

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

REV 16I

CHICAGO  **ELECTRIC**
POWER TOOLS

63408

**DOUBLE
CUT SAW**



Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein.
Tools required for assembly and service may not be included.

WARNING

**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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WARNING SYMBOLS AND DEFINITIONS

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

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.

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 grounded power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- 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.*
- 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.*

Electrical safety (cont.)

5. **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.
6. **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

1. **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.
2. **Use safety equipment. Always wear eye protection.** *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
3. **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.*
4. **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.
5. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
6. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
7. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of these devices can reduce dust-related hazards.*
8. **Only use safety equipment that has been approved by an appropriate standards agency.** *Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.*

Power tool use and care

1. **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.
2. **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.*
3. **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.
4. **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.*
5. **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.*
6. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
7. **Use the power tool, accessories and blades 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.*

Circular Saw Safety Warnings

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1. **▲DANGER: Keep hands away from cutting area and the blades. Keep your second hand on auxiliary handle, or motor housing.** *If both hands are holding the saw, they cannot be cut by the blades.*
 2. **Do not reach underneath the workpiece.** *The guard cannot protect you from the blades below the workpiece.*
 3. **Adjust the cutting depth to the thickness of the workpiece.** *Less than a full tooth of the blades' teeth should be visible below the workpiece.*
 4. **Never hold piece being cut in your hands or across your leg. Secure the workpiece to a stable platform.** *It is important to support the work properly to minimize body exposure, blade binding, or loss of control.*
 5. **Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** *Contact with a "live" wire will also make exposed metal parts of the power tool "live" and shock the operator.*
 6. **When ripping always use a rip fence or straight edge guide.** *This improves the accuracy of cut and reduces the chance of blade binding.*
 7. **Always use blades with correct size and shape (diamond versus round) of arbor holes.** *Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.*
 8. **Never use damaged or incorrect blade washers or bolt.** *The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.*
 9. **Causes and Operator Prevention of Kickback:**
 - Kickback is a sudden reaction to a pinched, bound or misaligned saw blades, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;
 - When the blades are pinched or bound tightly by the kerf closing down, the blades stall and the motor reaction drives the unit rapidly back toward the operator;
 - If the blades become twisted or misaligned in the cut, the teeth at the back edge of the blades can dig into the top surface of the wood causing the blades to climb out of the kerf and jump back toward the operator.
- Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:
- a. **Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blades, but not in line with the blades.** *Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.*
 - b. **When blades are binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blades come to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blades are in motion or kickback may occur.** *Investigate and take corrective actions to eliminate the cause of blade binding.*
 - c. **When restarting a saw in the workpiece, center the saw blades in the kerf and check that saw teeth are not engaged into the material.** *If saw blades are binding, they may walk up or kickback from the workpiece as the saw is restarted.*
 - d. **Support large panels to minimize the risk of blade pinching and kickback.** *Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.*
 - e. **Do not use dull or damaged blades.** *Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.*
 - f. **Blade depth and bevel adjusting locking levers must be tight and secure before making cut.** *If blade adjustment shifts while cutting, it may cause binding and kickback.*
 - g. **Use extra caution when making a "plunge cut" into existing walls or other blind areas.** *The protruding blades may cut objects that can cause kickback.*

Circular Saw Safety Warnings (cont.)

10. **Check lower guard for proper closing before each use. Do not operate the saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position.** *If saw is accidentally dropped, lower guard may be bent. Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blades or any other part, in all angles and depths of cut.*
11. **Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use.** *Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.*
12. **Lower guard should be retracted manually only for special cuts such as "plunge cuts" and "compound cuts." Raise lower guard by retracting handle and as soon as blades enter the material, the lower guard must be released.** *For all other sawing, the lower guard should operate automatically.*
13. **Always observe that the lower guard is covering the blades before placing saw down on bench or floor.** *Unprotected, coasting blades will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blades to stop after switch is released.*
14. **DO NOT USE THIS SAW WITH THE SAW HELD UPSIDE DOWN IN A VISE.** **The saw is not designed for such use and cannot be used safely in that position.**
15. **Do not use to cut logs, tree limbs, or uneven lumber.**
16. **Wet lumber, green (unseasoned) lumber, and pressure treated lumber all have an increased potential for kickback and should only be cut with blades for cutting that lumber type. Wear a NIOSH-approved respirator and have appropriate ventilation whenever cutting pressure treated lumber.**
17. **Do not use blades made from high-speed steel, abrasive blades, metal-cutting blades or masonry-cutting blades.** The guards of this saw are not designed to protect against the failure of such blades.
18. **Place the larger portion of the saw base on the larger, supported part of the workpiece.** This will help maintain balance and control while the cut is completed.
19. Closely observe position of saw's housing during cut. Do not let housing bump up against material being cut.
20. Blades must be rated to at least the maximum speed marked on the tool. Use only blades designed SPECIFICALLY for this saw.
21. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
22. Avoid unintentional starting. Prepare to begin work before turning on the tool.
23. Do not lay the tool down until it has come to a complete stop. Moving parts can grab the surface and pull the tool out of your control.
24. When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.
25. Do not leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from its electrical outlet before leaving.
26. Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
27. This product is not a toy. Keep it out of reach of children.
28. Verify that there are no utility lines or hardware in or near the workpiece. This is especially critical for plunge cuts.
29. Do not depress the spindle lock when starting or during operation.

Circular Saw Safety Warnings (cont.)

SAFETY

30. **WARNING:** The cord of this product contains lead and/or di (2-ethylhexyl) phthalate (DEHP), chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
31. **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 and birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-based paints
 - Crystalline silica from bricks and cement or other masonry products
 - Arsenic and chromium from chemically treated lumberYour 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. (California Health & Safety Code § 25249.5, *et seq.*)
32. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Do not use with power switch locked on.
 - Properly maintain and inspect to avoid electrical shock.
 - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
33. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SETUP

Vibration Safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Use tools with the lowest vibration when there is a choice.
4. Include vibration-free periods each day of work.
5. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
6. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

OPERATION

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SAVE THESE INSTRUCTIONS.

⚠️ WARNING

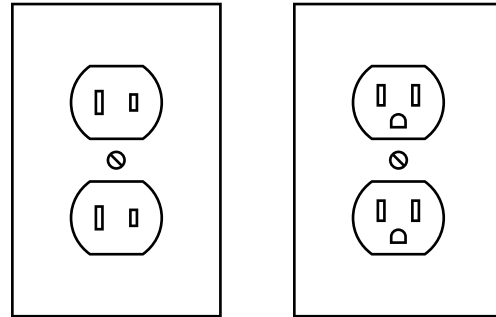


TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Double Insulated Tools: Tools with Two Prong Plugs

1. 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.
2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. (See Outlets for 2-Prong Plug.)



Outlets for 2-Prong Plug

Extension Cords




1. **Double Insulated** tools can use either a two or three wire extension cord.
2. 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. (See Table A)
3. 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. (See Table A)
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. (See Table A)
5. 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 cord size. (See Table A)
6. If you are using an extension cord outdoors, make sure it is marked with the suffix “W-A” (“W” in Canada) to indicate it is acceptable for outdoor use.
7. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

TABLE A: RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)

NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH			
	25'	50'	75'	100'
7.1 – 12.0	18	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.

Symbology

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.

VAC	Volts Alternating Current
A	Amperes
n_0 xxxx/min.	No Load Revolutions per Minute (RPM)

Specifications

Electrical Rating		120VAC / 60Hz / 8A
Motor No Load Speed		4600 RPM
Blade Diameter		5" (125mm) Maximum Use ONLY blade sets specifically designed for this Double Cut Saw
Cutting Capacities	PVC Pipe	up to 1"
	Copper Pipe	up to 1"
	Steel Pipe	up to 1"
	Corrugated Sheet	Standard Thickness
	Sheet Steel	up to 14 gauge
	Sheet Aluminum	up to 1/8"
	Oak Wood	up to 3/4"



Setup - Before Use:



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

WARNING

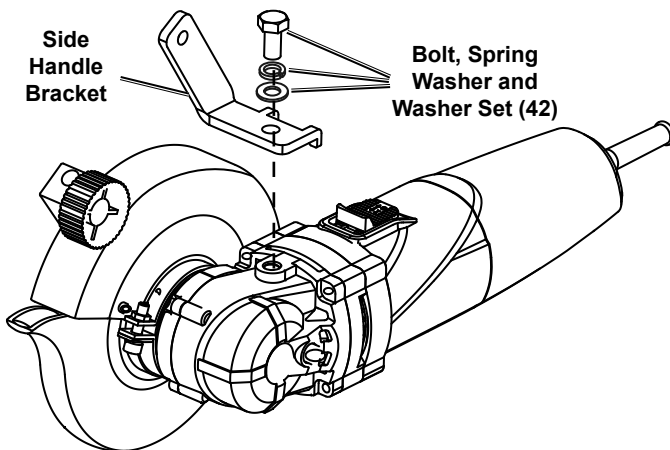
TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before assembling or making any adjustments to the tool.

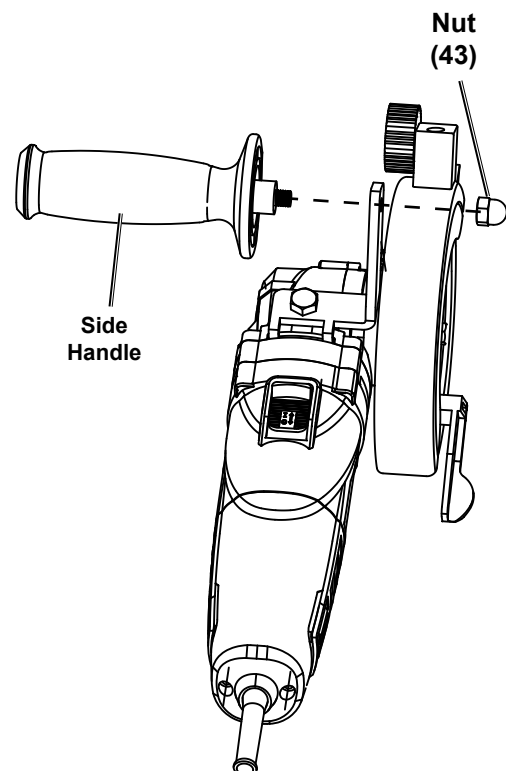
Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

Assembly

1. Attach Side Handle Bracket using Bolt, Spring Washer and Washer Set (42). Secure tightly with Wrench.



2. Attach Side Handle securely using Nut (43).



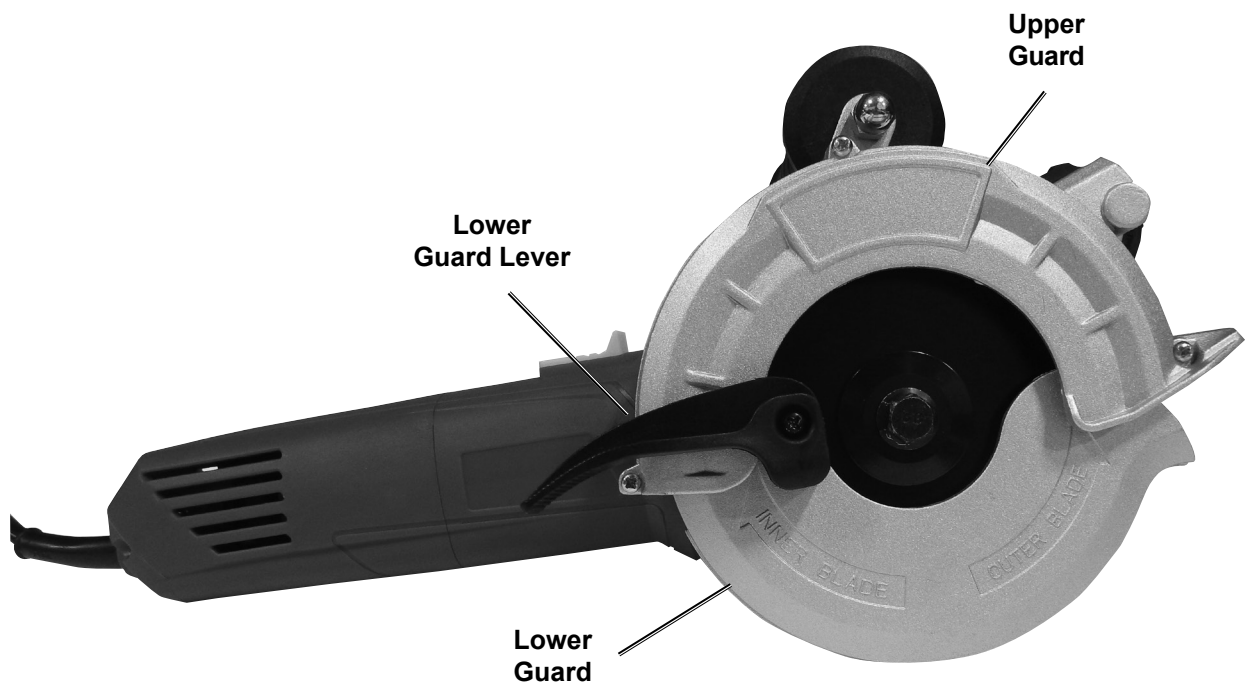
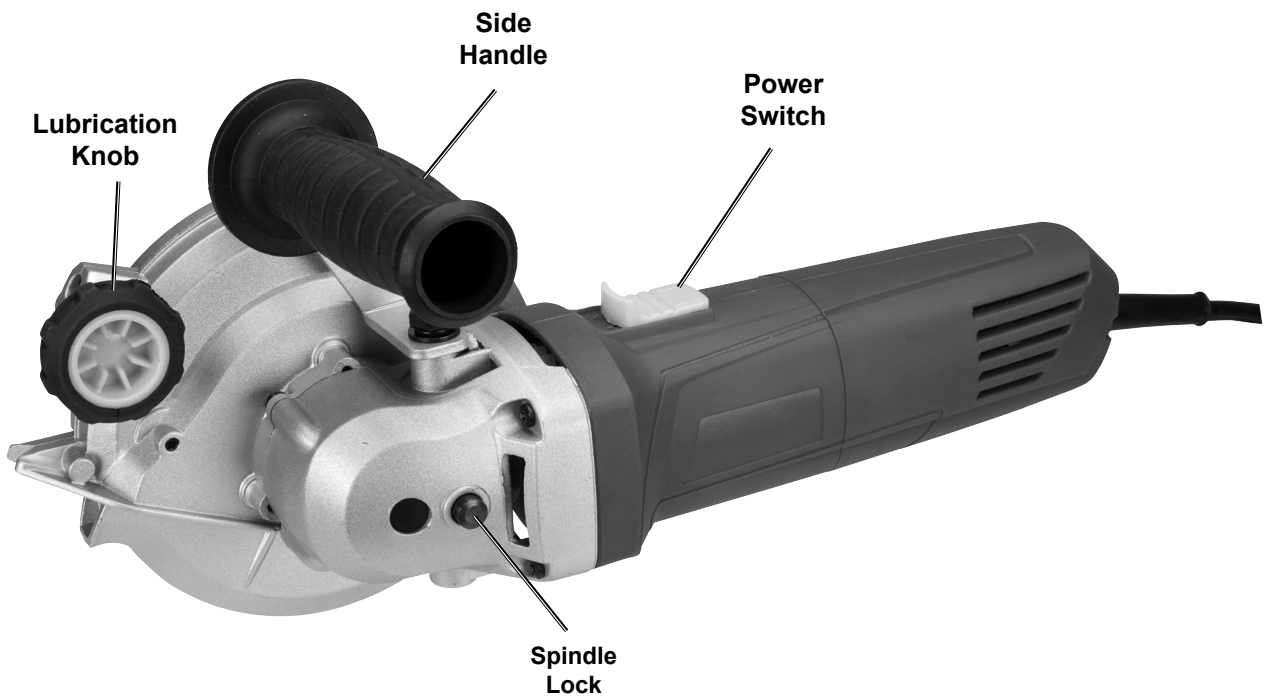
Functions

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Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Tool Set Up - Remove/Install Blades

WARNING

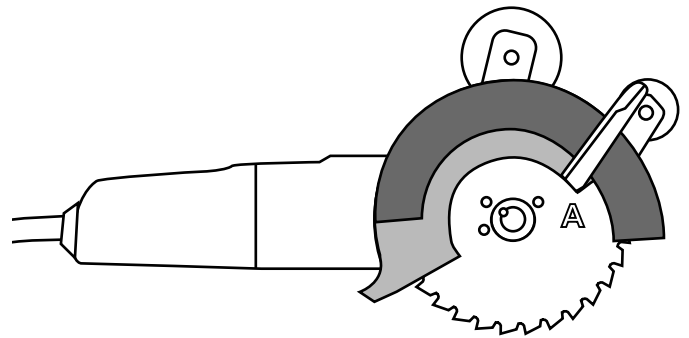
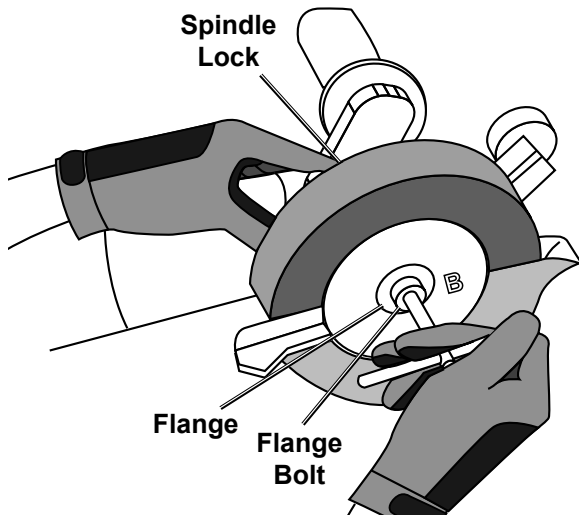
TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before adjusting tool or installing accessories.

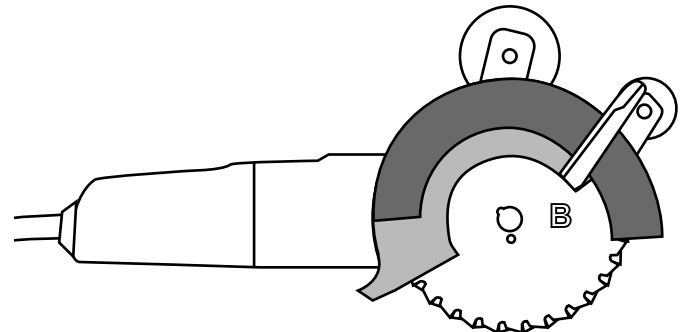
TO PREVENT SERIOUS INJURY FROM FLYING FRAGMENTS:

Do not use abrasive blades or masonry-cutting blades. The guards of this saw are not designed to protect against the failure of such blades.

1. Press and hold Spindle Lock, then use T-Wrench to turn Bolt counterclockwise until Blades lock.
2. Remove Flange Bolt and Flange, then release Spindle Lock.
4. Install new Blade A with "A" facing out.

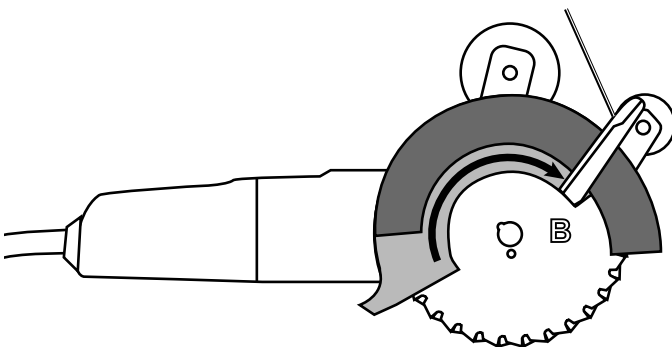


5. Install new Blade B over Blade A with "B" facing out.

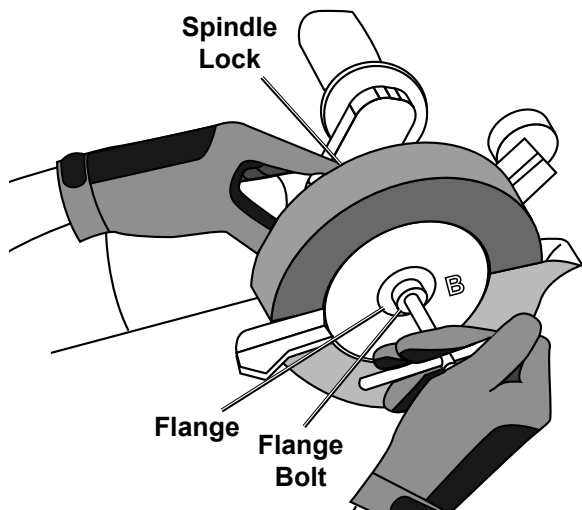


3. Move Lower Blade Guard Lever clockwise to expose Blades. Remove Blades.

Lower Blade Guard Lever



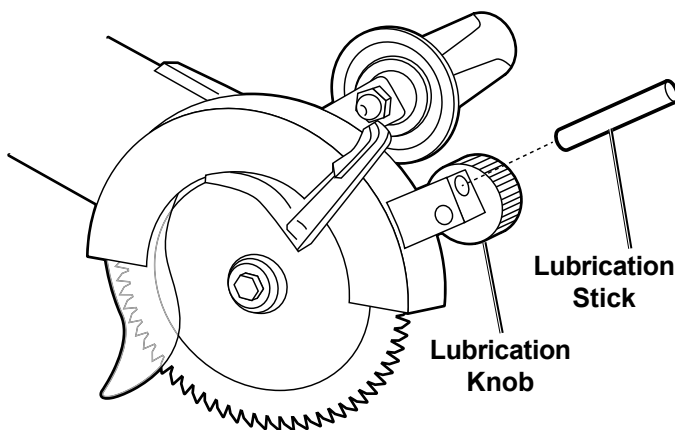
- Replace Flange with flat side facing in, then replace Flange Bolt. Press and hold Spindle Lock, then tighten Bolt securely.



- Inspect blades to make sure that the teeth point in opposite directions.

Using Lubrication Unit

- The blades only need to be lubricated when cutting soft metals, such as aluminum, copper, stainless steel and cast iron.
- Insert included Lubrication Stick, then feed stick into unit by turning Lubrication Knob.



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POWER TOOLS

Work Piece and Work Area Set Up

SAFETY

1. Wooden work piece selection:
 - a. Work piece must be free of foreign objects and loose knots.
 - b. Do not use to cut logs, tree limbs, or uneven lumber.
 - c. Wet lumber, green (unseasoned) lumber, and pressure treated lumber all have an increased potential for kickback and should only be cut with a blade designed for cutting that lumber. Wear a NIOSH-approved respirator and have appropriate ventilation whenever cutting pressure treated lumber.
2. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.
3. Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. The power cord must reach the work area with enough extra length to allow free movement while working.
4. Secure loose workpieces using a vise or clamps (not included) to prevent movement while working.
5. Verify that there are no utility lines or hardware in or near the workpiece. This is especially critical for plunge cuts.

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CHICAGO  ELECTRIC®
POWER TOOLS

General Operating Instructions

1. **Make sure that all guards are in place and in proper working order and that all adjustment knobs are tight before operation. Do NOT operate Saw without blade guard or if blade guard is broken or not operating properly.**
2. Use the Lubrication Unit when cutting aluminium, copper, stainless steel and cast iron. These materials can soften and stick to the blades.
3. Before starting a cut, draw a guideline along the desired line of cut.
4. Place the front edge of blades on that part of the workpiece that is solidly supported.
5. Do NOT place the saw on the part of the workpiece that will fall off when the cut is made.
6. Slide the power switch forward to start the saw. Let the blades reach full speed before beginning cut.

WARNING! Closely observe position of saw's housing during cut. Do not let housing bump up against material being cut.

PVC Pipe	up to 1"
Copper Pipe	up to 1"
Steel Pipe	up to 1"
Corrugated Sheet	Standard Thickness
Sheet Steel	up to 14 gauge
Sheet Aluminum	up to 1/8"
Oak Wood	up to 3/4"

Table B: Cutting Capacities

7. Cut using steady, even pressure. **Do NOT force the Saw.** Forcing the saw causes rough cuts and could shorten the life of the saw or cause kickback.

NOTE: THIS SAW WORKS BEST FOR SHORT CUTS. For cuts longer than 6", it is especially important to follow the feed speed recommendations below, and stop the cut or feed more slowly if the motor starts slowing down during the cut or if the blades start separating. For materials thicker than 1/16", cuts longer than 6" are not recommended.

8. Feed blade straight into the cut. **Feeding at an angle can damage the blade teeth.**
9. To prevent accidents, turn off the tool and disconnect its power supply after use. Clean, then store the tool indoors out of children's reach.

Feed Speed

Correct feed speed is determined by the hardness and the thickness of the material being cut. See following pages for how to cut certain cross sections.

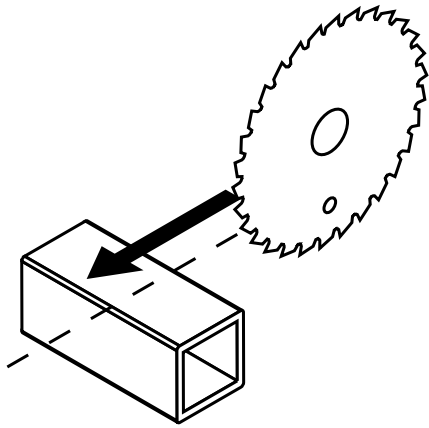
For thin materials, feed the blades down with the teeth protruding. Then move forward (or backward) for cutting.

1. If the feed speed is too slow:
 - a. The blades will only press down the material instead of cutting it.
 - b. The blade edges will glide and wear down the material.
 - c. This will cause a poor cut and will cause excessive wear on the blades.

2. If the feed speed is too fast:
 - a. The cut may split or splinter the workpiece.
 - b. This will result in a poor cut with significant discharge on the lower side of the material.
 - c. If feed speed is not slowed, the split will grow bigger, potentially leading to serious injury and property damage.

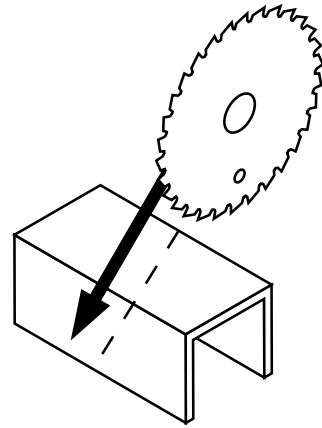
Cutting Techniques

SAFETY



Rectangular Pipe

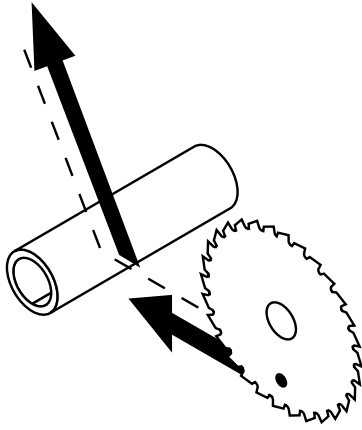
Feed blade from corner to corner.



U-Section

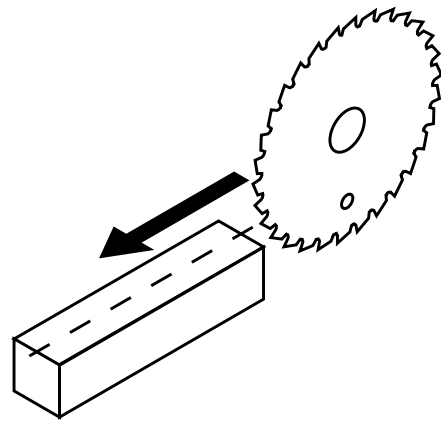
Feed blade from corner to corner (where opposite corner would be).

SETUP



Pipes

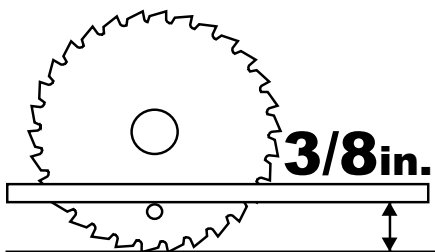
Feed blade through object until it reaches lower edge, keeping blade at 90° angle.



Flat Bar Iron

Feed blade at a 90° angle to the work surface.

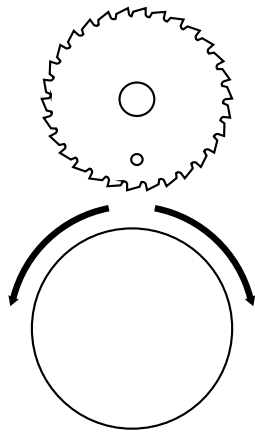
OPERATION



Thin Plate

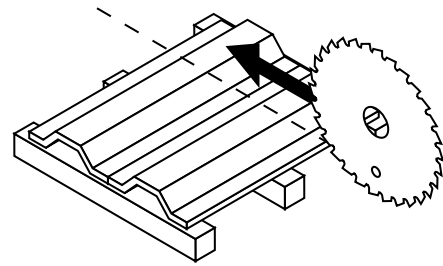
Feed blade down about 3/8" and start cut.

MAINTENANCE



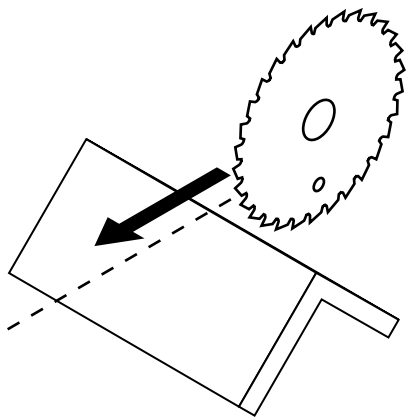
Spiral Tube and Longitudinal Cutting

Feed blade through material so only about 3/8" shows through. Do not drive it as far as entire cutting edge.



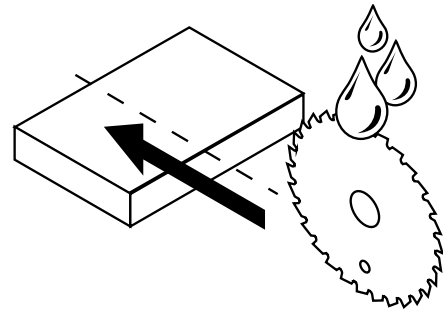
Shaped Plate

Rest plate on three mounts, making sure one is on either side of cut.



Corner Piece

Feed blade diagonally through the work surface.



Aluminum/Copper

Use Lubrication Unit whenever cutting aluminum or copper.

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POWER TOOLS

Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

⚠️ WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.


TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
2. **AFTER USE**, wipe external surfaces of the tool with clean cloth.
3. For blade changing instructions see **Tool Set Up - Remove/Install Blades on page 10**.
4. For lubrication instructions see **Using Lubrication Unit on page 11**.
5. **⚠️ WARNING!** If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> 1. Cord not connected. 2. No power at outlet. 3. Tool's thermal reset breaker tripped (if equipped). 4. Internal damage or wear. (Carbon brushes or switch, for example.) 	<ol style="list-style-type: none"> 1. Check that cord is plugged in. 2. Check power at outlet. If outlet is unpowered, turn off tool and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads. 3. Turn off tool and allow to cool. Press reset button on tool. 4. Have technician service tool.
Tool operates slowly.	Power being reduced by long or small diameter extension cord.	<p>Eliminate use of extension cord.</p> <p>If an extension cord is needed, use one with the proper diameter for its length and load.</p> <p>See <i>Extension Cords</i> in <i>GROUNDING</i> section.</p>
Performance decreases over time.	<ol style="list-style-type: none"> 1. Blades dull or damaged. 2. Carbon brushes worn or damaged. 	<ol style="list-style-type: none"> 1. Keep blades sharp. Replace as needed. 2. Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	<ol style="list-style-type: none"> 1. Forcing tool to work too fast. 2. Blades misaligned. 3. Blades dull or damaged. 4. Blocked motor housing vents. 5. Motor being strained by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Allow tool to work at its own rate. 2. Check and correct blades to fence alignment. 3. Keep blades sharp. Replace as needed. 4. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 5. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See <i>Extension Cords</i> in <i>GROUNDING</i> section.
 <p>Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.</p>		

SAFETY

SETUP

OPERATION

MAINTENANCE

Parts List and Diagram

PLEASE READ THE FOLLOWING CAREFULLY

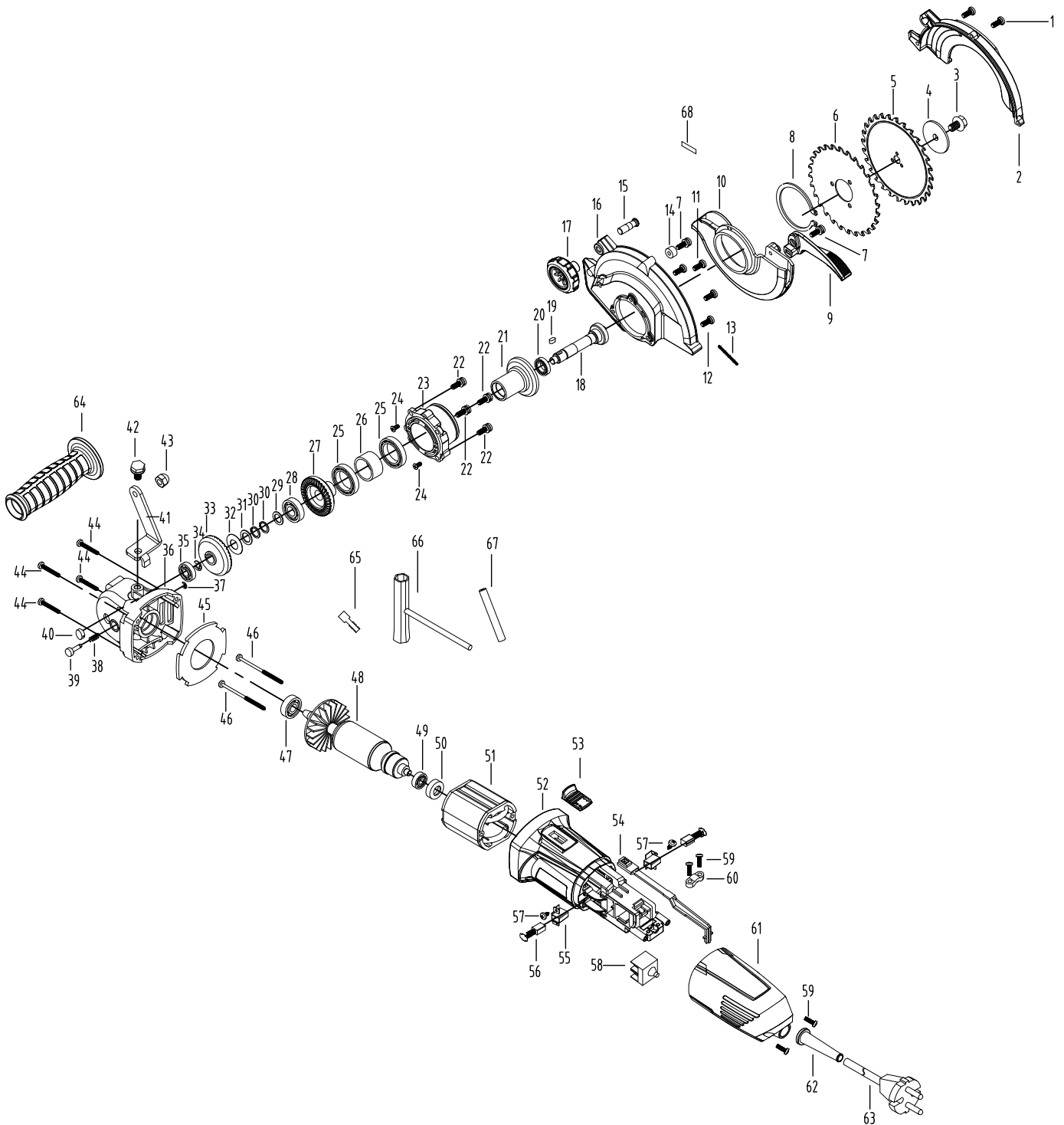
THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts List

Part	Description	Qty
1	Screw M4x14	2
2	Upper Guard (Right)	1
3	Flange Bolt M8x14	1
4	Flange	1
5	Blade B	1
6	Blade A	1
7	Screw M5x12	2
8	Ring 48	1
9	Lower Guard Lever	1
10	Lower Guard	1
11	Screw M4x10	2
12	Screw M4x6	1
13	Spring	1
14	Block	1
15	Pin	1
16	Upper Guard (Left)	1
17	Lubrication Knob	1
18	Small Output Shaft	1
19	Key 4x8	1
20	Bearing	1
21	Big Output Shaft	1
22	Screw M5x18	4
23	Gearbox Cap	1
24	Screw	2
25	Bearing	2
26	Bearing Seat	1
27	Lower Gear	1
28	Bearing	1
29	Washer	1
30	Ring 12	2
31	Washer	1
32	Spring Washer	1
33	Upper Gear	1
34	E-Ring 10	1

Part	Description	Qty
35	Bearing	1
36	Gearbox	1
37	E-Ring 3.5	1
38	Spring	1
39	Lock Pin	1
40	Cap	1
41	Side Handle Bracket	1
42	Bolt M8x16, Spring Washer and Washer Set	1
43	Nut M8	1
44	Screw ST4x25	4
45	Wind Ring	1
46	Screw ST4x70	2
47	Bearing	1
48	Rotor	1
49	Bearing	1
50	Bearing Seat	1
51	Stator	1
52	Housing	1
53	Power Switch	1
54	Switch Connector	1
55	Carbon Brush Holder	2
56	Carbon Brush	2
57	Screw ST3x10	2
58	Switch	1
59	Screw ST4x14F	3
60	Clamp	1
61	Housing Cover	1
62	Power Cord Sheath	1
63	Power Cord (18 AWG)	1
64	Side Handle	1
65	2.8 Terminal	1
66	T-Wrench	1
67	Lubrication Stick	10

Assembly Diagram



SAFETY

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Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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