

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 or battery-operated (cordless) power tool.

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.

2. 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

3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

4. 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.

5. 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.

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

7. 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.

8. 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.

9. 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

10. Grounded tools require a three wire extension cord. Double Insulated tools can use either a two or three wire extension cord.

Recommended Minimum Wire Gauge for Extension Cords

NAMEPLATE AMPERES (at full load)	7.62 m 25' long	15.24 m 50' long	22.86 m 75' long	30.48 m 100' long	45.72 m 150' long
0 - 5 Amps	18	18	16	14	12
5.1- 8 Amps	18	16	14	12	12
8.1 - 12 Amps	16	14	12	10	Do Not Use
12.1 - 15 Amps	14	12	10	Do Not Use	Do Not Use
15.1 - 20 Amps	12	10	Do Not Use	Do Not Use	Do Not Use

11. 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.
12. 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.
13. 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.
14. 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.
15. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
16. 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.
17. 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.
18. 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.
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.
24. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
25. 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

26. SERVICE AND REPAIRS should be made by

qualified repair technicians at an authorized repair center. Improperly repaired tools could cause serious shock or injury.

Circular Saw Safety Warnings

1. DANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing. If both hands are holding the saw, they cannot be cut by the blade.
2. Do not reach underneath the workpiece. The guard cannot protect you from the blade below the workpiece.
3. Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade 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 blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;
 - When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;
 - If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade 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 blade, but not in line with the blade. Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.
 - (b). When blade is binding, or when interrupt-

ing a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is 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 blade in the kerf and check that saw teeth are not engaged into the material. If saw blade is binding, it 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 blade may cut objects that can cause kickback.

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 blade 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 blade enters 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 blade before placing saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade 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 a blade 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. Blades must be rated to at least the maximum speed marked on the tool.
20. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
21. Avoid unintentional starting. Prepare to begin work before turning on the tool.
22. 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.
23. When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.
24. 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.
25. 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.
26. Verify that there are no utility lines or hardware in or near the workpiece. This is especially critical for plunge cuts.
27. Do not depress the spindle lock when starting or during operation.
28. This product is not a toy. Keep it out of reach of children.
29. 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.

SPECIFICATIONS

Electrical Rating	120VAC / 60Hz / 11A
Motor No Load Speed	4500/min
Max. Blade Diameter	7-1/4" (185mm)
Arbor	5/8"
Depth of Cut	2-1/2" @ 90° 1-5/8" @ 45°
Bevel Capacity	0° to 45°



CAUTION/ATTENTION



LASER RADIATION/RAYONNEMENT LASER
DO NOT STARE INTO BEAM/NE PAS REGARDER DIRECTEMENT LE
RAYON

Maximum Output/SORTIE MAXIMALE < 1mW, wavelength:
650nm / < 1mW LONGUEUR D'ONDES 650nm
CLASS II LASER PRODUCT/PRODUIT LASER CLASSE II

Caution:

The use of optical instruments with
this product will increase eye hazard.

Note: Symbology

A square symbol with a smaller square inside, representing double insulation.	Double Insulated
The ETL US Intertek logo, featuring the circular emblem and the company name.	Intertek Testing Services inc.
A circular symbol showing a pair of safety goggles, indicating a warning about eye injury.	WARNING mark concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields
A circular symbol showing a person reading a manual, indicating the instruction to read the manual before use.	Read the manual before set-up and/or use.

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.

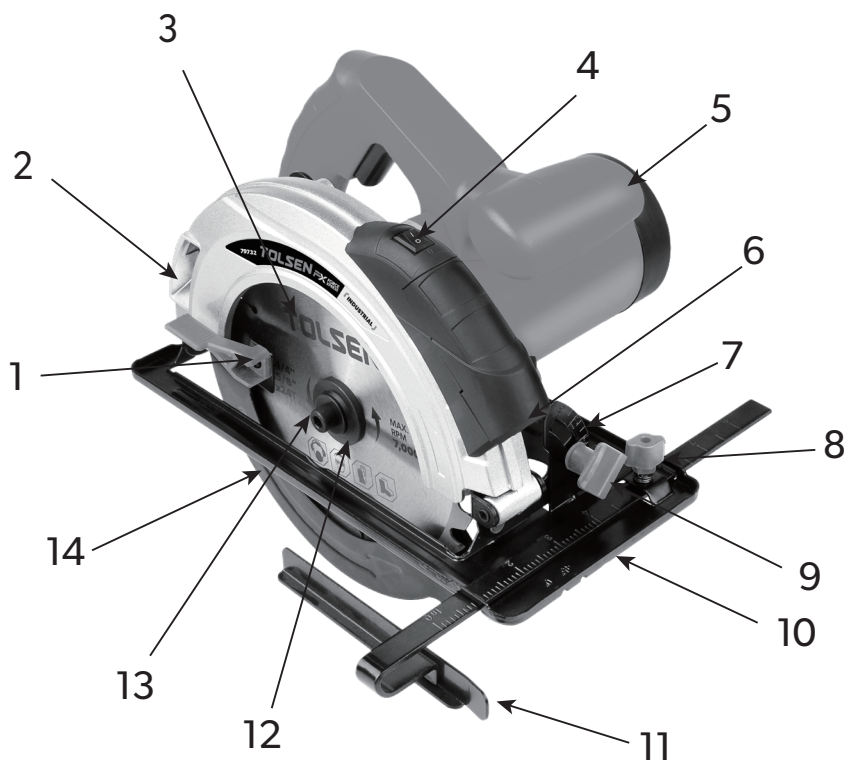


Fig. 1

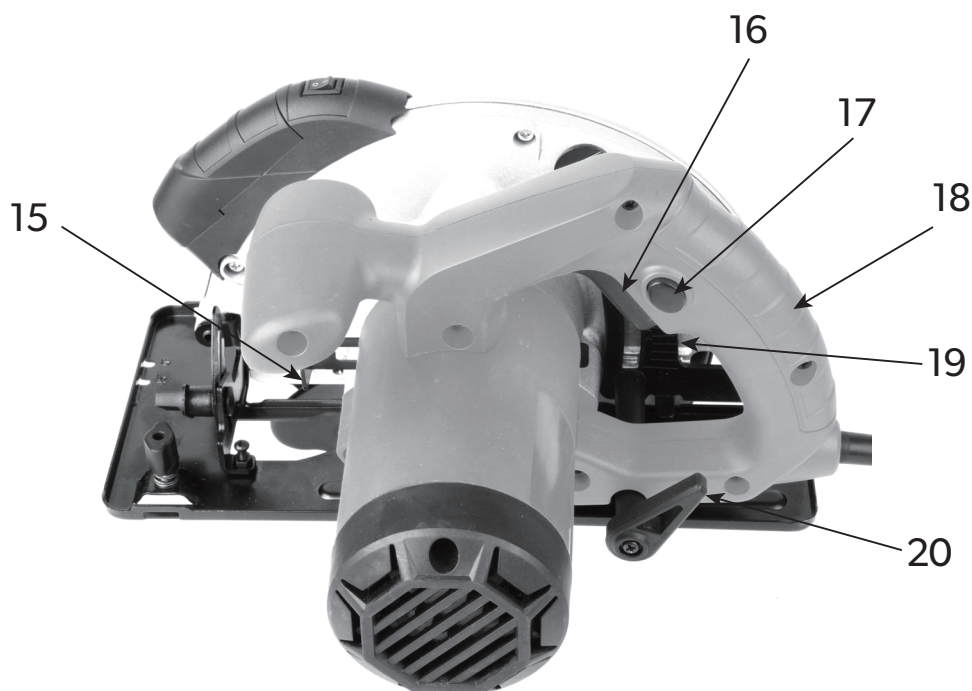


Fig. 2

- | | |
|-----------------------------------|-------------------------------------|
| 1. Lever of lower guard | 11. Edge guide |
| 2. Dust extraction outlet | 12. Outer flange |
| 3. Saw blade | 13. Blade clamp bolt |
| 4. Laser switch knob | 14. Lower guard |
| 5. Auxiliary handle | 15. Spindle lock button |
| 6. Laser generator | 16. ON/OFF switch |
| 7. Angle gauge | 17. Lock-off button |
| 8. Lock knob for angle adjustment | 18. Main handle |
| 9. Lock knob for edge guide | 19. Depth gauge |
| 10. Baseplate | 20. Lock lever for depth adjustment |

Changing the blade

WARNING:

To prevent serious injury from accidental operation: Release the Switch, turn off the laser and unplug the tool from its electrical outlet before adjusting tool or installing accessories.



Fig. 3

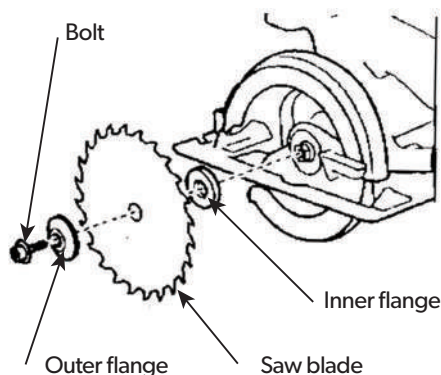


Fig. 4

1. Place this circular saw on its side on a flat surface. Advice you bring the base plate down as if a minimum depth cut which is ease to operate.
2. Push the spindle lock button (15) toward motor housing as the arrow shows in fig. 3 and firmly hold it.
3. Turn the blade clamp bolt (13) anti-clockwise by using the Allen key that supplied with the tool.
4. Remove the blade clamp bolt and outer flange (12).
5. Raise the lower guard (14) by using the lever for

- lower guard (1), and then remove the saw blade.
6. Clean the saw blade flanges, then mount the new saw blade onto the output spindle and against the inner flange.
7. Make sure the saw teeth and arrow on the blade is to be the same direction as the arrow on the lower guard.
8. install the outer flange, and tighten the blade clamp bolt.
9. Make sure that the saw blade runs freely by turning the blade by hand.

WARNING:

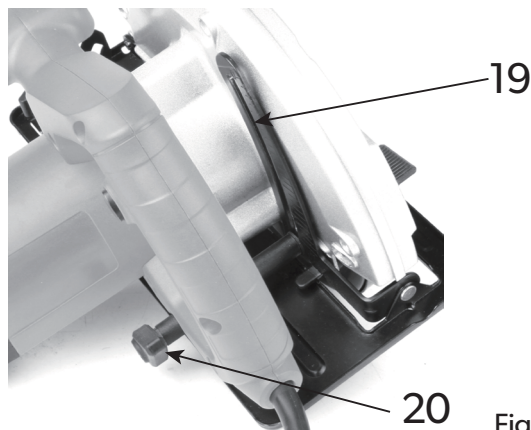
Blade must be rated to at least 5,500 RPM.

Make sure to install the new Saw Blade with its teeth and the arrow on the Saw Blade pointing in the same direction as the arrow on the Lower Guard.

Depth adjustment

WARNING:

To prevent serious injury from accidental operation: Release the Switch, turn off the laser and unplug the tool from its electrical outlet before adjusting tool or installing accessories.



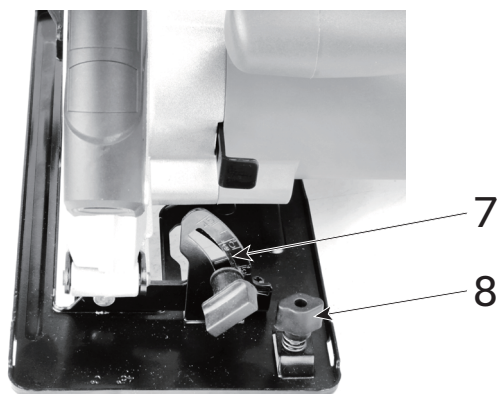
1. Loosen the lock lever for depth adjustment (20).
2. Hold the baseplate flat against the edge of the work piece and lift the body of the saw until the blade is at the right depth determined by the depth gauge (19) (align the scale line).
3. Tighten the lock lever for depth adjustment.

Fig. 5

WARNING:

To reduce the risk of Serious Injury: Depth of cut must be adjusted to just clear the workpiece.

Angle adjustment



1. Loosen the Lock knob for angle adjustment (8).
2. Adjust the shoe to the desired angle between 0° to 45°. [See Angle gauge (7)].
3. Tighten the lock knob for angle adjustment.

Fig. 6

Switch on and off

WARNING:

Before engage the ON/OFF switch, check that the saw blade is properly fitted and run smoothly, the blade clamp bolt is well tightened.



Fig. 7

1. Connect the plug to the power supply , until the tool disconnect from the power mains.
2. To switch on the circular saw, press the lock-off button (17) and pull the ON/OFF switch trigger (16).
3. When you release the switch trigger (16), the tool turns off.

Parallel cut adjustment

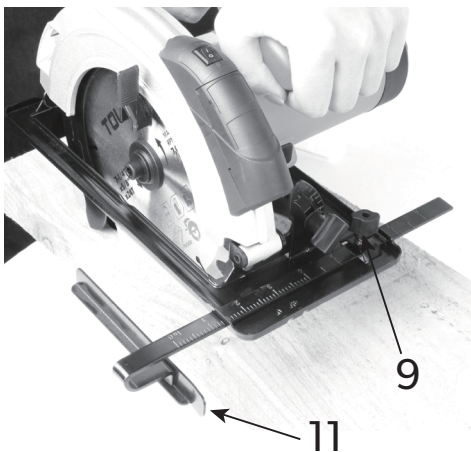


Fig. 8

1. Loosen the lock knob of edge guide (9).
2. Slide the edge guide (11) through the slots in the shoe to the desired width.
3. Tighten the lock bolt to secure it in the position.
4. Ensure that the edge guide rests against the wood along its entire length to give a consistent parallel cuts.

Laser line generator



Warnings: Do not stare directly at the laser beam, do not deliberately aim the beam at personnel and ensure that it is not directed towards the eye of a person for longer than 0.25s.

When you make the line of the cut on the work piece, the laser line generator can help you get better alignment.

Turn on: the laser generator (6) works when turn laser switch knob (4) on.

Turn off: Press laser switch knob (4) again.

1. Make sure line of the cut on the work piece.
2. Adjust the angle of cut as required
3. Plug in the machine and start the motor
4. When the blade is at its maximum speed (approximately 2 seconds), place the saw on the work-piece.
5. Align the beam with the mark on the work-piece and slowly push the saw forward using both hands, keeping the red light beam on the mark.
6. Switch off this tool when completion of the cut.

GENERAL OPERATING INSTRUCTIONS**WARNING:**

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Release the Trigger, turn off the laser and unplug the tool from its electrical outlet before adjusting tool or installing accessories.

TO PREVENT SERIOUS INJURY FROM FLYING FRAGMENTS: Do not use blades made from high-speed steel, abrasive blades, or metal- or masonry-cutting blades. The guards of this saw are not designed to protect against the failure of such blades.

1. Make all necessary depth and angle adjustments to the Circular Saw.
2. Make sure that all guards are in place in proper working order and that all adjustment knobs are tight before operation.
3. Plug the Power Cord into the nearest 120 volt, grounded, electrical outlet.
4. Press the Laser Switch to ON (I).
5. Firmly grip the Handle with one hand and the Auxiliary Handle with the other hand. Squeeze and hold the Trigger Lock, then the Trigger to turn on the Circular Saw.
6. Release the Trigger Lock.
7. Allow the Saw Blade to reach full speed before feeding the Saw Blade into the workpiece.
8. Make straight cuts only. Do not attempt to twist the Circular Saw to the right or left while cutting. If this occurs, the Saw Blade will "bind" in the workpiece causing kickback, potential injury, and/or damage to the workpiece and Circular Saw.
9. Do not force the Circular Saw to cut faster than it is designed to cut. Feed the Saw Blade gradually into the workpiece.
10. Turn off the Circular Saw if the Saw Blade is to be backed out of an uncompleted cut. When turning off the Circular Saw, allow the Saw Blade to fully stop on its own before removing the Circular Saw. Do not press against the Saw Blade to stop it.
11. Once the cutting job is completed, release the Trigger and wait until the Saw Blade stops spinning. Turn the Laser Switch OFF (O).
12. To prevent accidents, unplug the Power Cord from its electrical outlet. Clean, then store the tool indoors out of children's reach.

MAINTENANCE AND SERVICING

WARNING:

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Turn off the switch, laser 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 hardware
- misalignment or binding of moving parts
- cracked or broken parts
- damaged electrical wiring
- any other condition that may affect its safe operation.

WARNING:

If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

2. AFTER USE, wipe external surfaces of the tool with clean cloth.

3. TO CLEAN: The ventilation openings should be kept clean and free of dirt and debris. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator before cleaning ducts. The most effective way to clean the

ventilation openings is with compressed air.

4. CARBON BRUSH MAINTENANCE. The carbon brushes may require maintenance when the motor performance of the tool decreases or stops working completely. Carbon brushes are internal to the Motor Housing, and should only be checked by a qualified service technician.

CAUTION: The brushes must always be replaced in pairs.

5. Blades become dull even when cutting regular lumber, a sure sign of a dull blade is the need to force the saw forward instead of guiding it while making a cut. Take the blade to a service center for sharpening.

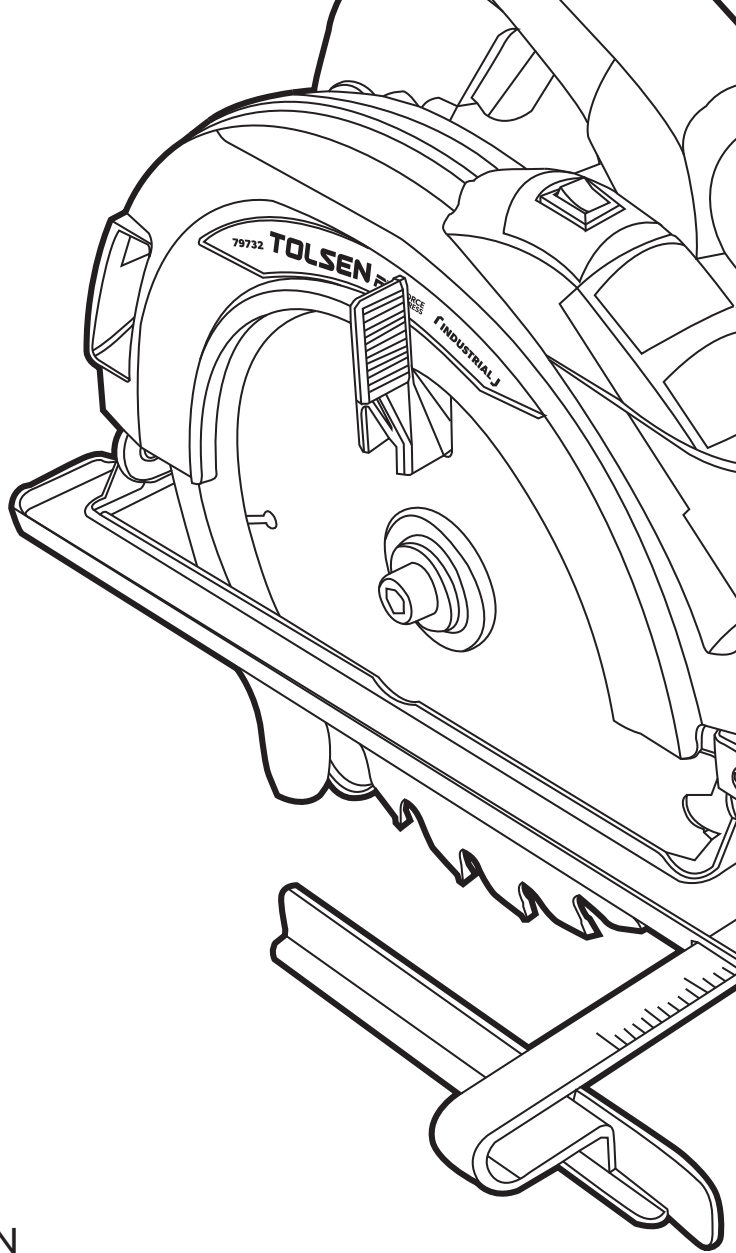
6. If you discover any damage, consult the exploded drawing and parts list to determine exactly which replacement part you need to order from our customer service department.

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.	<ol style="list-style-type: none"> 1. Excess pressure applied to workpiece. 2. Power being reduced by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Decrease pressure, allow tool to do the work. 2. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load.
Performance decreases over time.	<ol style="list-style-type: none"> 1. Carbon brushes worn or damaged. 2. Blade dull or damaged. 	<ol style="list-style-type: none"> 1. Have qualified technician replace brushes. 2. Keep Blade sharp. Replace as needed.
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. Blocked motor housing vents. 3. 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. 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 General Power Tool Safety Warnings section.

WARNING:

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



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