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. 23f

WARRIOR®

7-1/4" COMPOUND SINGLE BEVEL MITER SAW



Blade sold separately.

Visit our website at: http://www.harborfreight.com

Email our technical support at: productsupport@harborfreight.com

57174

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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WARRIOR®

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.
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

General Power Tool Safety Warnings

⚠ WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool.
Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

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

2. **Electrical safety**

   a. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*

   b. **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.*

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

   d. **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.*

   e. **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.*

   f. **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.*

3. **Personal safety**

   a. **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.*

   b. **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.*

   c. **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.*

   d. **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.*

   e. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*

   f. **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.*

   g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*

   h. **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** *A careless action can cause severe injury within a fraction of a second.*

   i. 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.

   j. Avoid unintentional starting. Prepare to begin work before turning on the tool.

   k. 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.

   l. This product is not a toy. Keep it out of reach of children.

   m. 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 Trigger locked on.
   • Properly maintain and inspect to avoid electrical shock.
   • Properly ground power cord.
   Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.

   n. 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.

4. **Power tool use and care**

   a. **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.*

b. **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.*

c. **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

d. **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.*

e. **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*

f. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

h. **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.*

5. **Service**

a. **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.*

b. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

6. **Safety instructions for mitre saws**

a. **Mitre saws are intended to cut wood or wood-like products, they cannot be used with abrasive cut-off wheels for cutting ferrous material such as bars, rods, studs, etc.** *Abrasive dust causes moving parts such as the lower guard to jam. Sparks from abrasive cutting will burn the lower guard, the kerf insert and other plastic parts.*

b. **Use clamps to support the workpiece whenever possible. If supporting the workpiece by hand, you must always keep your hand at least 100 mm from either side of the saw blade. Do not use this saw to cut pieces that are too small to be securely clamped or held by hand.** *If your hand is placed too close to the saw blade, there is an increased risk of injury from blade contact.*

c. **The workpiece must be stationary and clamped or held against both the fence and the table. Do not feed the workpiece into the blade or cut "freehand" in any way.** *Unrestrained or moving workpieces could be thrown at high speeds, causing injury.*

d. **Push the saw through the workpiece. Do not pull the saw through the workpiece. To make a cut, raise the saw head and pull it out over the workpiece without cutting, start the motor, press the saw head down and push the saw through the workpiece.** *Cutting on the pull stroke is likely to cause the saw blade to climb on top of the workpiece and violently throw the blade assembly towards the operator.*

e. **Never cross your hand over the intended line of cutting either in front or behind the saw blade.** *Supporting the workpiece "cross handed" i.e. holding the workpiece to the right of the saw blade with your left hand or vice versa is very dangerous.*

f. **Do not reach behind the fence with either hand closer than 100 mm from either side of the saw blade, to remove wood scraps, or for any other reason while the blade is spinning.** *The proximity of the spinning saw blade to your hand may not be obvious and you may be seriously injured.*

g. **Inspect your workpiece before cutting. If the workpiece is bowed or warped, clamp it with the outside bowed face toward the fence. Always make certain that there is no gap between the workpiece, fence and table along the line of the cut.** *Bent or warped workpieces can twist or shift and may cause binding on the spinning saw blade while cutting. There should be no nails or foreign objects in the workpiece.*

h. **Do not use the saw until the table is clear of all tools, wood scraps, etc., except for the workpiece.** *Small debris or loose pieces of wood or other objects that contact the revolving blade can be thrown with high speed.*

i. **Cut only one workpiece at a time.** *Stacked multiple workpieces cannot be adequately clamped or braced and may bind on the blade or shift during cutting.*

j. **Ensure the mitre saw is mounted or placed on a level, firm work surface before use.** *A level and firm work surface reduces the risk of the mitre saw becoming unstable.*

k. **Plan your work. Every time you change the bevel or mitre angle setting, make sure the adjustable fence is set correctly to support the workpiece and will not interfere with the blade or the guarding system.** *Without turning the tool "ON" and with no workpiece on the table, move the saw blade through a complete simulated cut to assure there will be no interference or danger of cutting the fence.*

l. **Provide adequate support such as table extensions, saw horses, etc. for a workpiece that is wider or longer than the table top.** *Workpieces longer or wider than the mitre saw table can tip if not securely supported. If the cut-off piece or workpiece tips, it can lift the lower guard or be thrown by the spinning blade.*

m. **Do not use another person as a substitute for a table extension or as additional support.** *Unstable support for the workpiece can cause the blade to bind or the workpiece to shift during the cutting operation pulling you and the helper into the spinning blade.*

n. **The cut-off piece must not be jammed or pressed by any means against the spinning saw blade.** *If confined, i.e. using length stops, the cut-off piece could get wedged against them blade and thrown violently.*

o. **Always use a clamp or a fixture designed to properly support round material such as rods or tubing.** *Rods have a tendency to roll while being cut, causing the blade to "bite" and pull the work with your hand into the blade.*

p. **Let the blade reach full speed before contacting the workpiece.** *This will reduce the risk of the workpiece being thrown.*

q. **If the workpiece or blade becomes jammed, turn the mitre saw off. Wait for all moving parts to stop and disconnect the plug from the power source and/or remove the battery pack. Then work to free the jammed material.** *Continued sawing with a jammed workpiece could cause loss of control or damage to the .mitre saw.*

r. **After finishing the cut, release the switch, hold the saw head down and wait for the blade to stop before removing the cut-off piece.** *Reaching with your hand near the coasting blade is dangerous.*

s. **Hold the handle firmly when making an incomplete cut or when releasing the switch before the saw head is completely in the down position.** *The braking action of the saw may cause the saw head to be suddenly pulled downward, causing a risk of injury.*

7. **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:

a. 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 symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.

b. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.

c. Wear suitable gloves to reduce the vibration effects on the user.

d. Use tools with the lowest vibration when there is a choice.

e. Include vibration-free periods each day of work.

f. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.

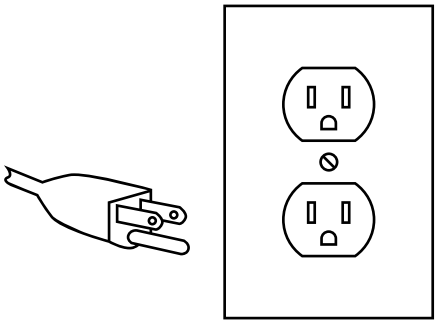
g. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

Grounding

⚠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. Never remove the grounding prong from the plug. 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.

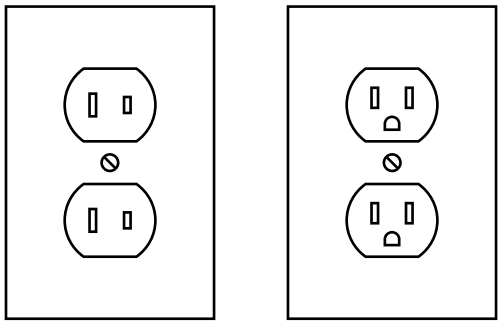
Grounded Tools: Tools with Three Prong Plugs



3-Prong Plug and Outlet

1. Tools marked with "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See 3-Prong Plug and Outlet.)**
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal. **(See 3-Prong Plug and Outlet.)**
3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration. **(See 3-Prong Plug and Outlet.)**

Double Insulated Tools: Tools with Two Prong Plugs



Outlets for 2-Prong Plug

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.)**

Extension Cords

1. ***Grounded*** tools require a three wire extension cord. ***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´	150´
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	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
V	Volts
~	Alternating Current
A	Amperes
n_0 xxxx/min.	No Load Revolutions per Minute (RPM)

	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields.
	Read the manual before set-up and/or use.
	WARNING marking concerning Risk of Fire. Do not cover ventilation ducts. Keep flammable objects away.
	WARNING marking concerning Risk of Electric Shock. Properly connect power cord to appropriate outlet.

Specifications

Electrical Rating	120VAC / 60Hz / 9.5A
Rated No Load Speed	5200 RPM
Cutting Capacity at 0°	2" x 4-5/16"
Cutting Capacity at 45° Miter	2" x 3-1/8"
Maximum Bevel	45° Left
Maximum Miter	47° Left and Right
Saw Blade	7-1/4" Diameter 5/8" Round Arbor 5200 Minimum RPM Rating

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.

Note: For additional information regarding the parts listed in the following pages, refer to *Parts List and Diagram* on page 18.

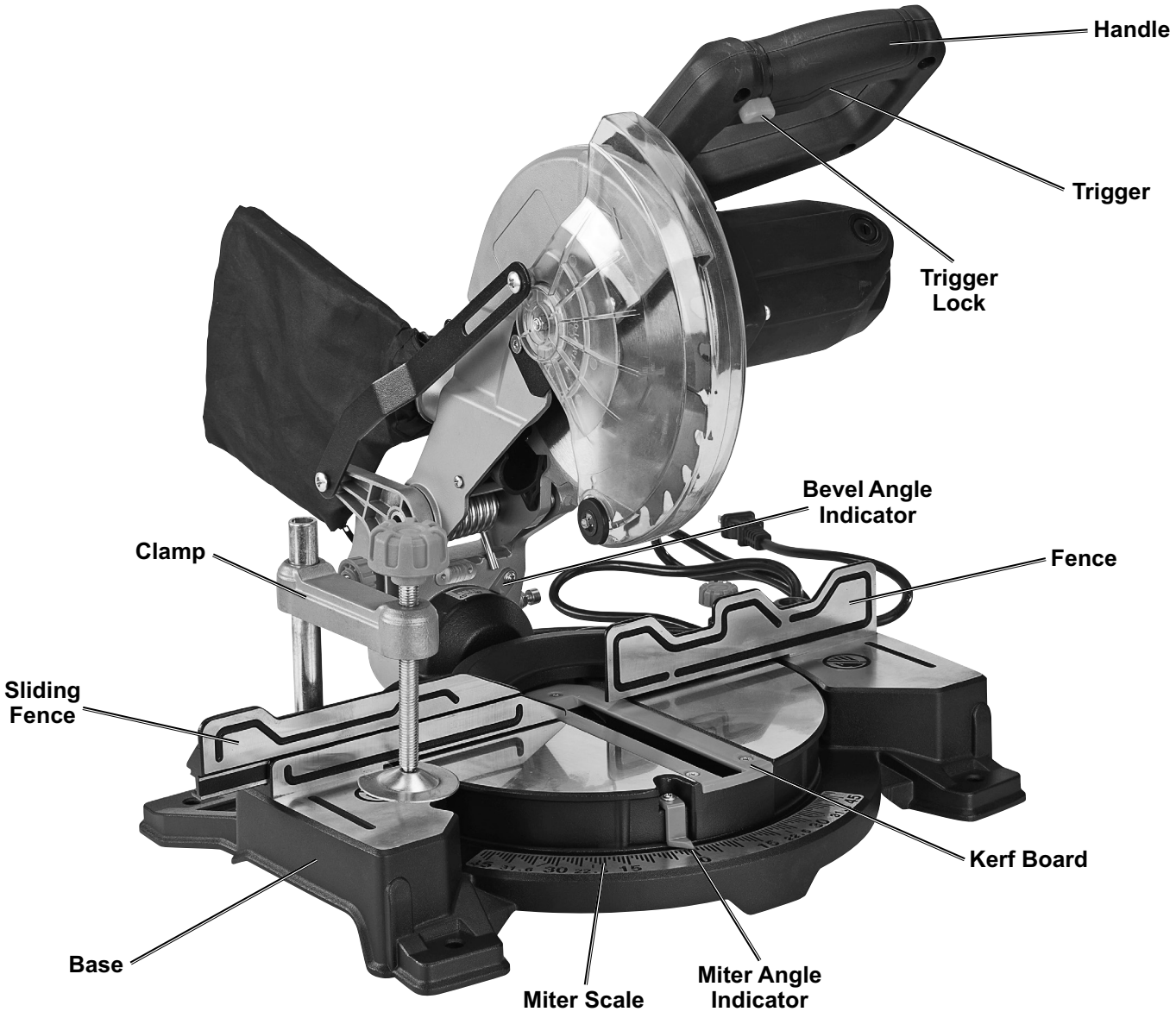
Mounting

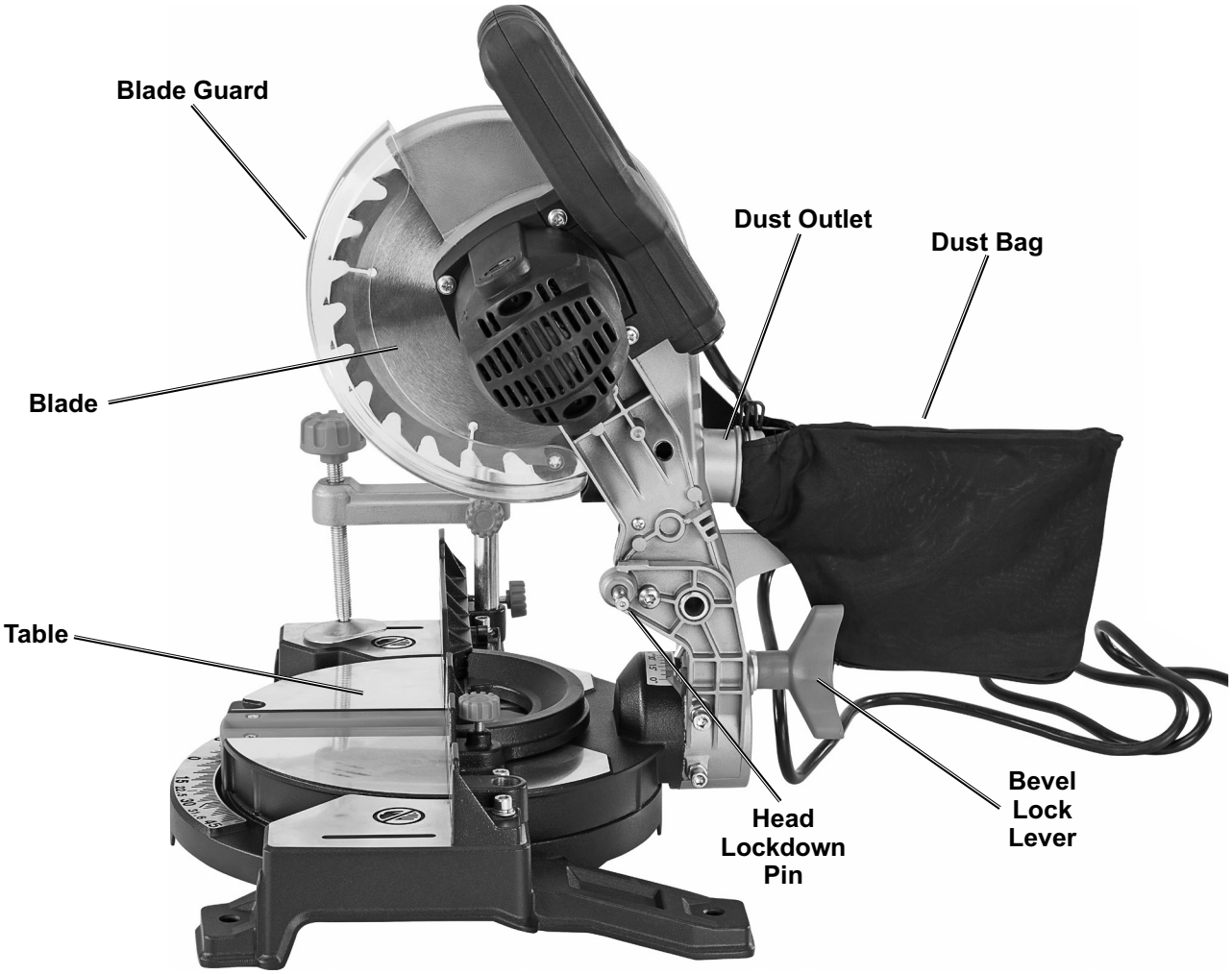
1. Use the four bolt holes provided in the Base to mount the Miter Saw to a stable support before use. Mounting hardware not included.
2. Ensure that the miter saw is always stable and secure (e.g. fixed to a bench).

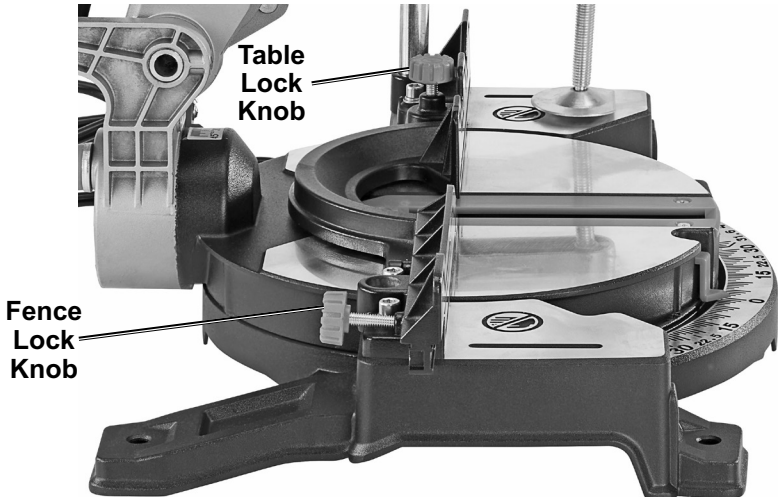
Assembly

1. Squeeze the Spring Clip on the Dust Bag to open the mouth of the Bag. Slip the Bag over the Dust Outlet at the rear of the Saw Head Assembly and release the Clip to secure the Bag to the Outlet.
2. If adjustable and/or removable workpiece support extension(s) are provided, always fix and use these extension(s) during operation.

Functions







Description of Selected Functions

Blade Guard operation:
When the cutting head is lowered, the Blade Guard raises automatically. When the cutting head is raised the Blade Guard returns to its safety position. Keep hands clear of the Blade when the Handle is lowered. Do not interfere with the proper movement of the Blade Guard.

Note: Additional functions are explained elsewhere in the manual.

Work Area

1. 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.
2. There must not be objects, such as utility lines, nearby that will present a hazard while working.
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.

Saw Blade Selection

1. Any saw blade that will be used must be marked as suitable for the material to be cut.
2. Use only a saw blade diameter in accordance with the markings on the saw. See specification table for the bore diameter and the maximum kerf of the saw blade.
3. Use only saw blades that are marked with a speed equal or higher than the speed marked on the tool.

Guard Setup

Check that the Lower Blade Guard is in place, moves freely, and closes instantly.

Dust Extraction Setup

To use the Dust Collection Bag, slide the Bag over the Dust Outlet at the rear of the Saw Head Assembly. Refer to *Assembly* on page 8.

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 Changing

Note: Blade sold separately.

1. Unplug the tool from its power source.
2. Raise the Lower Blade Guard out of the way and hold it up.
3. Loosen the Guard Plate Bolt until it disengages the Guard Plate.
4. Swing the Guard Plate up and out of the way.

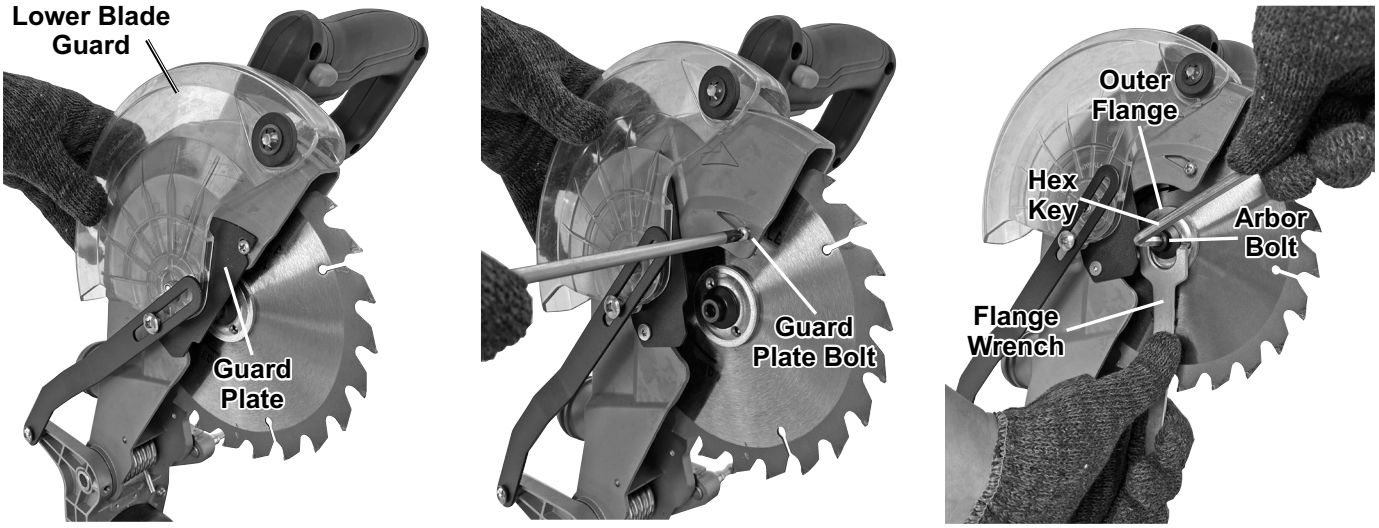


Figure A

5. Insert the two prongs of the supplied Flange Wrench into the two holes in the Outer Flange. Hold the Outer Flange in place and use the supplied Hex Key to loosen the Arbor Bolt by turning **CLOCKWISE**.

   IMPORTANT: The Arbor Bolt has a left-handed thread and removes by turning CLOCKWISE.

6. Remove the Arbor Bolt and Outer Flange. Refer to Figure B.

Note: Make sure the Inner Flange stays in place on the Spindle.

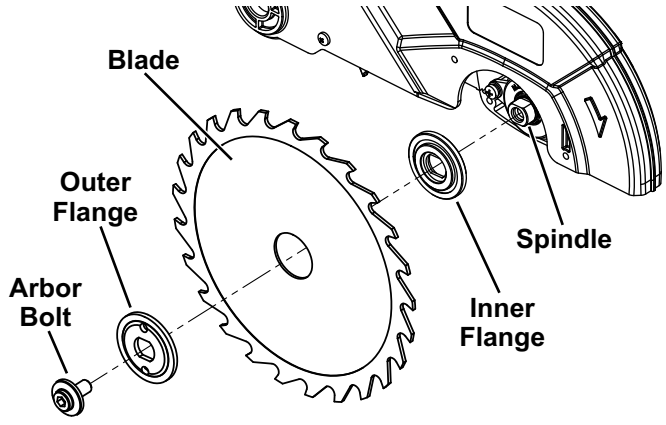


Figure B

7. Remove the used blade. Install the new Blade. **Make sure that the Blade's rotation arrow points in the same direction as the rotation arrow on the Upper Blade Guard.**
8. Replace the Outer Flange and Arbor Bolt. Position the cupped side of the Flange against the Blade. Hold the Outer Flange with the Flange Wrench and tighten the Arbor Bolt with the Hex Key by turning it **COUNTERCLOCKWISE**.
9. Rotate the Guard Plate back into place and secure it with the Guard Plate Bolt.
10. Move the Lower Blade Guard back into place.
11. **WARNING! TO PREVENT SERIOUS INJURY: Make sure the Lower Blade Guard operates smoothly and properly protects from the Blade before using the Saw.**

Setting and Testing

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Make sure that the Trigger is in the off-position and unplug the tool from its electrical outlet before performing any procedure in this section.

Adjusting the Miter Angle

A miter cut is one that is at an angle across the horizontal surface of the material. 45º miter cuts to join two pieces in a right angle corner are common. A 30º cut is often used for a scarf joint or to make a chamfered end.

1. Loosen the Table Lock Knob by turning it counterclockwise.
2. Lower the Saw Head Assembly and lock it down with the Head Lockdown Pin. Using the Handle, move the Table to the desired angle.
3. The Miter Angle Indicator will indicate the selected angle. The Miter Scale displays often used miter angles, including 15º, 22.5º, 30º, and 45º on both left and right sides.
4. Tighten the Table Lock Knob after adjusting the miter angle. Release the Head Lockdown Pin and raise the Saw Head Assembly.
5. With the Table adjusted to the desired angle, place the workpiece flush against the Fence, secure it with the Clamp and make the cut.

Adjusting the Bevel Angle

A bevel cut is one that is at an angle vertically. Bevel cuts can be used to cut a miter in relatively wide and thin material. Bevel cuts can be used in combination with a miter cut to form a compound angle. Compound angle cuts are often used in crown moldings, picture frames and similar trim materials.

1. Loosen the Bevel Lock Knob at the rear of the saw.
2. Move the Saw Head Assembly to the desired angle. Read the angle on the Bevel Angle Indicator.
3. Lock the Saw Head Assembly into position by rotating the Bevel Lock Knob clockwise. Tighten firmly but do not over-tighten.
4. Make a sample cut in a piece of scrap to confirm that the bevel angle is correct. If it is not, correct the angle before cutting.

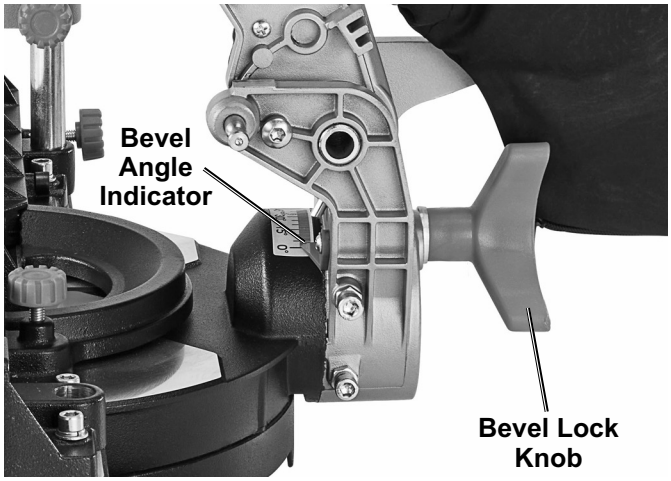


Figure C

Aligning the Fence

1. After adjusting the miter or bevel setting, check and adjust the Sliding Fence.
2. Loosen the Fence Lock Knob, and move the Sliding Fence to be within 1/8" of the blade.
3. Tighten the Fence Lock Knob. Make sure that the Sliding Fence still does not contact the Blade.

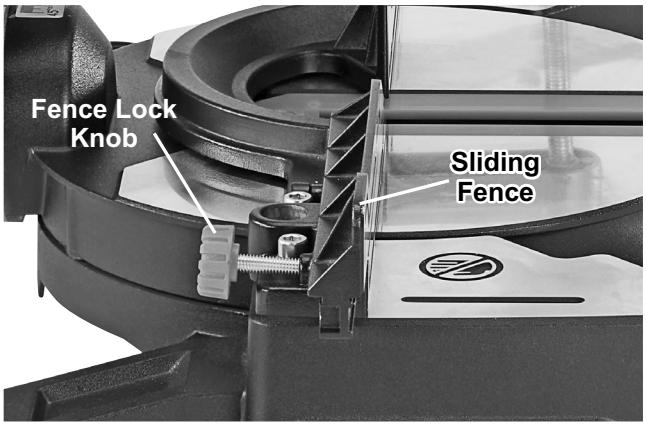


Figure D

Kerf Board Replacement/Adjustment

If the Kerf Board becomes damaged it must be replaced.

1. Remove the four screws holding the Kerf Board in place.
2. Install a new Kerf Board. Replace the four screws and tighten them slightly.

To adjust the Kerf Board:

1. Lower the blade assembly and lock it down with the Head Lockdown Pin.
2. Adjust the Kerf Board so the right side of the Blade slightly clears the edge of the Kerf Board.
3. Check for blade clearance by moving the Saw Head through its full range of motion with the bevel angle set at 0° and at maximum left bevel angle. Refer to *Adjusting the Bevel Angle* on page 12.
4. If the Saw Blade hits the Kerf Board, loosen the four screws and adjust. Tighten the screws and check again for blade clearance.
5. After verifying blade clearance, tighten the four screws holding the Kerf Board in place.

Workpiece and Work Area Set Up

1. Secure loose workpieces using a vise or clamps (not included) to prevent movement while working.
2. Cut only the following materials:

   Dimensional lumber, plywood, particle board, plastic.

Note: Use caution to avoid overheating the cutting tips. If cutting plastic, cut at an even pace to avoid melting it.

3. Refer to cutting capacities in the *Specifications Table* on page 7 for limitations on workpiece size.
4. Allow room on both left and right sides of saw for extended workpieces.
5. Use additional supports if needed to ensure the stability of the workpiece. Mount the Saw so that the surface is level to the ground, and additional supports to provide a surface on the same level as the saw table. If the work surface and any workpiece supports are not level, and on the same level, unwanted bevel angles will appear in the cuts resulting in poor joinery.
6. Secure workpieces to the saw table using the Clamp or other clamping devices (not included). Securing the workpiece will provide safety by preventing kick back and by removing the need to hold workpieces near the blade by hand. Clamping the workpiece will also improve cutting accuracy by preventing the workpiece from moving during the cutting operation.

Workpiece Support

1. Support the workpiece to be level with the table, and so that after the cut is made the cut off pieces will not fall. Use sawhorses or other supports (not included) to support longer workpieces.
2. If the workpiece is not level, you will make an unintentional bevel cut in the material. If the workpiece is not supported, it will bind the blade and may cause the material to kick back, potentially causing injury.

General Instructions for Use

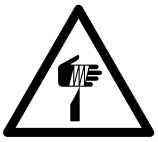
1. Make sure that the Trigger is in the off-position, then plug in the tool.

Miter Saw Cutting Procedure

2. Unlock the Head Lock-Down Pin.
3. Check that all adjustment knobs are tight (Table Lock Knob, Bevel Lock Knob, Fence Lock Knob).
4. Blow any sawdust or debris away from the Fence. Place the work material against the Fence.
5. Align the marked location of the cut on the work material with the Saw Blade.

Note: To prevent your workpiece from being cut too short, align the edge of the blade with the measured mark, keeping the rest of the blade on the waste side of the cut.

6. Hold the work material in place using the Clamp. Ensure that the work material is level and supported securely. Use saw horses or supports if necessary.



DANGER! Saws can quickly amputate fingers if misused. Keep hands well clear of cutting area.

7. Grip the Saw Handle, press the Trigger Lock with your thumb, and squeeze the Trigger to start the Saw.
8. Use two hands and hold workpiece securely against table and fence at all times.
9. Press down lightly to cut the workpiece. Press straight down, “chopping” the material. Do not bear down on the material—use light downward pressure. If the material binds the blade, release the Trigger.
10. When the cut is completed, raise the Saw Head, release the Trigger, wait for the Blade to stop turning, release the Clamp and remove the workpiece from the Saw.
11. To prevent accidents, turn off the tool and unplug it after use. Clean, then store the tool indoors out of children’s reach.
12. Lock the Saw Head down and lock all other adjustments before moving the Saw. Use the handle cut outs on each side of the Base to lift and support the Saw while moving it.

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

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Make sure that the Trigger is in the off-position and unplug the tool from its electrical outlet before performing any procedure in this section.

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 hardware
   - misalignment or binding of moving parts
   - damaged cord/electrical wiring
   - cracked or broken parts
   - any other condition that may affect its safe operation.
2. **AFTER USE,** wipe external surfaces of the tool with clean cloth. Carefully clean the dust collection chute and the area around the Lower Blade Guard. Check that the Lower Blade Guard moves smoothly through its entire range of movement, without sticking.
3. Periodically, wear ANSI-approved safety goggles and NIOSH-approved breathing protection and blow dust out of the motor vents using dry compressed air.
4. **⚠ WARNING! TO PREVENT SERIOUS INJURY: If the plug or the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.**

Checking and Calibrating the Fence

The Fence holds the workpiece in a fixed position while the Table and/or the blade assembly are adjusted in a miter or bevel angle.

To make accurate cuts, the Fence must be perpendicular (at a 90º angle) to the Saw Blade.

1. Before beginning work, make a test cut on scrap material with the Table set at 0º.
2. Check the cut with an accurate square. You can also reverse the two pieces, hold the cut ends together, and hold a good straight edge along the side of the pieces.
3. If either test reveals that the cut is not a true 90º angle, adjust the Fence before beginning work.

If Fence needs adjustment:

1. First unplug the tool.
2. Lower the blade assembly and lock it in place using the Head Lockdown Pin.
3. Lay a carpenter's square on the Table with one edge along the Blade and the other along the Fence. Any inaccuracy should be visible.

NOTE: The square must contact the surface of the Blade, not the teeth, for an accurate reading.

4. The Fence is held in place with bolts at each end. Loosen the bolts slightly, and gently tap the Fence into position using a soft mallet. Retighten the bolts and make another test cut. Repeat the process until the Fence is adjusted accurately.
5. Once the Fence is accurately adjusted, tighten the bolts firmly in place. Recheck one last time, then proceed to work.

Calibrating the Miter Angle Indicator

After checking or adjusting the Fence to confirm that it is at 90º to the Blade, check the accuracy of the Miter Angle Indicator.

1. Loosen the screw holding the Angle Indicator in place.
2. Rotate it until the pointer is exactly on 90º.
3. Retighten the screw.

Calibrating the Bevel Angle

For making accurate cuts, the Saw Blade must be adjusted to be exactly vertical to the Table.

1. To check the angle, have the blade assembly in its normal upright position. Make a cut on a piece of flat sided, fairly thick scrap material.
2. Check the cut with an accurate square. The cut should be at exactly 90º.
3. Angle can also be checked by rotating one cut-off piece 180º and holding the cut ends together. If the cut is not exactly vertical, the two pieces will form a slight angle.
4. If necessary, the bevel angle can be corrected by adjusting the adjustment screw on the right side near the Bevel Lock Knob.
5. Once the bevel angle is adjusted, adjust the Bevel Angle Indicator to read 0º when the Saw Blade is in the vertical position. Loosen the screw holding the Indicator in place, adjust it to be exactly over the 0º mark, then retighten the screw.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	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 Trigger, for example.)	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.	1. Forcing tool to work too fast. 2. Extension cord too long or cord diameter too small.	1. Allow tool to work at its own rate. 2. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See *Extension Cords* in *Grounding* section on page 6.
Performance decreases over time.	Carbon brushes worn or damaged.	Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	1. Forcing tool to work too fast. 2. Blocked motor housing vents. 3. Motor being strained by long or small diameter extension cord.	1. Allow tool to work at its own rate. 2. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 3. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See *Extension Cords* in *Grounding* section on page 6.

Follow all safety precautions whenever diagnosing or servicing the tool.
Disconnect power supply before service.

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.

Record Product's Serial Number Here:_____

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

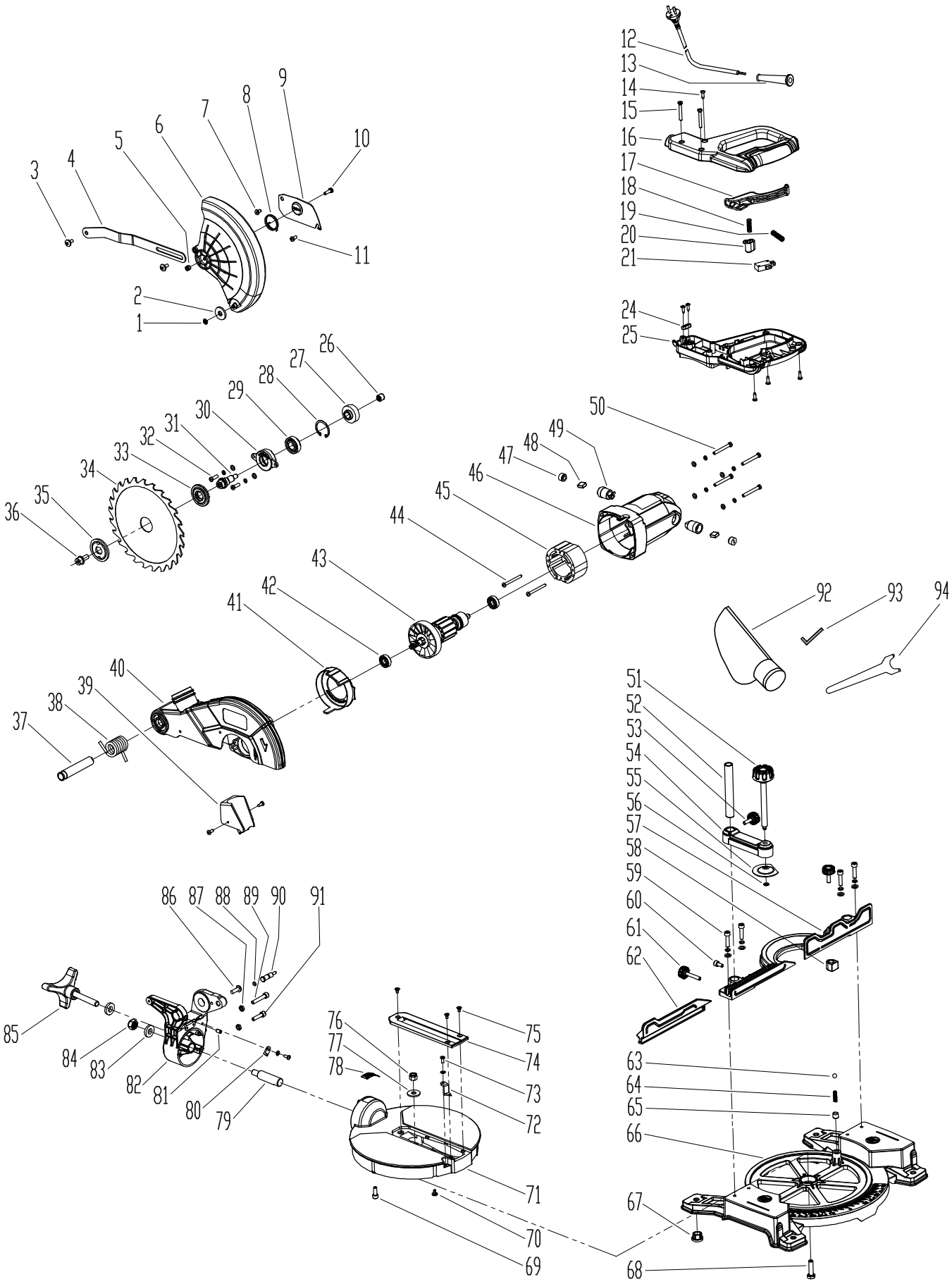
Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 193175504302 when ordering parts.

Parts List

Part	Description
1	Washer
2	Shield Roller
3	Connecting Rod Screw
4	Connecting Rod
5	Nut M5
6	Lower Blade Guard
7	Plum Screw
8	Shield Coil Spring
9	Guard Plate
10	M5x12 Screw
11	M5x10 Screw
12	Power Cord
13	Power Cord Sheath
14	St4.2x14 Screw
15	M5x40 Screw
16	Upper Handle
17	Trigger
18	Self-Locking Spring
19	Microswitch Spring
20	Trigger Lock
21	Microswitch
24	Power Cord Clamp
25	Lower Handle
26	Roller Bearing Hk081210
27	Large Gear
28	Elastic Retainer Type A 32
29	Bearing 6002
30	Front Cover
31	Spindle
32	M5x16 Screw Set
33	Inner Flange
34	Blade
35	Outer Flange
36	Arbor Bolt
37	Cross Pin
38	Torsion Spring
39	Dusting Collection
40	Upper Blade Guard
41	Windshield
42	Bearing 609
43	Rotor Assembly
44	Bolt 4.2x50
45	Stator Assembly
46	Motor Housing
47	Carbon Brush Cover
48	Carbon Brush

Part	Description
49	Carbon Brush Holder
50	M5x45 Bolt Set
51	Clamp Knob Assembly
52	Clamp Rod
53	Knob
54	Clamp Bracket
55	Clamping Plate
56	Split Washer 5
57	Fence
58	Disc Lock Friction Pad
59	M6x25 Screw Set
60	M6x12 Screw
61	Fence Knob
62	Sllding Fence
63	Steel Ball 8
64	Spring
65	M10x20 Screw
66	Base
67	Rubber Foot
68	M8x30 Screw
69	M6x16 Screw
70	Friction Pad
71	Table
72	Miter Angle Indicator
73	M4x10 Screw Set
74	Kerf Board
75	M4x8 Screw
76	Nut M8
77	Washer 8x22x2
78	Bevel Scale
79	Shaft
80	Bevel Angle Indicator
81	M6x10 Screw
82	Pivot
83	Washer 10
84	Nut M10
85	Bevel Lock Knob
86	Screw
87	Nut M6
88	O-Ring Φ5xØ1.8
89	M6x35 Screw
90	Pin
91	M6x25 Bolt
92	Dust Bag
93	Hex Key
94	Flange Wrench

Assembly Diagram



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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