



4IN. ANGLE GRINDER

OWNER'S MANUAL



WARNING:

Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item# 45996

Thank you very much for choosing an Ironton product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call **1-800-222-5381**.

INTENDED USE:

This Angle Grinder is ideal for cutting and grinding metal, cutting masonry and rust removal.

TECHNICAL SPECIFICATIONS:

Disc diameter:	4in.
No load speed:	11,000 RPM
Input voltage:	120V-60Hz
Input current:	4.5A
Spindle thread:	M10

GENERAL SAFETY RULES



WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.



CAUTION: Do not allow persons to operate or assemble this Angle Grinder until they have read this manual and have developed a thorough understanding of how the Angle Grinder works.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

WORK AREA

- **Keep work area clean**, free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- **Do not use your tool where there is a risk of causing a fire or an explosion**; e.g. in the presence of flammable liquids, gasses, 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, so visitors should remain at a safe distance from the work area.
- **Be aware of all power lines, electrical circuits**, water pipes and other mechanical hazards in your work area, particularly those hazards below the work surface hidden from the operator's view that may be unintentionally contacted and may cause personal harm or property damage.
- **Be alert of your surroundings**. Using power tools in confined work areas may put you dangerously close to cutting tools and rotating parts.

ELECTRICAL SAFETY


-  **WARNING:** Always check to ensure the power supply corresponds to the voltage on the rating plate.
- **Do not abuse the cord**. Never carry a portable tool by its power cord, or yank tool or extension cords from the receptacle. Keep power and extension cords away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords may cause a fire and increase the risk of electric shock.
- **Double insulated tools** are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still doesn't fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.
- **Avoid body contact** with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- **When operating a power tool outside**, use an outdoor extension cord marked "W-A" or "W." These cords are rated for outdoor use and reduce the risk of electric shock.
- **Extension Cord Use:**
 - A. Use only 'Listed' extension cords. If used outdoors, they must be marked "For Outdoor Use." Those cords having 3-prong grounding type plugs and mating receptacles are to be used with grounded tools.
 - B. Replace damaged or worn cords immediately.
 - C. Check the nameplate rating of your tool. Use of improper size or gauge of extension cord may cause unsafe or inefficient operation of your tool. Be sure your extension cord is rated to allow sufficient current flow to the motor. For the proper wire gauge for your tool, see chart.

CHART FOR MINIMUM WIRE SIZE OF EXTENSION CORD:

Nameplate AMPS	CORD LENGTH			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	(NOT RECOMMENDED)	

If in doubt, use larger cord. Be sure to check voltage requirements of the tool to your incoming power

source.

- **Do not expose** power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- **Do not let your fingers** touch the terminals of plug when installing to or removing from the outlet.
- **Ground fault circuit interrupters.** If work area is not equipped with a permanently installed Ground Fault Circuit Interrupter outlet (GFCI), use a plug-in GFCI between power tool or extension cord and power receptacle.

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.
- **Dress properly.** Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts. Air vents often cover moving parts and should be avoided.
- **Use safety apparel and equipment.** Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Use as dust mask in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate.
- **Avoid accidental starting.** Do not carry the power tool with your finger on the switch. Ensure the switch is in the off position before plugging tool into power outlet. In the event of a power failure, while a tool is being used, turn the switch off to prevent surprise starting when power is restored.
- **Do not overreach.** Keep proper footing and balance at all times.
- **Remove adjusting keys or wrenches** before connecting to the power supply or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.

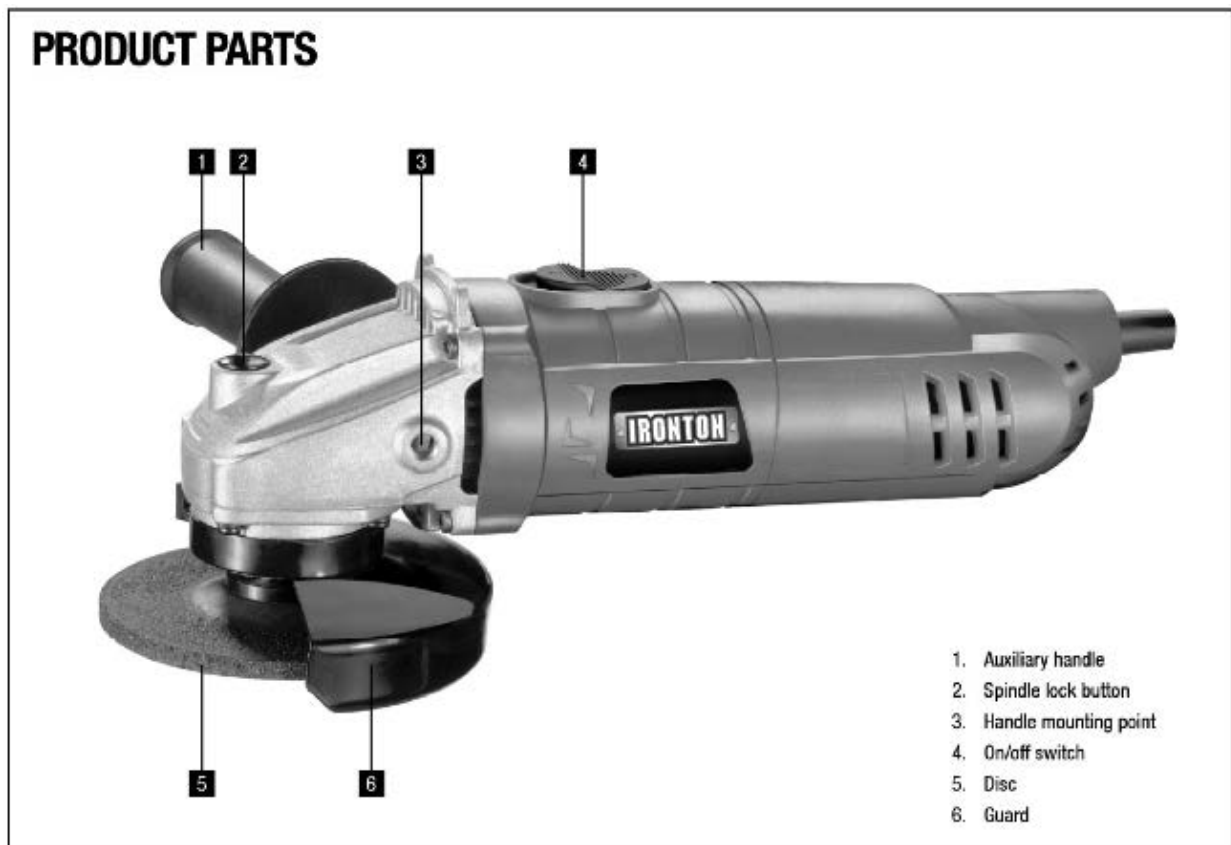
ANGLE GRINDER USE AND CARE

- **Do not modify the Angle Grinder in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which Angle Grinder was designed.
- **Always check of damaged or worn out parts before using the Angle Grinder.** Broken parts will affect the Angle Grinder operation. Replace or repair damaged or worn parts immediately.
- **Store idle Angle Grinder.** When Angle Grinder is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before reuse.
- **When operating the tool**, ensure that the switch is in the off position “O” before connecting to the power supply. Switch to the off position “O” immediately after completion of the task.
- **Keep the power cord away** from any moving parts or accessories.
- **Never cover the ventilation** slots in the tool.
- **Inspect the disc before use.** Do not use a chipped, cracked or otherwise damaged product.
- **Always hold the body and auxiliary handle firmly.** Otherwise, the counterforces produced during use can cause inaccuracies or put the Angle Grinder out of control.
- **Do not use separate adaptors** to try and attach a disc with a center hole larger than 5/8in.
- **Be aware that a disc will continue** to turn for some seconds after it is switched off.

- **Use only wheel types that are recommended for your power tool and 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 operator from broken wheel fragments and accidental contact with the wheel.
- **Wheels must be used only for recommended applications.** For example: do not grind with the side of 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.** A wheel intended for a larger power tool is not suitable for the higher speed of a smaller tool and may burst.
- **Do not “jam” the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- **Do not position your body in line with and behind the rotating wheel.** When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.
- **When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop.** Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
- **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully reenter the cut.** The wheel may bind, walk up or kickback if the power tool is restarted in the work piece.
- **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback.** Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the work piece on both sides of the wheel.
- **Use extra caution when making a “pocket cut” into existing walls or other blind areas.** The protruding wheel may cut a gas or water pipe, electrical wiring or objects that can cause kickback.
- **Do not use excessively oversized sanding disc paper.** Follow manufacturer’s recommendations when selecting sanding paper. Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.
- **When starting the tool with a new or replacement wheel, or a new or replacement wire brush installed, hold the tool in a well protected area and let it run for one minute.** If the wheel has an undetected crack or flaw, it should burst in less than one minute. If the wire brush has loose wires, they will be detected. Never start the tool with a person in line with the wheel. This includes the operator.
- **Make sure that a grinding disc is mounted with the label on top or facing the Angle Grinder.**
- **If you are fitting any other kind of attachment,** refer to attachment fitment Instructions. The distributor will not be responsible for any damage or injury caused due to the incorrect fitment of grinding discs or any other kind of attachment.

- **Incorrect attachments can cause** the motor to burn out, generally damage the tool or cause injury.
- **Your Angle Grinder has been designed** to grind all types of material when used in a DIY (Do It Yourself) context or for hobbyist purposes. It is not built for continuous daily use in a trade or professional capacity.
- **You will need to select the appropriate** disc depending on the type of material you are grinding.
- **When grinding, do not force the Angle Grinder.** The weight of the Angle Grinder itself should provide all the force that is required.
- **If the tool slows significantly,** lift it away from the surface to allow it to regain speed. Continuous use at lower speeds will result in permanent damage to your tool.
- **Avoid bouncing the wheel or giving it rough treatment.** If this occurs, stop the tool and inspect the wheel for cracks or flaws.
- **Direct sparks away from operator, bystanders or flammable materials.** Sparks may be produced while using a sander or grinder. Sparks may cause burns or start fires.

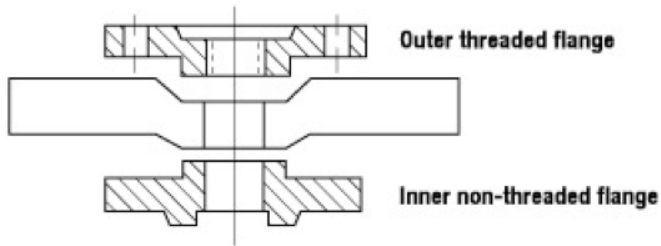
ASSEMBLY



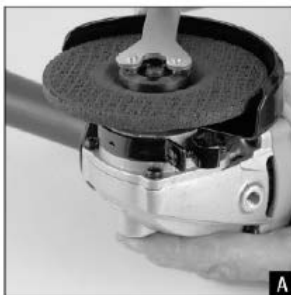
Attaching and removing the grinding disc provided



WARNING! Be sure to disconnect the Angle Grinder from the power supply before attaching or removing the disc or attachment.



1. Inspect the grinding disc before fitting and during use to ensure it is not deformed or cracked. Do not use a damaged disc.
2. Ensure that the guard is fitted in a position that ensures it is between you and the grinding disc. The guard is there to protect you from flying objects that may be dislodged at the workpiece and from accidental contact of your hand, fingers or other part of your body with the disc.
3. Do not fit or use a grinding disc for cutting applications. Grinding discs should be used for grinding metal only.
4. The grinding disc provided is not solid. It is made from grit, which is bonded together with reinforcement and adhesives. It is always possible that a part of the disc can dislodge and fly away from the tool at high speed. This is why you must wear the appropriate safety equipment (glasses, gloves and protective clothing) and follow all safety instructions detailed in this manual.
5. Do not use any kind of attachment (discs or otherwise) that has a diameter greater than 4in.
6. Remove the outer flange by hand if loose.
7. If the outer flange is tight, depress the spindle lock button at the top of the gear box housing and rotate the spindle until it locks in position. Once the spindle is locked and cannot be rotated, use the pin wrench supplied to loosen the outer flange. **Fig A**



8. Remove the grinding disc from its envelope.
9. Hold the Angle Grinder with the spindle facing upwards and make sure that the inner flange is on the spindle and located correctly. The two machined flat sections on one side of the inner flange must face the Angle Grinder and locate in the appropriate position on the spindle. **Fig B**



10. Insert the grinding disc onto the Angle Grinder spindle with the disc label facing the Angle

Grinder. The hole in the disc should be located onto the spindle. Ensure that the hole in the disc locates and fits firmly into the ring section of the inner flange. **Fig C**



11. Screw the outer flange onto the spindle with the protruding ring section facing the Angle Grinder. This ring section must locate with the hole in the grinding disc. **Fig D**



12. Tighten the outer flange by locking the spindle and tighten with the pin wrench provided. **Fig E**



13. To remove the disc, first lock the spindle and loosen the outer flange with the pin wrench. Thereafter, remove the outer flange and the grinding disc. **Fig E**
14. Regularly check that the outer flange has not loosened during use.

Attaching a wire wheel



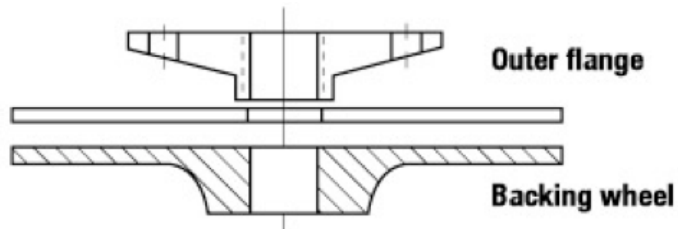
WARNING! Be sure to disconnect the Angle Grinder from the power supply before attaching or removing the disc or attachment.

1. When fitting the wire wheel, the ring section on the outer flange should face into the wheel. Similar to when fitting a grinding disc.

Attaching a sanding accessory



WARNING! Be sure to disconnect the Angle Grinder from the power supply before attaching or removing the disc or attachment.



1. Remove the inner and outer flanges.
2. Screw the backing wheel of the sanding accessory onto the Angle Grinder spindle.
3. Select the sandpaper with the correct grit for the task.
4. Place the sandpaper on the backing wheel and then thread the paper retaining nut on and tighten using the pin wrench whilst depressing the spindle lock.

Attaching the auxiliary handle



WARNING! Be sure to disconnect the Angle Grinder from the power supply before attaching or removing the disc or attachment.

The auxiliary handle should be assembled to the Angle Grinder prior to use. This is done by screwing the threaded end of the auxiliary handle firmly into the handle mounting points on the alloy gear case of the Angle Grinder. **Fig F**



The auxiliary handle can be fitted to the left or right side of the Angle Grinder to maximize user comfort according to the type of application being undertaken.

Choose the most appropriate position considering user comfort (preferred hand) and the task at hand.

To reduce the risk of injury and to ensure maximum control during use, hold the tool with both hands while the tool is in operation.

OPERATION:

Operating the on/off switch

1. To turn the Angle Grinder on, slide the on/off switch forward to the on position "1". To turn the Angle Grinder off, slide the on/off switch towards the rear of the Angle Grinder to the off position "0". **Fig G**



Safe use and operation of the Angle Grinder

1. Do not expose the tool to rain or snow. Do not use the tool in damp locations or in an environment with explosive or corrosive gas.
2. Keep your work area well lit.
3. Make sure you are well balanced when using the tool and you have secure footing. Do not use the tool when you are tired.
4. Keep long hair away from the Angle Grinder.
5. Always inspect the Angle Grinder before use.
6. Make sure the disc is not contacting the work piece when the switch is turned on.
7. Keep the guard in place.
8. Adjust the position of the guard to best shield the user from sparks according to the application. **Fig H & I**



9. Use only discs having a maximum operating speed at least as high as “No Load Speed” marked on the nameplate.
10. Check the disc carefully for cracks or damage before operation. Replace cracked or damaged discs immediately.
11. Be careful not to damage the spindle or either of the disc flanges. Damage to these parts could result in disc breakage.
12. Hold the tool firmly.
13. Before using the tool on an actual work piece, let it run for a while. Watch for vibration or wobbling that could indicate poor installation of the disc or a poorly balanced disc.
14. Use only discs designed for each specified function and purpose. Do not use cutting discs for grinding or metal wheels on masonry.
15. Watch out for flying sparks. Hold the tool at an angle of approximately 15°-30° to the work piece surface. **Fig J**



16. To prevent a new grinding disc from digging in to the work piece, initial grinding should be conducted by drawing the Angle Grinder towards you. Once the leading edge of the disc is worn a little, it's possible to grind in any direction.
17. It should never be necessary to force the tool. If the rotational speed drops abnormally, pressure should be released immediately. Little more than the weight of the tool should be applied. Forcing and excessive pressure can cause dangerous disc breakage or damage to the tool.

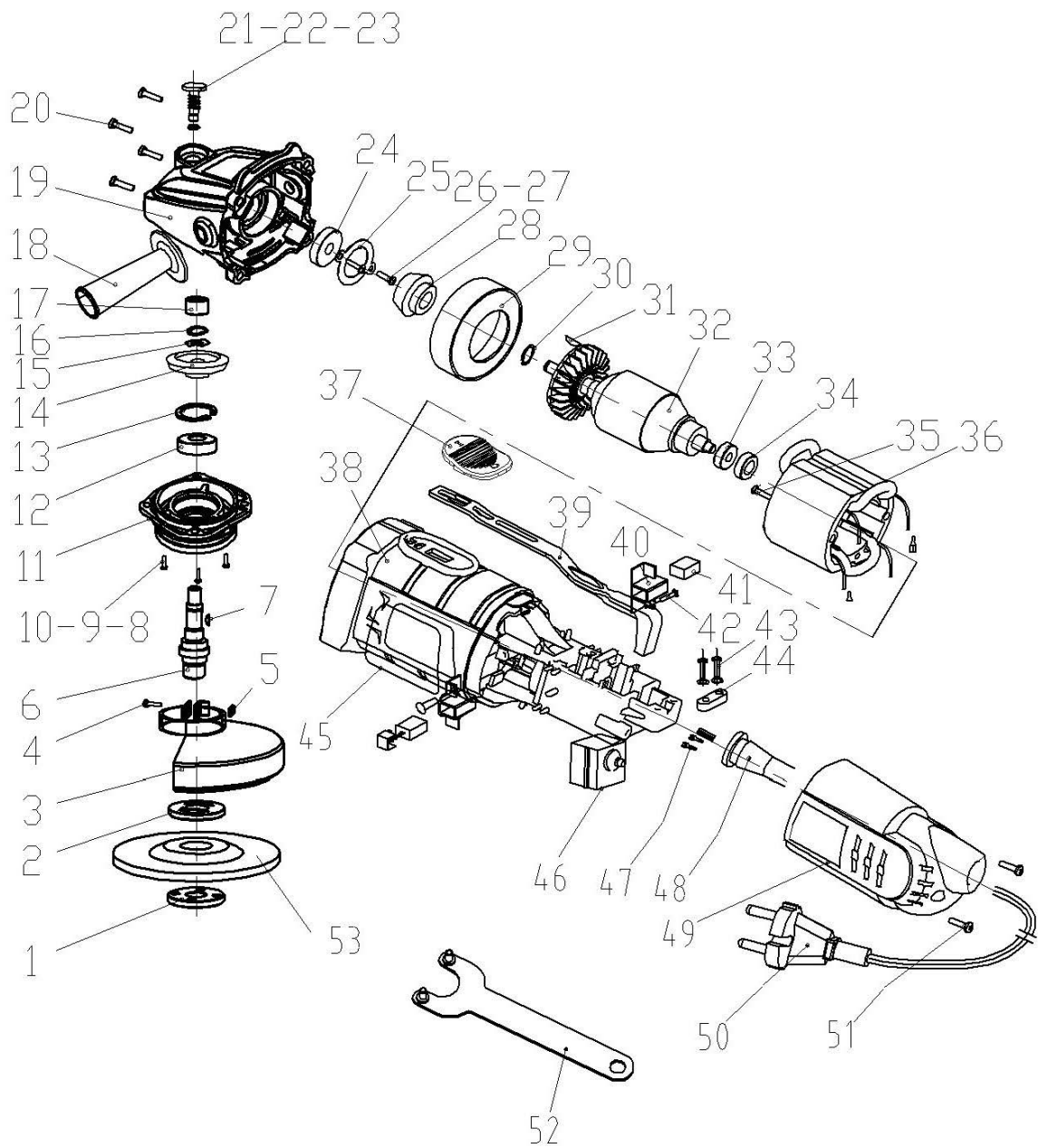
MAINTENANCE

- **Maintain your Angle Grinder.** It is recommended that the general condition of any Angle Grinder be examined before it is used. Keep your Angle Grinder in good repair by adopting a program of conscientious repair and maintenance. Have necessary repairs made by qualified service personnel.
- When not in use the Angle Grinder should be stored in a dry, frost-free location not within the reach of children.
- Keep ventilation slots of the Angle Grinder clean at all times and prevent any foreign matter from entering them.
- If the Angle Grinder enclosure requires cleaning do not use solvents; use a moist soft cloth only.
- The grease in the gearbox will require replacement/replenishment after extensive use of the Angle Grinder. Please see your authorized service agent to provide this service.
- Regularly check the carbon brushes. Brushes should be replaced before they wear out. Both brushes should be replaced at the same time.
- **If the supply cord of this power tool is damaged**, the tool should be disposed of properly and replaced with a new tool.

PARTS LIST

Part#	Description
1	Outer flange
2	Inner flange
3	Guard
4	Screw
5	Bolt
6	Output spindle
7	Semicircle key
8	Screw
9	Spring washer
10	Flat washer
11	Gear box cover
12	Bearing
13	Washer
14	Gear
15	Wave washer
16	Washer
17	Ball bearing
18	Side handle
19	Gear box
20	Screw
21	Self-lock button
22	Self-lock spring
23	Washer
24	Bearing
25	Bearing cover
26	Screw
27	Taper swasher

Part#	Description
28	Pinion
29	Wind shield ring
30	Spring baffle
31	Semicircle key
32	Rotor
33	Bearing
34	Bearing sheath
35	Screw
36	Stator
37	Pushing hinge of switch
38	Housing
39	Hand spike of switch
40	Brush holder
41	Carbon brush
42	Screw
43	Screw
44	Cord clamping
45	Label
46	Switch
47	Contector
48	Cord sleeve
49	Back cover
50	Cord
51	Screw
52	Wrench
53	Grinding wheel



For replacement parts and technical questions, please call **1-800-222-5381**.

WARRANTY

THIS WARRANTY FORM SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

PURCHASED FROM: _____

DATE PURCHASED: _____

The warranty is only made available by returning the tool to the place of purchase with a confirmed register receipt.

6-MONTH REPLACEMENT WARRANTY

Your IRONTON tool is covered by a 6-month replacement warranty from the date of purchase. Industrial or high-frequency use will void this warranty. The warranty covers faulty parts or workmanship.

WARNING

The following actions will result in the warranty being void.

- If the tool has been operated on a supply voltage other than that specified on the unit.
- If the tool shows signs of damage or defects caused by or resulting from abuse accidents or alterations.
- If the tool has been disassembled or tampered with in any way.

Warranty excludes consumable parts such as brushes, batteries, sanding pads, blades, discs and drill bits.



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.



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