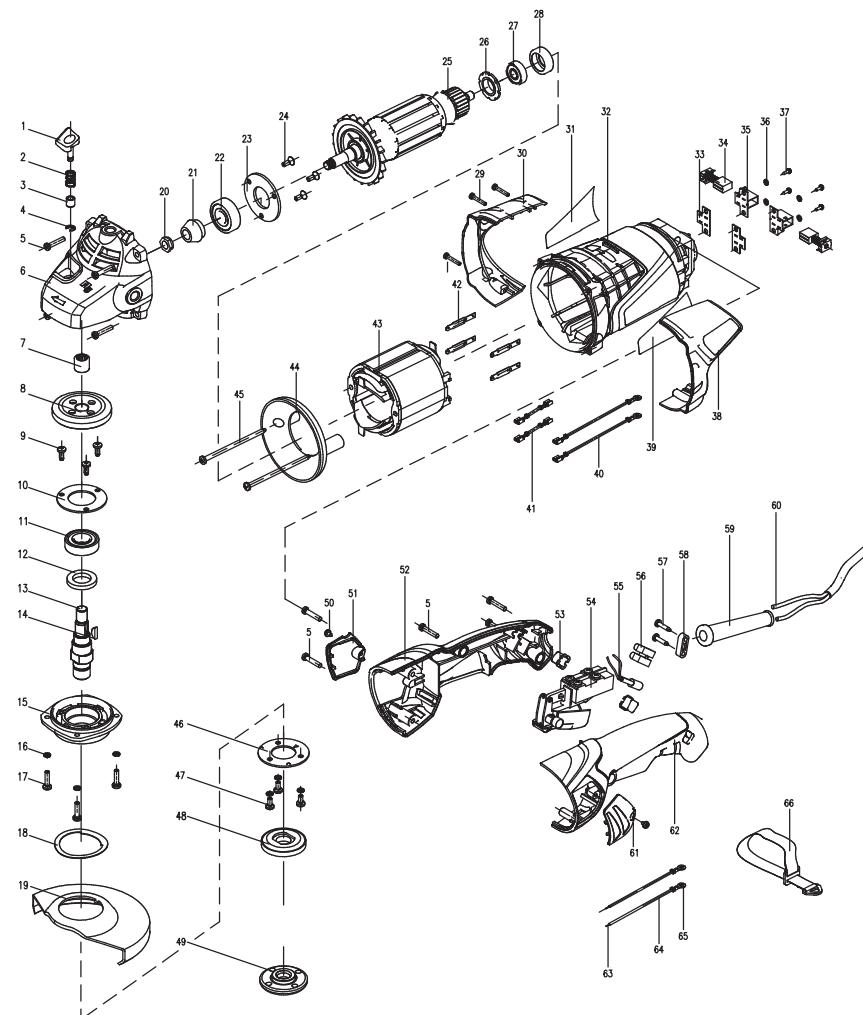
- When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product. For more information, call the toll-free helpline, at 1-800-689-9928.
- Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used with another tool.
- Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges, are less likely to bind and are easier to control.
- If the supply cord is damaged, it must be replaced by a specially prepared cord available through the service organization.

TROUBLESHOOTING

Problem	Possible causes	Solution
Motor does not start	Tool is not plugged in	Check that all cords are plugged in
	Fuse	Check the time-delayed fuse or circuit breaker
Tool vibrates or shakes	Damaged disc	Replace disc
	Loose disc	Tighten arbor bolt

If the problem remains unsolved after performing the checks described above, call the toll-free helpline, at 1-800-689-9928.

EXPLODED VIEW



No.	Part No.	Description	No.	Part No.	Description
1	3123640000	Lock-on/lock-off button	26	3120322000	Dust cover
2	3660071000	Spring	27	5700008000	Ball bearing
3	3550107000	Bushing	28	3120993000	Bearing holder
4	5660003000	E-Ring	29	5620034000	Screw
5	5610106000	Tapping screw	30	3420622000	Right aluminium cover
6	3420624000	Gear case	31	2240114000	Power nameplate
7	5700033000	Needle bearing	32	3123639000	Motor housing
8	3550901000	Gear	33	3700486000	Plate
9	5610097000	Thread-forming screw	34	4960009000	Carbon brush
10	3700447000	Washer	35	2800034000	Brush holder
11	5700015000	Ball bearing	36	5650034000	Plain washer
12	3700528000	Felt block	37	5610006000	Tapping screw
13	3550580000 3550104000	Spindle	38	3420621000	Left aluminium cover
14	5680024000	Cup half key	39	2240113000	Trademark plate
15	3420623000	Gear case cover	40	2820653000	Internal wire assembly
16	5650007000	Spring washer	41	2820652000	Internal wire assembly
17	5620042000	Screw	42	3700099000	Terminal
18	3700106000	Wave washer	43	2740119000	Stator
19	3700111000	Guard	44	3120321000	Fan baffle
20	5630039000	Nut	45	5610052000	Tapping screw
21	3550105000	Pinion	46	3700893000	Clamp
22	5700015000	Ball bearing	47	5620034000	Screw
23	3700100000	Clamp	48	2820067000	Inner flange
24	5620068000	Screw	49	3550333000 3550109000	Outer flange
25	2750156000	Rotor	50	3700135000	Flange screw

No.	Part No.	Description	No.	Part No.	Description
51	3123624000	Right brush cover	59	3121050000	Cord guard
52	3320547000	Right handle	60	4810002000	Power cord & plug
53	3123707000	Transparence cap	61	3123641000	Left brush cover
54	4870340000	Switch	62	3320546000	Left handle
55	4540017000	Power supply indicator	63	4930061000	Shark-teeth terminal
56	4930017000	Connector	64	4860004000	Inner wire
57	5610024000	Tapping screw	65	4930047000	Ring terminal
58	3120234000	Cord anchorage	66	2490136002	Nylon string

5-YEAR LIMITED WARRANTY

This Mastercraft Maximum product is guaranteed against defects in workmanship and materials for a period of 5 years from the date of original retail purchase, with the exception of the following components:

- a) Component A: Batteries, chargers and carrying case, which are guaranteed against defects in workmanship and materials for a period of 2 years from the date of original retail purchase;
- b) Component B: Accessories, which are guaranteed against defects in workmanship and materials for a period of 1 year from the date of original retail purchase.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period, and if covered under this warranty, will be repaired or replaced (with the same model or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any labour costs relating thereto.

This warranty is subject to the following conditions and limitations:

- a) A bill of sale verifying the purchase and purchase date must be provided;
- b) This warranty will not apply to any product or part thereof that is worn or broken, or that has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions), or that is being used for industrial, professional, commercial or rental purposes;
- c) This warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product and that are expected to become inoperative or unusable after a reasonable period of use;
- d) This warranty will not apply to routine maintenance and consumable items, including but not limited to fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e) This warranty will not apply where damage is caused by repairs made or attempted by others (i.e.: persons not authorized by the manufacturer);
- f) This warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g) This warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or if any repairs or alterations have been made or attempted by unauthorized persons;
- h) This warranty will not apply to normal deterioration of the exterior finish, including but not limited to scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and



- i) This warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

Additional Limitations

This warranty applies only to the original purchaser, and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including but not limited to any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

Notice to Consumer

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

IMPORTED BY MASTERCRAFT CANADA TORONTO, CANADA M4S 2B8

