C.R. LAURENCE CO., INC.

Jigsaw Instruction Manual

CAT. NO. LD192/LD192AU

WARNING! When using electric tools, machines or equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury. Completely read the manual before proceeding to use this tool.

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AVDB3093 02.13

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:

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, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

NOTICE is used to address practices not related to personal injury.

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 electric (corded) 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 grounded power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
   b. 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.
   c. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock if your body is grounded.

d. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from the 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. Safety equipment such as a dust mask, non-skid safety shoes, a 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, 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 these devices can reduce dust-related hazards.
   h. 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. Breathing protection must be NIOSH-approved for the specific hazards in the work area.
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 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. 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. 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.

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.

JIGSAW SAFETY WARNINGS

1. 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 make exposed metal parts of the tool "live" and shock the operator.
2. Use clamps or another practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
3. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact your distributor for a replacement.
4. Avoid unintentional starting. Prepare to begin work before turning on the tool.
5. 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.
6. When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.
7. 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.
8. This product is not a toy. Keep it out of reach of children.
9. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to a 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.
10. **WARNING**: Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

11. **WARNING**: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known 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 or other masonry products
    - 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.
12. 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.

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 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. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

SAVE THESE INSTRUCTIONS

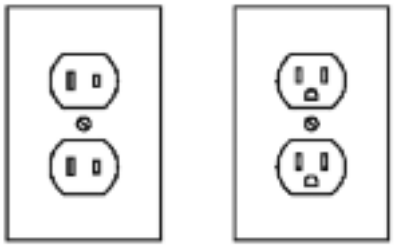
GROUNDING

⚠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.

DOUBLE INSULATED TOOLS: TOOLS WITH TWO PRONG PLUGS



Outlets for 2-Prong Plug

1. Tools marked "Doubled 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 Standards Association, and the National Electrical Code.
2. Double insulated tools may be used in either of the 120 volt shown in the above 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 cause a serious drop in voltage, resulting in loss of power and possible tool damage (See Table A below.)
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 below.)
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 below.)
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 below.)
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'
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
	Canadian Standards Association
	Underwriters Laboratories, Inc.
	Volts Alternating Current
	Amperes
	**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 electric shock. Properly connect the power cord to appropriate outlet.

SPECIFICATIONS

LD192AU	240V / 50 HZ / 750 WATT
LD192	120V / 60 HZ / 6.6 A
Cutting Speed	500-3000 SPM
Stroke Length	1-9/16"
Max. Capacity	3-3/16" (Wood)
Footplate Tilt	0-45° Left or Right
Blade Type	T-Shank
Batteries	2 "AAA" for Laser Light (not included)

INSTRUCTIONS FOR PUTTING TOOL INTO 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 Parts List and Assembly Diagram on page 15.

BLADE INSTALLATION

1. Refer to the chart below to select the proper Saw Blade for the material being cut.

WARNING! Wear ANSI-approved safety goggles and heavy-duty work gloves when changing blade

2. Once the proper blade is selected, lift the Blade Cover (53) up to access the Blade Release Lever. See Figure 1 below.
3. Pull blade release lever counterclockwise to open blade collet.
4. With the blade teeth facing FORWARD, insert blade into blade holding collet as far as it will go. **WARNING!** Make sure blade's back edge is set against the roller guide.
5. Release the blade release lever. Pull on blade until blade collet snaps blade into place.

Blade Selection and Suitable Speed		
Material	**TIPS**	**Speed**
Soft Wood	6	6
Hardwood	6	5
Plastic	12	4 - 6
Aluminum	12	3 - 6
Steel	24	2 - 4
Tile	24	1 - 3
Glass	32	1 - 3
Leather	(Knife Edge)	4 - 6
Rubber	(Knife Edge)	4 - 6

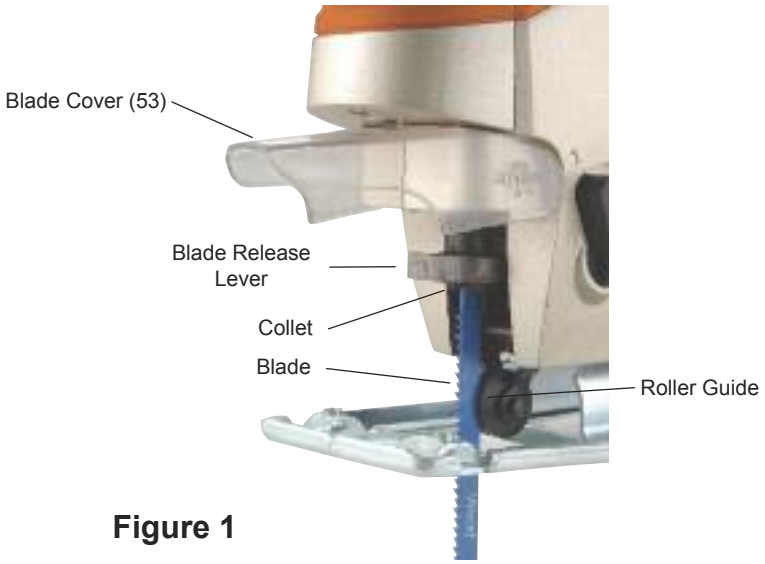


Figure 1

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.

WARNING

TO PREVENT SEROUS 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.

WORK PIECE AND WORK AREA SET UP

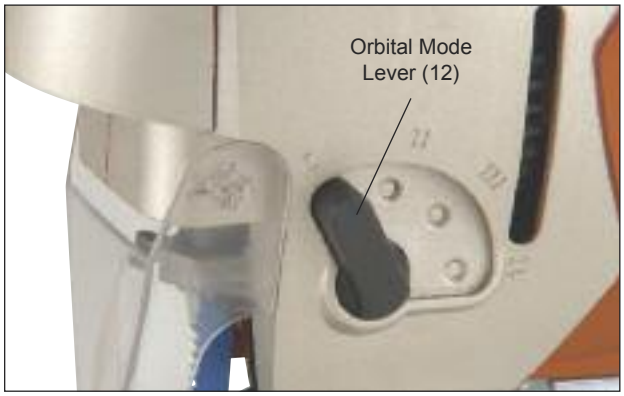
1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.
2. Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. This power cord must reach the work area with enough extra length to allow free movement while working.

3. Secure loose work pieces using a vise or clamps (not included) to prevent movement while working.
4. There must not be objects, such as utility lines, nearby that will present a hazard while working.

SELECTING CUTTING MODE

1. The Jigsaw comes with four cutting modes (three cutting settings and one straight cutting mode). To change cutting mode adjust the Orbital Mode Lever (12). See Figure 2 below.
2. The settings are:
   a. I = Straight line cutting (for plastics and mild steel)
   b. II = Small orbit (for aluminum and hardwood)
   c. III = Medium orbit (for wood, plywood and fast cutting of aluminum)
   d. IV = Large orbit (for fast cutting wood and plywood)

Figure 2



ADJUSTING JIGSAW SPEED

1. The Jigsaw's speed can be adjusted between 500 and 3,000 strokes per minutes.
2. To adjust speed, turn the Speed Switch from 1 (the slowest speed) to 6 (the fastest speed). See Figure 3 below.

Figure 3

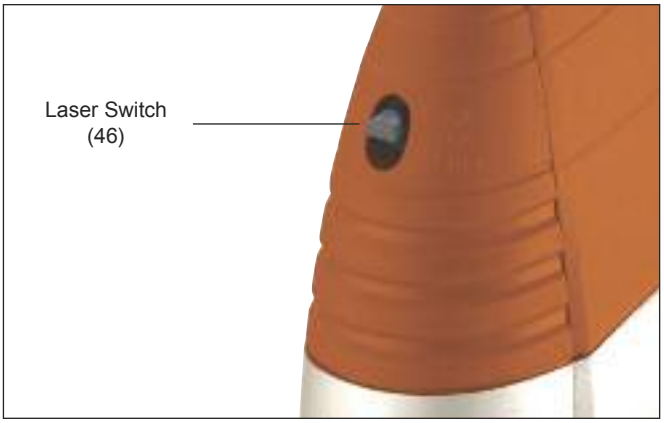
3. Use higher speeds to cut work pieces faster.

NOTICE: Refer to the Blade Selection Chart on page 9 to verify you are using the correct speed with the appropriate blade. Otherwise blade damage can occur.

GENERAL OPERATING INSTRUCTIONS

1. Plug the Power Cord into the nearest grounded electrical outlet.
2. Position the saw blade of the Jigsaw about 1/2" from the beginning cut line on the workpiece. Do not allow the saw blade to come in contact with the workpiece.
3. Turn the Laser Switch (46) to its "LASER" position, and align the laser beam with the cut line on the workpiece. See Figure 4 below.

Figure 4



NOTE: The Jigsaw is equipped with both a Laser Guide and an LED Light. However, both cannot be used at the same time. The Laser switch can only be set in the Laser Setting OR the LED Light Setting.

4. To turn off the Laser or LED, slide the Laser Switch to the OFF position.
5. Squeeze the Trigger (16) to turn on the Jigsaw. If operating the Jigsaw for an extended period of time, depress the Trigger Lock (located above the Power Switch) to lock the Trigger in its "ON" position. See Figure 5 below.

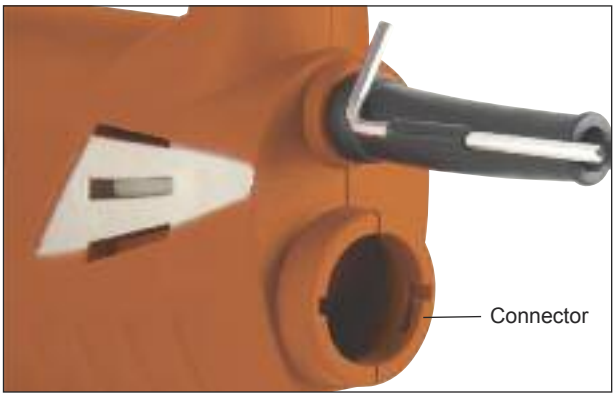
Figure 5

6. Allow the Saw Blade to stroke at full speed before slowly feeding it into the workpiece,
7. Make sure to hold the Jigsaw firmly with both hands to avoid kickback. Then, finish making the cut.

DUST CHUTE AND DUST BLOWER

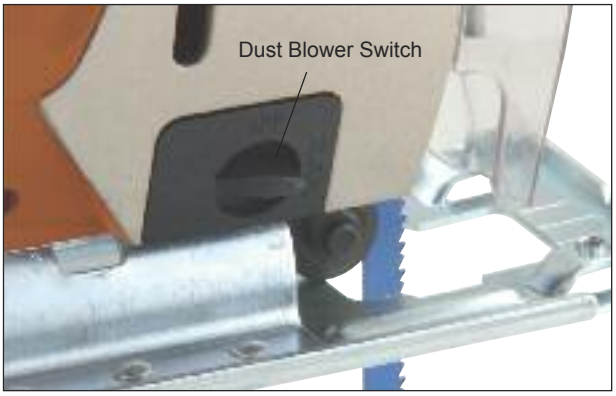
1. To fasten the optional Dust Chute Vacuum Adapter in place, align the pins on Dust Chute with slots in Connector. Push Dust Chute in and turn clockwise to lock. See Figure 6 below.

Figure 6



2. To clear dust from accumulating along the cut line, use the Dust Blower to blow a stream of air onto the workpiece.
3. To activate, turn the Dust Blower Switch to the ON (horizontal) position. To turn it off, turn the switch back to the OFF (vertical) position. See Figure 7 below.

Figure 7



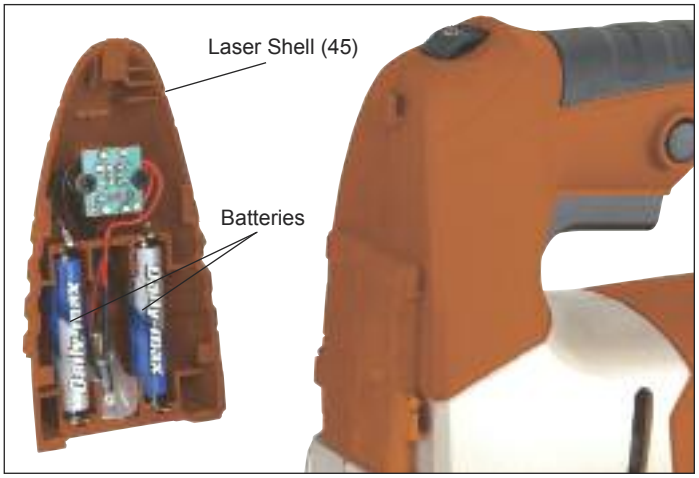
BEVEL AND METAL CUTTING

1. Use the included Hex Key to loosen the Cap Screw (24) on the bottom of the Base Plate (22). Tilt the base allowing for bevel cuts between 0 and 45 degrees.
2. Retighten the Cap Screw once the desired angle is reached.
3. For metal cutting be sure to use a coolant such as cutting oil during use. Failure to add coolant will lead to greater blade wear. If desired, grease the underside of the workpiece in place of adding coolant.
4. When finished with Jigsaw, unlock and release the Trigger to stop the Jigsaw. Wait until the Saw Blade stops completely. Turn the Laser Switch to its "OFF" position. Then, remove the Jigsaw from the workpiece.
5. To prevent accidents disconnect the power cord after use. Clean, then store the tool out of children's reach.

REPLACING LASER BATTERIES

1. Push Laser Shell (45) up and lift off of housing.
2. Remove the two AAA batteries from the inside of the Laser Shell and replace with two new AAA batteries. See Figure 8 below. **CAUTION**! Position the batteries according to indicated polarity.
3. Slide Laser Shell back onto housing.

Figure 8



MAINTENANCE AND SERVICING

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

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Unlock and release Trigger and unplug 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 hardware, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
2. Inspect the Saw Blade. Replace with a new Saw Blade when needed.
3. **AFTER USE**, wipe external surfaces of the tool with clean cloth.
4. **WARNING!** If the supply cord of this power tool is damaged, it must only be replaced by a qualified service technician.

TROUBLESHOOTING

Problem	Possible Causes	Likely Solutions
Tool will not start.	1. Cord not connected. 2. No power at outlet. 3. Internal damage or wear (Carbon brushes or switch, 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.
Tool operates slowly.	Extension cord too long or wire size too small.	Eliminate use of extension cord. If an extension cord is needed, use shorter/ heavier gauge cord. See Extension Cords in Grounding section on page 7.
Performance decreases over time.	1. Accessory dull or damaged. 2. Carbon brushes worn or damaged.	1. Keep cutting accessories 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	1. Forcing tool to work too fast. 2. Accessory misaligned 3. Accessory dull or damaged. 4. Blocked motor housing vents. 5. Motor being strained by long or small diameter extension cord.	1. Allow tool to work at its own rate. 2. Check and connect accessory to fence and/or table alignment. 3. Keep cutting accessories 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 Extension Cords in Grounding section on page 7.
Laser Guide will not illuminate.	1. Laser Switch is off or set to LED. 2. Laser opening is dirty or blocked. 3. Laser damaged.	1. Turn Laser Switch on to LASER setting. 2. Turn Laser Switch to it's OFF position, then clean the laser opening. 3. Have a qualified service technician check the tool for internal damage.

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

PARTS LIST AND ASSEMBLY 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 MAKE 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
1	Orbital Mode Lever
2	Circlip 10
3	Spring 3.9 x 5.5
4	Steel Ball
5	Pin
6	Label
7	Left Housing
8	Power Cord
9	Power Cord Sleeve
10	Cord Clip
11	Screw (M4 2 x 16)
12	Blade Guide Roller
13	Spring Lamination
14	Fixed Pin
15	Capacitor
16	Trigger
17	Circuit Board
18	Right Housing
19	Screw (M4 2 x 20)
20	Label
21	Nut (M4)
22	Base Plate
23	Washer Board
24	Cap Screw (M6)
25	Needle (3 x 6.5)
26	Field
27	Bearing
28	Brush
29	Armature

Part	Description
30	Bearing (608)
31	Center Support
32	Screw (M4 2 x 32)
33	Needle Bearing (0613.5)
34	Balance Patch
35	Balance Frame
36	Gear
37	Spring (5.5)
38	Washer (6 x 0.5)
39	Directive Wheel
40	Bearing
41	Positive Plate
42	Blade Holder Shaft
43	Spring Housing
44	Spring (3.9 x 10)
45	Laser Shell
46	Laser Switch
47	Circuit Board
48	Screw (M3 x 8)
49	Laser
50	LED Lamp
51	Positive Electrodes
52	Laser Batteries (not included)
53	Blade Cover
54	Setting Board
55	Adjustment Knob
56	Screw (M2 x 8)
57	Hex Key (not shown)

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

ASSEMBLY DIAGRAM