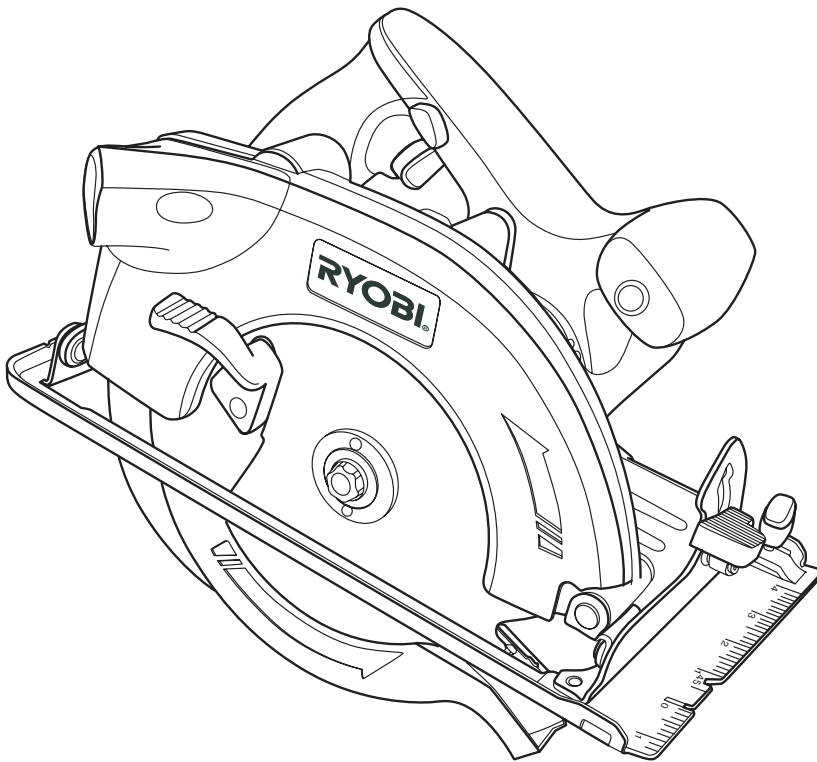




**ECS12519**

# **CIRCULAR SAW OWNER'S OPERATION MANUAL**



**Double  
Insulated**



**N197**

## **THANK YOU FOR BUYING A RYOBI CIRCULAR SAW**

Your new circular saw has been engineered and manufactured to Ryobi's high standard for dependability, ease of operation and operator safety. Properly cared for, it will give you years of rugged, trouble free performance.



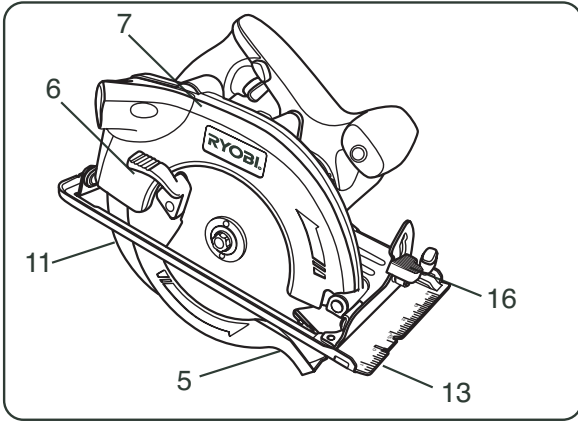
**CAUTION: Carefully read through this entire owner's manual before using your circular saw.**

Pay close attention to the Rules for Safe Operation, Warnings and Cautions.

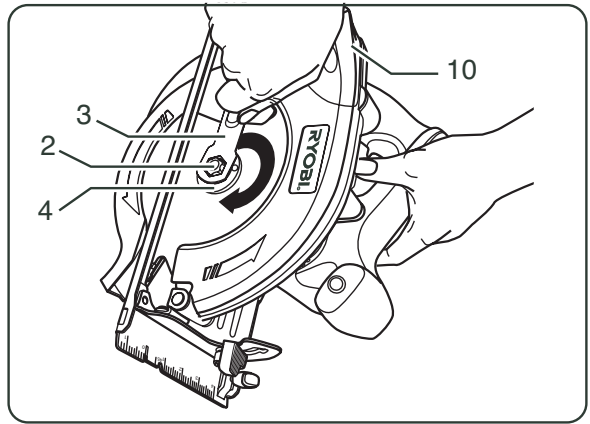
If you use your circular saw properly and only for what it is intended, you will enjoy years of safe, reliable service.

Thank You again for buying Ryobi tools.

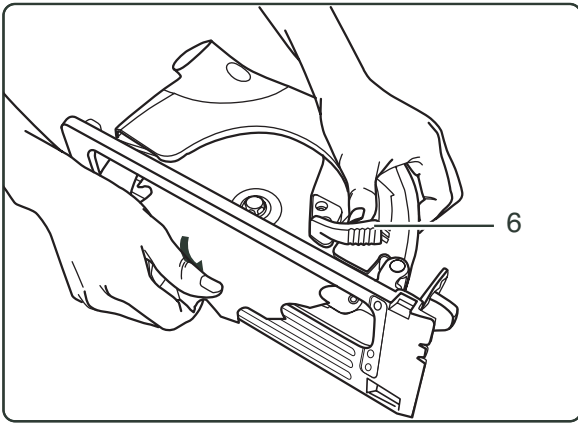
**SAVE THIS MANUAL FOR FUTURE REFERENCE**



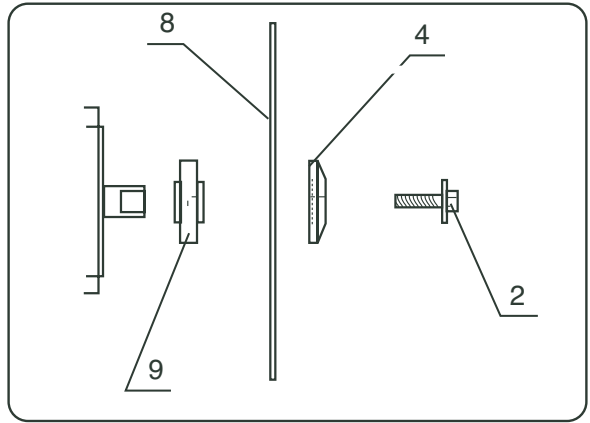
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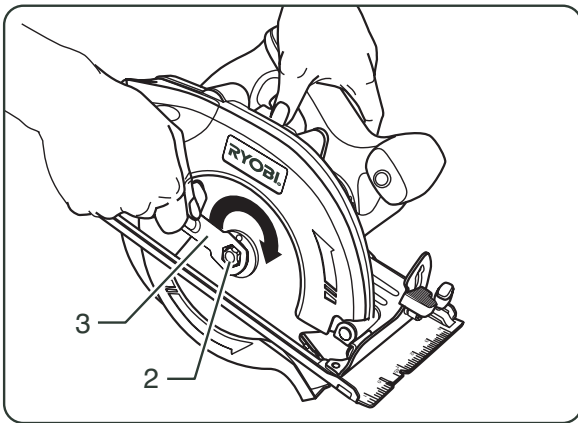
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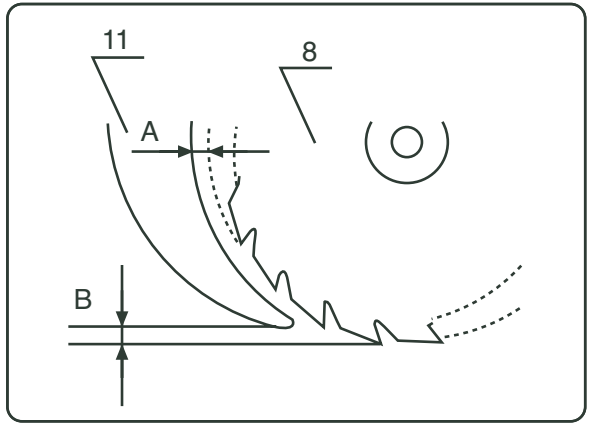
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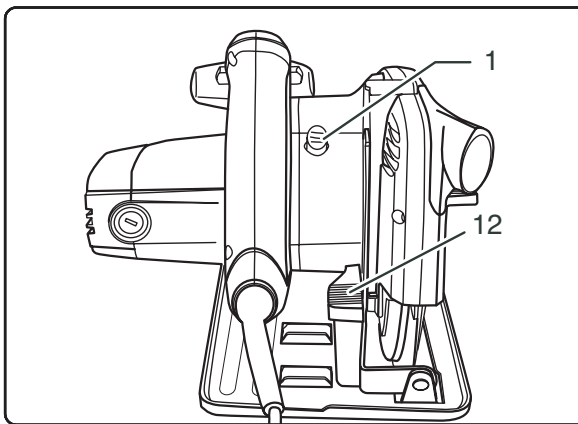
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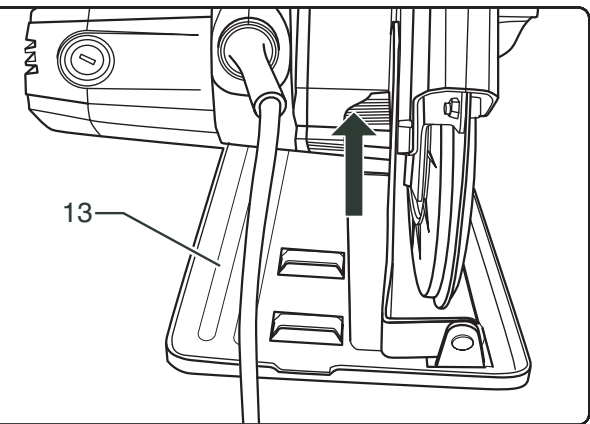
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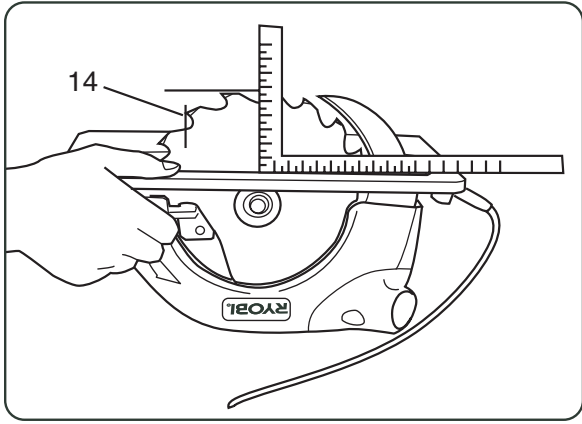
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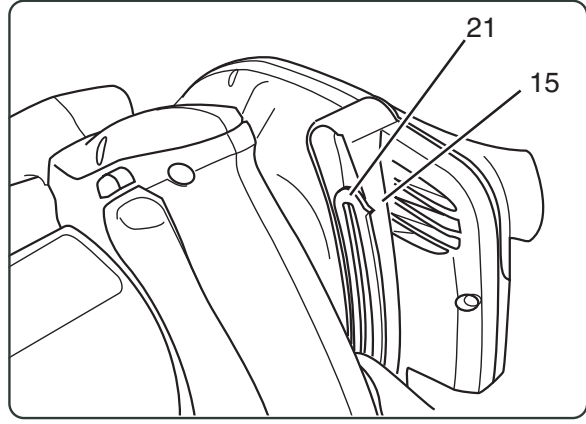
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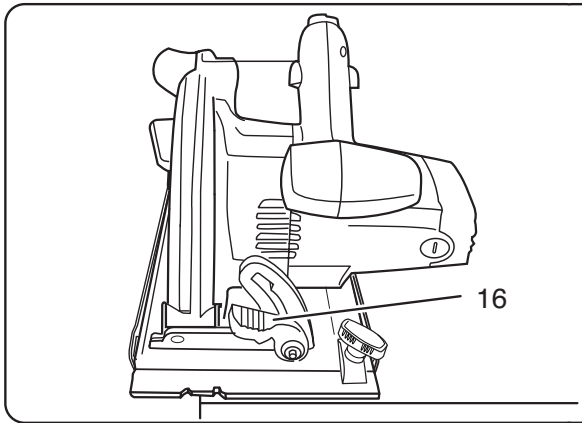
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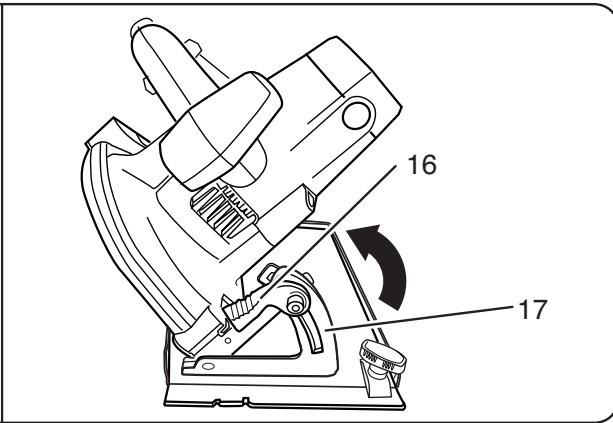
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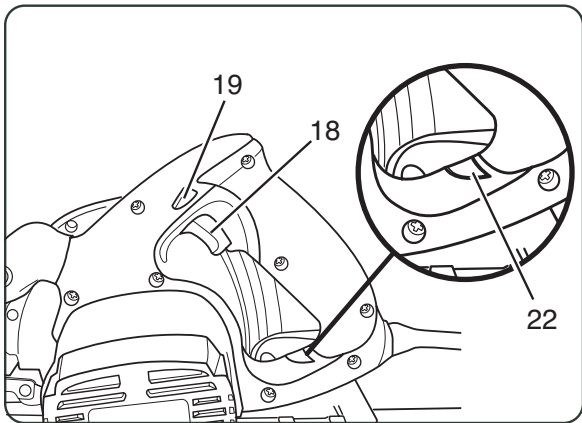
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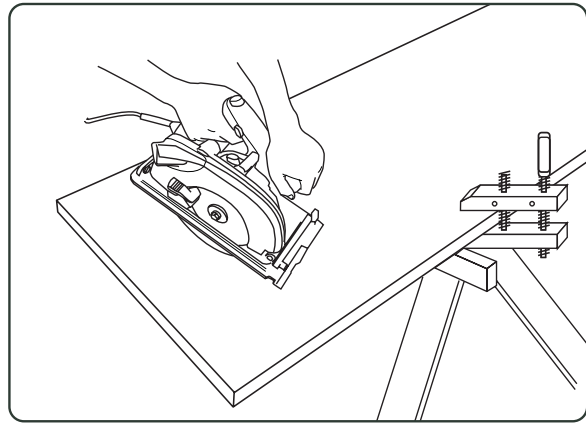
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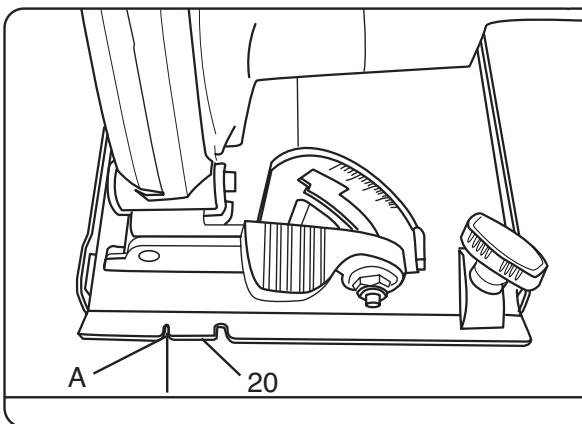
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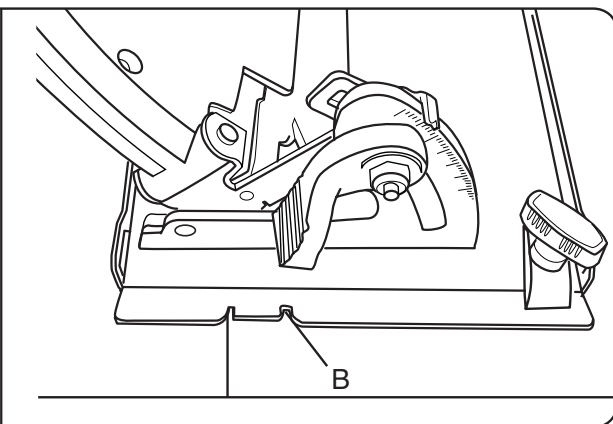
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12



13A



13B



## IMPORTANT READ THESE SAFETY INSTRUCTIONS.

Before using the CIRCULAR SAW, please read the manual carefully, especially the safety instructions. Keep this manual for future reference.

### GENERAL SAFETY RULES

**WARNING!** Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “Power Tool” in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.



**SAFETY ALERT SYMBOL.** Indicates caution or warning. May be used in conjunction with other symbols or pictures.



**WARNING:** Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.



**WARNING:** Do not attempt to operate this tool until you have read thoroughly and understood completely safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock or serious personal injury. Save owners manual and review frequently for continuing safe operation and instructing others who may use this tool.



The operation of any tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles

or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields.

### WORK AREA

- **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

### ELECTRICAL SAFETY

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **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.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord.** Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- **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.

### PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **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.
- **Avoid accidental starting.** Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- **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.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly.** Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- **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.

## GENERAL SAFETY RULES

### POWER TOOL USE AND CARE

- **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.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that can not be controlled with the switch is dangerous and must be repaired.
- **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.
- **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.
- **Maintain power tools.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from intended could result in a hazardous situation.

### SERVICE

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- **Check damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other part that is damaged should be properly repaired or replaced by an authorized service centre unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorized

service centre. Do not use the tool if the switch does not turn it on and off.

## PARTICULAR REQUIREMENTS FOR CIRCULAR SAWS

Not to use any abrasive wheels

Ensure that the riving knife is adjusted so that the distance between the riving knife and the rim of the blade is not more than 5mm, and the rim of the blade does not extend more than 5mm beyond the lowest edge of the riving knife.

### Safety instructions for all saws

#### 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.
- **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.
- **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.
- **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.
- **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.
- **When ripping always use a rip fence or straight edge guide.** This improves the accuracy of cut and reduces the chance of blade binding.
- **Always use blades with correct size and shape (diamond versus round) of arbour holes.** Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.
- **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.

### Further safety instructions for all saws

#### 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;



## PARTICULAR REQUIREMENTS FOR CIRCULAR SAWS

- 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.

- **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.
- **When blade is binding or when interrupting 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.
- **When restarting a saw in the workpiece, centre 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.
- **Support large panels to minimise 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.
- **Do not use dull or damaged blades.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.
- **Blade depth and bevel adjusting locking levers must be tight and secure before making a cut.** If blade adjustment shifts while cutting, it may cause binding and kickback.
- **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.

## Safety instructions for saws with lower guard

- **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.
- **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 debris.
- **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 the blade enters the material, the lower guard must be released.** For all other sawing, the lower guard should operate automatically.
- **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.

## Additional safety instructions for all saws with riving knife

- **Use the appropriate riving knife for the blade being used.** For the riving knife to work, it must be thicker than the body of the blade but thinner than the tooth set of the blade.
- **Adjust the riving knife as described in this instruction manual.** Incorrect spacing, positioning and alignment can make the riving knife ineffective in preventing kickback.
- **Always use the riving knife except when plunge cutting.** Riving knife must be replaced after plunge cutting. Riving knife causes interference during plunge cutting and can create kickback.
- **For the riving knife to work, it must be engaged in the workpiece.** The riving knife is ineffective in preventing kickback during short cuts.
- **Do not operate the saw if riving knife is bent.** Even a light interference can slow the closing rate of a guard.

## DESCRIPTION

- |                        |                           |
|------------------------|---------------------------|
| 1. Spindle lock button | 12. Depth lock knob       |
| 2. Hex-head bolt       | 13. Base plate            |
| 3. Spanner             | 14. Depth of cut          |
| 4. Outer blade washer  | 15. Depth scale           |
| 5. Lower guard         | 16. Bevel adjustment knob |
| 6. Lower guard lever   | 17. Bevel scale           |
| 7. Upper guard         | 18. Trigger switch        |
| 8. Blade               | 19. Safety button         |
| 9. Inner blade washer  | 20. Line guide            |
| 10. Dust port          | 21. Depth adjustment lug  |
| 11. Riving knife       | 22. Livetool Indicator™   |

## SPECIFICATION

|                  |                         |
|------------------|-------------------------|
| Input            | 1,250 W                 |
| No load speed    | 4,500 min <sup>-1</sup> |
| Bore size        | 16 mm                   |
| Blade size       | 190 mm                  |
| Cutting capacity |                         |
| at 0°            | 66 mm                   |
| at 45°           | 38 mm                   |
| Bevel scale      | 0 - 45°                 |
| Cord length      | 4 m                     |

## INSTRUCTIONS FOR SAFE HANDLING

The maximum permissible system impedance:  $Z_{max}$  for ECS12519 is 0.245  $Z_{ref}$ .

If in doubt, please verify with your local energy-utility that the AC outlets in your area do not exceed the above values.

## STANDARD ACCESSORIES

Saw blade, Parallel fence, Spanner.

## APPLICATION

Sawing wood.

## NOISE BUILD-UP

Noise (sound pressure level) in the workplace can exceed 85 dB. In this case, sound insulation and hearing protection measures must be taken by the operator.

## ASSEMBLY INSTRUCTIONS

**Be sure to disconnect the tool from the power supply before attaching or removing the saw blade. Be sure that the teeth of the saw blade are pointing upward at the front of the tool.**

## ATTACHING AND REMOVING THE BLADE (FIGURES 2, 3, 4, AND 5)

### ATTACHING THE BLADE

1. Pressing the spindle lock button (1), turn the hex-head bolt (2) with the spanner (3) until the spindle locks. (Fig.2)
2. Loosen the hex-head bolt by turning the spanner anticlockwise while pressing the spindle lock button. (Fig.2)
3. Remove the hex-head bolt and the outer blade washer (4). (Fig. 2)
4. Retract the lower guard (5) back with the lower guard lever (6) as far as possible under the upper guard (7). (Fig. 3)
5. Then, attach the saw blade (8) against the inner blade washer (9) on the spindle. Then fit the outer blade washer and the hex-head bolt. (Fig. 3 and 4)
6. Press the spindle lock button again, tighten the hex-head bolt by turning the spanner clockwise while pressing the spindle lock button. (Fig. 5)
7. After tightening the hex-head bolt, release the spindle lock button.

### REMOVING THE BLADE

1. Pressing the spindle lock button, turn the hex-head bolt with the spanner until the spindle locks.
2. Loosen the hex-head bolt by turning the spanner anticlockwise while pressing the spindle lock button.
3. Remove the hex-head bolt and the outer blade washer.
4. Retract the lower guard back as far as possible under the upper guard, then remove the saw blade.

## ADJUSTING THE RIVING KNIFE (FIG. 6)



### WARNING

Do not use saw blades the disk of which is thicker or the set of which is smaller than the thickness of the riving knife.

## OPERATION

1. Ensure that the riving knife is adjusted so that (Fig. 6):
  - A. The distance between the riving knife (11) and the toothed rim of the saw blade is under 5 mm.
  - B. The toothed rim does not extend more than 5 mm beyond the lower edge of the riving knife.
2. The riving knife should always be used except when making a plunging cut in the middle of a workpiece.

## ADJUSTING THE DEPTH OF CUT (FIG. 7A, 7B, 8, 9)

1. To adjust the depth of cut, loosen the depth adjustment knob (12). (Fig. 7A)
2. Slide the base plate (13) to the desired depth using the depth adjustment lug (21) and retighten the knob securely. (Fig. 7B)
3. The depth of cut (14) can be determined by the depth scale (15) or by measuring the distance by which the blade protrudes from the base plate. (Fig. 8 and 9)

## ADJUSTING THE CUTTING ANGLE (FIG. 10A, 10B)

1. The cutting angle may be set to any position between 0° and 45°. (Fig. 10A)
2. Loosen the bevel adjustment knob (16) at the front of the tool and move the base plate to the desired angle using the bevel scale (17). (Fig. 10B)
3. Once the angle has been set, be sure to retighten the bevel adjustment knob firmly.

## TRIGGER SWITCH (FIG. 11)

This tool is started and stopped by squeezing and releasing the trigger switch (18). To prevent the tool from being started accidentally, the trigger can only be operated if the safety button (19) is depressed first. The safety button can be depressed with the thumb leaving the other fingers free to squeeze the trigger switch. It is not necessary to maintain pressure on the safety button once the trigger switch has been depressed.

## OPERATING INSTRUCTIONS (FIG. 12)



### DANGER!

Keep hands away from the cutting area when operating the tool. Keep the cord away from the cutting area and position it so that it will not get caught on the workpiece during the cutting operation.

When cutting, use steady and even pressure (**DO NOT FORCE**) in order to obtain a uniform cut. Cut at a speed suited to the workpiece. (Cut slowly if the workpiece is hard.) Inspect the saw blade frequently and replace or sharpen it if dull to avoid overloading the motor.

## CUTTING POSITION (FIG. 13A, 13B)

When cutting a workpiece at 0°, use point "A" of the base plate line guide (20) and move the saw along the pencilled line you have drawn. When cutting at 45°, use point "B". This line guide shows an approximate line of cut. Make a sample cut in scrap lumber to determine the actual line of cut.



### CAUTION!

When ripping, the rip fence should only touch the workpiece slightly. Do not force.

## MAINTENANCE

After use, check the tool to make sure that it is in top condition.

We recommended that you take this tool to an Authorised Ryobi Service Centre for a thorough cleaning and lubrication at least once a year.

Do not make any adjustments while the motor is running.

Always disconnect the power cord from the socket before changing removable or expendable parts (blade, bit, sandpaper, etc.), lubricating or working on the saw. Keep handles clean and free from oil and grease.

If the supply cord is damaged, it shall be replaced by the manufacturer or its service centre or similar qualified person in order to avoid a hazard.



### WARNING

For greater safety and reliability, all repairs should be performed by an Authorised Ryobi Service Centre.

## LIVETOOL INDICATOR™

This tool features a livetool Indicator™ (22) which illuminates as soon as the tool is connected to the supply. This warns the user that the tool is connected and will operate when the switch is pressed.



## ENVIRONMENTAL PROTECTION



Do not dispose of in general household waste. Instead, dispose in an environmentally friendly way. Contact your local recycling centre or council for advise. Ryobi takes the care of the environment very seriously.

**TECHTRONIC INDUSTRIES AUSTRALIA PTY LIMITED**  
**GUARANTEE**



Subject to the guarantee condition below, this Ryobi tool (hereinafter called "the product") is guaranteed by TECHTRONIC INDUSTRIES AUSTRALIA PTY LIMITED (hereinafter called "the Company") to be free from defects in material or workmanship for a period of 24 months from the date of original purchase covering both parts and labour. Under the terms of this guarantee, the repair or replacement of any part shall be the opinion of the Company or its authorised service centre. Should service become necessary during the warranty period, the owner should contact the customer service HELPLINE 1300 361 505 or contact the retailer from whom the product was purchased. In order to obtain guarantee service, the owner must present the sales docket and Guarantee Certificate to confirm date of purchase. This product is sold by the dealer or service centre as principal and the dealer has no authority from the Company to give any additional guarantee on the Company's behalf except as herein contained or herein referred to.

**Guarantee Conditions**

This guarantee only applies provided that the Product has been used in accordance with the manufacturer's recommendations under normal use and reasonable care (in the opinion of the Company) and such

guarantee does not cover damage, malfunction or failure resulting from misuse, neglect, abuse, or used for a purpose for which it was not designed or is not suited and no repairs, alterations or modifications have been attempted by other than an authorised service centre. This guarantee will not apply if the tool is damaged by accident or if repairs arise from normal wear and tear.

The Company accepts no additional liability pursuant to this guarantee for the costs of travelling or transportation of the Product or parts to and from the service dealer or centre - such costs are not included in this guarantee.

Certain legislation, including the Trade Practices Act, 1974 (as amended) and other state and territorial laws give rights to the buyer and impose liability on the seller in certain circumstances. Nothing herein shall have the effect of excluding, restricting or modifying any condition, guarantee, right or liability imposed, to the extent only that such exclusion, restriction or modification would render any term herein void.



**TECHTRONIC INDUSTRIES AUSTRALIA PTY LIMITED**

A.B.N. 98 002 277 509

SYDNEY: Building B, Rosehill Industrial Estate, 3-5 Shirley Street, Rosehill N.S.W. 2142

Contact during normal business hours.

Tel: 1300 361 505 - Fax: 1800 807 993 - [www.ryobi.com.au](http://www.ryobi.com.au)

**ALL AUSTRALIAN ENQUIRIES TEL : 1300 361 505**  
**WEST AUSTRALIAN ENQUIRIES TEL : (08) 9455 7775**

**TECHTRONIC INDUSTRIES N.Z. LIMITED**

**AUCKLAND:** 27 Clemow Drive, Mt Wellington, N.Z.

Tel: (09) 573 0230 - Free Call: 0800 279 624 - Fax: (09) 573 0231 - [www.ryobi.co.nz](http://www.ryobi.co.nz)

Contact during normal business hours.

**This Guarantee Form Should Be Retained By The Customer At All Times**

For your record and to assist in establishing date of purchase (necessary for in-guarantee service) please keep your purchase docket and this form completed with the following particulars.

Purchased From \_\_\_\_\_

Address Of Dealer \_\_\_\_\_

Date \_\_\_\_\_ Model No \_\_\_\_\_ Serial No \_\_\_\_\_

Present This Form With Your Purchase Docket When Guarantee Service Is Required.