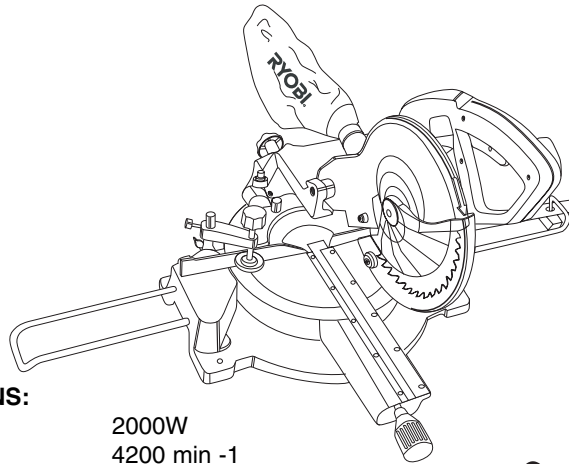


RYOBI®

OWNER'S OPERATING MANUAL 2000 WATT 305 MM SLIDE COMPOUND MITRE SAW WITH LASER MODEL EMS2305SCL



SPECIFICATIONS:

Power Input	2000W
No Load Speed	4200 min -1
Blade Diameter	305mm
Blade Arbor	16mm
Weight	23kg



N197



Cutting Capacity

Mitre	Bevel	Max. Width of Cut	Max. Depth of Cut
90°	90°	315mm	110mm
45°L/ 45°R	45°	220mm	75mm
45°L/ 45°R	90°	220mm	110mm
90°	45°	315mm	57mm

THANK YOU FOR BUYING A RYOBI 305mm SLIDE COMPOUND MITRE SAW

Your new mitre 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 SLIDE COMPOUND MITRE SAW.

THANK YOU FOR BUYING A RYOBI 305mm SLIDE COMPOUND MITRE SAW

Pay close attention to the Rules for Safe Operation, Warnings, and Cautions. If you use your 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.

RULES FOR SAFE OPERATION

The purpose of safety rules is to attract your attention to possible dangers. The safety symbols and the explanations with them, require your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.



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.

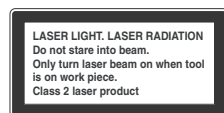
1. **KNOW YOUR POWER TOOL.** Read owners manual carefully. Learn its applications and limitations as well as the specific potential hazards related to this tool.
2. **GUARD AGAINST ELECTRICAL SHOCK BY PREVENTING BODY CONTACT WITH GROUNDED SURFACES.** For example, pipes, radiators, ranges, refrigerator enclosures.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **AVOID DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations or expose to rain. Keep work area well lit.
5. **KEEP CHILDREN AND VISITORS AWAY.** Visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord.
6. **STORE IDLE TOOLS.** When not in use, tools should be stored in a dry and high or locked-up place, out of reach of children.
7. **DON'T FORCE TOOL.** It will do the job better and safer at the rate at which it was designed.
8. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended.
9. **DRESS PROPERLY.** Do not wear loose clothing or jewellery. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Also wear protective hair covering to contain long hair.
10. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses have only impact resistant lenses, they are not safety glasses.
11. **PROTECT YOUR LUNGS.** Wear a dust mask if operation is dusty.
12. **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
13. **DON'T OVERREACH.** Keep proper footing and balance at all times. Do not use tool on a ladder or unstable support. Secure tools when working at elevated levels.
14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form a habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
16. **NEVER USE IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.
17. **KEEP HANDLES DRY, CLEAN AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum based products, or any strong solvents to clean your tool.
18. **STAY ALERT AND EXERCISE CONTROL.** Watch what you are doing and use common sense. Do not operate tool when you are tired. Do not rush operation of tool.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or any 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, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or any other part that is damaged should be properly repaired or replaced by an authorised service centre.
20. **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by authorised service centre.
21. **DO NOT OPERATE THIS TOOL WHILE UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR ANY MEDICATION.**
22. **THE APPLIANCE IS NOT INTENDED FOR USE BY YOUNG OR INFIRM PERSONS WITHOUT SUPERVISION. YOUNG CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.**

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

Due to continued product refinement policy, product features and specifications can and will change without notice. Check current features and specifications with your retailer.

OTHER SAFETY PRECAUTIONS FOR USING SLIDE COMPOUND MITRE SAW

1. **KEEP GUARDS IN PLACE AND IN WORKING ORDER.** Never wedge or tie lower blade guard open. Check operation of lower blade guard before each use. Do not operate if lower blade guard does not close briskly over saw blade.
2. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
3. **KEEP BLADES CLEAN AND SHARP.** Sharp blades minimise stalling and kickback.
4. **KEEP HANDS AWAY FROM CUTTING AREA.** Keep hands away from blades. Do not reach underneath work while blade is rotating. Do not attempt to remove cut material when blade is moving. **WARNING:** Blades coast after truning off.
5. **INSPECT TOOL CORDS PERILDICALLY.** If damaged, have repaired by authorised service centre. Stay constantly aware of cord location and keep it well away from rotating blade.
6. **USE RIP FENCE.** Always use a fence or straight edge guide when ripping.
7. **BEFORE MAKING A CUT.** Be sure the depth and bevel adjustments are tight.
8. **USE CORRECT BLADES.** Do not use blades with incorrect size holes. Never use blade washers or bolts that are defective or incorrect. The maximum blade capacity of your saw is 305mm.
9. **AVOID CUTTING NAILS.** Inspect and remove all nails from timber before cutting.
10. **NEVER.** Touch the blade or moving parts during use.
11. **NEVER.** Start the saw when the blade is in contact with the workpiece.



CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser type: Semiconductor

Laser class: 2

Wave length: 650NM

Laser power: < 1 mW

For service personnel.

CAUTION: Avoid exposure to beam when servicing.

Complies with AS/NZS2211- 2004 as a Class 2 Laser.

Laser Radiation. Do not stare into laser beam Class 2 Laser product

Do not perform any operation freehand. The workpiece must be secured firmly against the base and guideforce with the vice during all operations. Using for hand may cause sever injury.

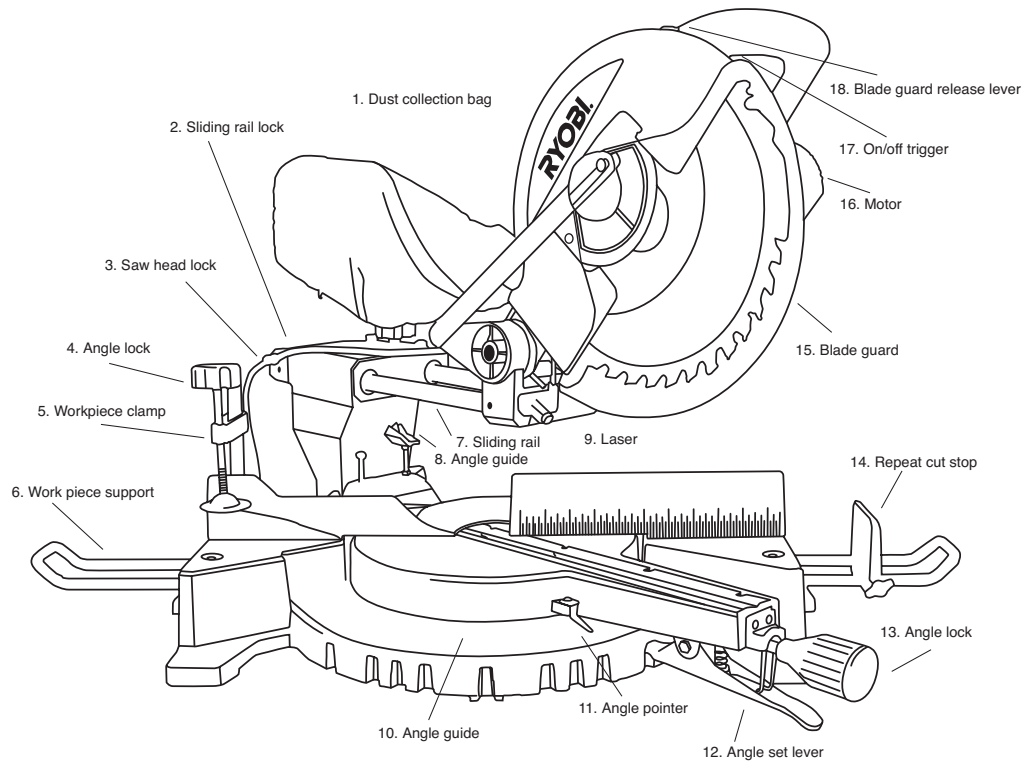
Allow blade to reach full speed before cutting.

Warning. Do not stare directly at the laser beam.

A hazard may exist if you deliberately stare into the beam, please observe all safety rules as follows.

- The laser shall be used and maintained in accordance with the manufacturer?s instructions.
- Never aim the beam at any person or an object other than the workpiece.
- The laser beam shall not be deliberately aimed at personnel and shall be prevented from being directed towards the eye of a person for longer than 0.25s.
- Always ensure the laser beam is aimed at a sturdy workpiece without reflective surfaces, i.e. wood or rough coated surfaces are acceptable. Bright shiny reflective sheet steel or the like is not suitable for laser use as the reflective surface could direct the beam back at the operator.
- Do not change the laser light assembly with a different type. Repairs must be carried out by authorized Ryobi service centre.

FEATURES



LOOSE PARTS LIST

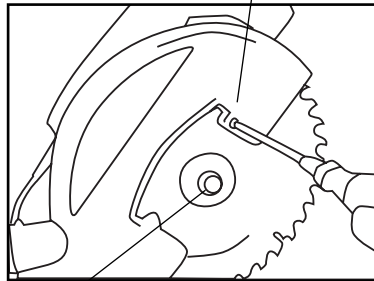
- Work piece support x 2
- Work piece clamp
- Repeat cut stop
- Dust collection bag
- Box spanner

ASSEMBLY

FITTING THE BLADE GUARD.

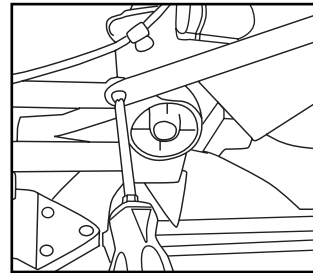
WARNING : Failure to unplug your saw could result in accidental starting causing possible serious personal injury.

Fig. 1 cover plate screw



guard screw

Fig. 2



- Unplug the saw from the outlet. Ensure the cutting head is up to its full extent.
- Loosen the cover plate stop screw (Fig 1) and take note of where guard screw (supplied with loose parts) is to be located.
- Fit the guard around the blade and ensure the cover plate of the guard is located over the cover plate stop screw.
- Fit the guard screw and tighten before tightening the cover plate stop screw.
- Position the connecting bar to the back of the unit and use the screw pivot point to fix the bar to the saw (Fig 2). The saw head may need to be moved up and down slightly in order to correctly locate the screw.

UNPACKING



WARNING:

To prevent accidental starting that could cause possible serious personal injury, assemble all parts, make sure all adjustments are complete, and make sure all fasteners are secure before connecting saw to power supply. Saw should never be connected to power supply when you are assembling parts, making adjustments, installing or removing blades, or when not in use.



WARNING:

Although compact, this saw is heavy. To reduce the risk of back injury, get help whenever you have to lift the saw.

- Before removing the saw from the carton tighten the slide lock knob to guard against sudden movement.
- Remove the mitre saw from the carton by lifting the saw with the carrying handle.
- Place the saw on a secure stationary work surface and look the saw over carefully

TO INSTALL OR REMOVE THE BLADE (Fig. 1&2)



WARNING:

305mm blade is the maximum blade capacity of your saw. Never use a blade that is too thick to allow outer blade washer to engage with the flats on the spindle. Larger blades will come in contact with the blade guards, while thicker blades will prevent the blade bolt from securing the blade on the spindle. Either of these situations could result in a serious accident and can cause serious personal injury.



WARNING:

Failure to unplug your saw could result in accidental starting causing possible serious personal injury.

- Unplug the saw from the outlet. Ensure cutting head is up.
- Rotate the lower blade guard by hand. Loosen, but do not remove the guard bracket screw. Phillips end of combination wrench.
- Lift the lower guard up and tilt the lower guard assembly back so the arbor screw is exposed.
- Fit 6.35mm hex end of combination tool in arbor screw or use 12.7 mm box end wrench.

NOTE: The arbor screw has a left hand thread. This helps prevent unwanted loosening of the arbor screw during normal operation.

TO INSTALL OR REMOVE THE BLADE

- Remove the arbor screw, arbor washer and the blade.

NOTE: Pay attention to pieces removed, nothing their position and direction they face (see illustration). Wipe the blade collars clean of any saw dust before installing the new blades.

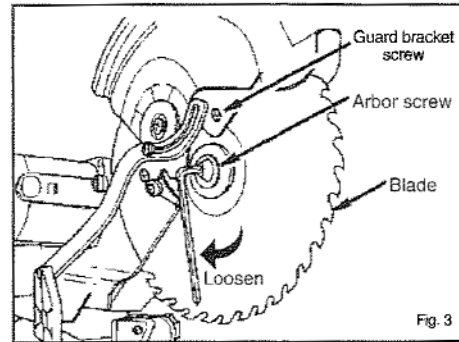


Fig. 3

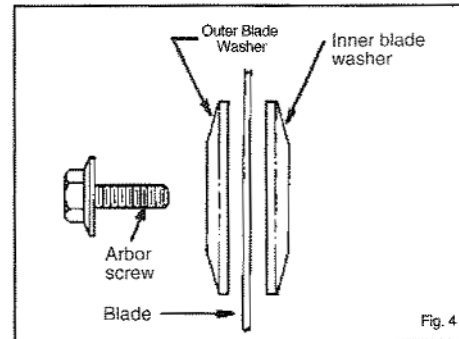


Fig. 4



CAUTION:

To reduce the risk of cuts from extremely sharp teeth: Wear gloves when installing or removing saw blade.

- Install the new 305mm blade. Make sure the rotation arrow on the blade matches the clockwise rotation arrow on the upper guard. The blade teeth should always point downward at the front of the saw.
- Install the blade washer and arbor screw. Turn the combination wrench or the 12.7mm wrench counter clockwise to secure the blade. Tighten arbor screw using moderate force, but do not overtighten.
- Lower the lower blade guard until the slot in cover plate rests all the way down on the cover plate stop screw.

ADJUSTMENTS

WARNING : Failure to unplug your saw could result in accidental starting causing possible serious personal injury.

ADJUSTMENT OF THE CUTTING ANGLES.

The saw is factory set and should need little or no adjustment when new, however both time and use can affect the angles and some adjustment may be required during the life of the saw.

MITRE ANGLE:

- Loosen the sliding rail locking knob, push the saw handle back as far as it will go and lock the handle.
- Loosen the angle lock knob, pull up the angle adjustment lever and turn the table until the angle guide pointer is close to 0° (ensure the table is locked in the groove) before retightening the lock knob.
- If the pointer is not set to 0° loosen the screw and turn the pointer until it is (Fig 5).
- Loosen the four (two on each side of the saw) rear fence locking bolts and lower the blade to its lowest point.
- Lock the cutting head down with the cutting head lock knob.
- Place a square against the blade and the rear fence and adjust until an angle of exactly 90° is achieved.
- Tighten the rear fence locking bolts while ensuring that an angle of 90° is maintained.

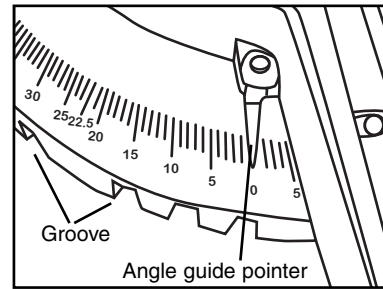


Fig. 5

BEVEL ANGLE: (Fig 6)

- Lock the cutting head down with the cutting lock knob.
- If the blade is not at 90° loosen the lock nut on the right angle setting bolt and adjust up or down to achieve an angle of 90°.
- Tighten the lock nut ensuring an angle of 90° is maintained.
- If the angle pointer is not indicating 0°, loosen the screw and turn the pointer until it indicates 0°.
- Pull the cutting head to the left and check the pointer is indicating 45°.
- If the pointer does not indicate 45° loosen the lock nut on the angle setting left angle setting bolt and adjust until 45° is achieved.

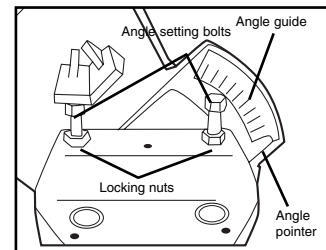


Fig.6

FITTING THE REPEAT STOP.

- Loosen the thumb screw to allow the arms of the work piece supports into the holes in the repeat stops.
- Tighten the thumb screws firmly to minimise movement on the work piece support.
- Attach the work piece support as detailed above.

NOTE: By loosening the thumb screws the repeat stop can be adjusted to required widths for each application.

FITTING THE WORK PIECE SUPPORT.

- Loosen the support retaining screw located on the turntable.
- Insert the work piece support into the retaining holes in the base.
- Tighten the retaining screw.

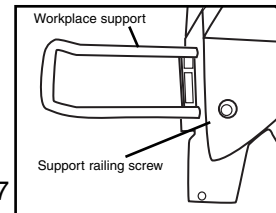


Fig.7

FITTING THE WORK PIECE VICE.

- Fit the vice to the retaining hole that best suits the cutting application. There are two retaining holes on each side of the saw.
- Tighten the thumbscrew on the saw.
- Put the work piece to be cut onto the saw bed.
- Adjust the vice so that it securely holds the work piece.

NOTE: A small piece of scrap timber can be used between the clamp and the work piece to more evenly distribute the clamping force. This will reduce the risk of marking the work piece (especially if it is softwood) with the vice.

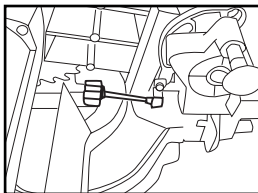


Fig.9

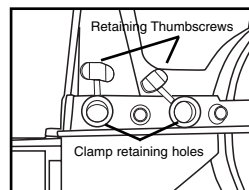


Fig.8

DEPTH STOP: (Fig.9)

Use of the depth stop feature means that the blade will not cut completely through the work piece depending on the depth that it is set to. This allows the operator to cut slots out of the work piece if used in conjunction with the sliding function of the saw.

NOTE: It is advisable that the depth of cut is checked using a scrap piece to timber prior to undertaking this operation on the workpiece.

By making a cut in the work piece and then slightly moving the work piece to the left or right before repeating, it is possible to perform trenching cuts or dados in the work piece.

NOTE: It may be necessary to occasionally clean the pitches of the depth adjustment screw using a sharp chisel or by sanding.

To use the depth stop feature follow these steps:

- Loosen the wing nut.
- Adjust the thumb knob to the required depth.
- Once set to the desired depth, tighten the wing nut against the retaining bracket to lock the depth stop and ensure that there is no movement.

MOUNTING THE MITRE SAW



WARNING:

To reduce the risk of injury from unexpected saw movement

- Before moving the saw, unplug electric cord. Lock the mitre and bevel knobs and lock the power head in the lower position.
- To reduce the risk of back injury, hold the tool close to your body when lifting. Bending your knees so you can lift with your legs, not your back. Lift by using the handhold areas at each side of the bottom of the base, by the carrying handle, or the handles on the front of base.
- Never carry the mitre saw by the power cord or the trigger grip of the plastic handle. Carrying the tool by power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.
- Place the saw so other people cannot stand behind it. Thrown debris could injure people in its path.
- Place the saw on a firm, level surface where there is plenty of room for handling and properly supporting the workpiece.
- Support the saw so the table is level and the saw does not rock.
- Bolt or clamp the saw to its support.

Place the saw in the desired location either on a work bench or other recommended leg set. The base of the saw has four holes to mount the mitre saw.

If the saw is to be used in one location, permanently fasten it to the workbench or leg set.

When mounted on a large flat surface, the mitre saw table is 115mm high.

PORTABLE APPLICATIONS

To mount the saw to a 19mm piece of plywood, use 4, 1/4" bolt holes and the 4 screw holes. The mounting board can then be clamped down to prevent it from tipping. Plywood mount also helps protect saw from damage during the rough handling associated with portable mitre saw usage.

WORK BENCH APPLICATION

Mount as specified in portable applications. Check for workpiece clearances to left and right of saw.

INSTRUCTIONS FOR BASIC SAW OPERATIONS

BEFORE EACH USE INSPECT YOUR SAW. DISCONNECT THE MITRE SAW.

To reduce the risk of injury from accidental starting, unplug the saw, before changing the setup, before changing the blade or adjusting anything. Compare the direction of rotation arrow on the guard to direction arrow on the blade. The blade teeth should always point downward at the front of the saw. Tighten the arbor screw. Tighten the cover plate stop screw.

INSTRUCTIONS FOR BASIC SAW OPERATIONS

Check Damaged parts.

Check for:

- Proper alignment of moving parts,
- Damaged electric cords,
 - Binding of moving parts,
 - Broken parts,
 - Stable mounting
- Function of arm return spring and lower guard: Push the arm all the way down, then let it rise up until it stops by itself. Check the lower guard to see if it closed fully. If it did not, follow the instructions in the "Troubleshooting" section.
- Smooth, solid movement of sliding assembly.
- Other conditions that may affect the way the mitre saw works. If any part of this mitre saw is missing, bent, or broken in any way, or any electrical parts don't work, turn the saw off and unplug it. Replace damaged, missing, or failed parts before using the saw again.
- **Keep Guards in Place**, in working order, and in proper adjustment.
- **Maintain Tools With Care**. Keep the mitre saw clean for best and safest performance. Follow instructions for lubricating. DON'T put lubricants on the blade while it's spinning.
- **Remove Adjusting Keys And Wrenches** from tool before turning it on.

TO REDUCE THE RISK OF INJURY FROM JAMS, SLIPS OR THROWN PIECES

- Use only Recommended Accessories. The use of improper accessories may cause risk of injury to persons.
- Choose the right 305mm diameter blade for the saw and material you plan to cut.
- Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the power head all the way down. Hand spin the blade and check for clearance. Tilt the powerhead to 45 degree bevel and repeat the check. If the blade hits anything, make the adjustments shown in the Maintaining "Alignment (Adjustments)" section.
- Make sure the blade and arbor collars are clean.
- Make sure the collars' recessed sides are facing the blade.
- Using a hex wrench, make sure the left hand thread arbor screw is firmly tightened counterclockwise.
- Make sure all clamps and locks are tight and there is no excessive play in any parts.
- Keep work area clean. Cluttered areas and benches invite accidents. Floor must not be slippery. To reduce the risk of burns or other fire damage, never use the mitre saw near flammable liquids, vapors or gases.

PLAN AHEAD TO PROTECT YOUR EYES, HANDS, FACE AND EARS

- Know your mitre saw. Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential haz-

INSTRUCTIONS FOR BASIC SAW OPERATIONS

ards peculiar to this tool. To reduce the risk of injury from accidental contact with moving parts, don't do layout, assembly, or setup work on the mitre saw while any parts are moving.

- **Reduce the Risk of Accidental Starting.** Make sure switch is "OFF" before plugging mitre saw into a power outlet.
- **Plan your work. Use The Right Tool.** Don't force tool or attachment to do a job it was not designed to do. Use a different tool for any workpiece that can't be held in a solidly braced, fixed position.



CAUTION:

Because of the sliding action of this saw, this machine is not designed for cutting metals. Use this mitre saw to cut only wood, and wood like products. Other materials may shatter, bind on the blade, start fires or create other dangers.

PREPARING TO MAKE THE CUT

Inspect Your Workpiece. Make sure there are no nails or foreign objects in the part of the workpiece to be cut. **Plan your work to avoid thrown pieces caused when the workpiece binds on the blade and is torn from your hands.**

Plan how you will make the cut.

Always:

- Make sure the blade is not spinning.
- Raise the blade.
- Slide the saw out above the front edge of the workpiece before starting saw.
- Push the lower guard safety lock knob to release the lower guard, then push the saw blade down on top of the wood and back toward the rear of the saw to make the cut.



DANGER:

NEVER pull the saw toward you during a cut. The blade can suddenly climb up on top of the workpiece and force itself toward you.

Plan the way you will hold the workpiece from start to finish.

- Avoid awkward operations and hand positions where a sudden slip could cause fingers or hand to move into the blade.
- Don't overreach. Keep good footing and balance.
- Keep your face and body to one side of sawblade, out of line with a possible throwback.
- Cut only one workpiece at a time.

Never cut Freehand:

- Brace your workpiece solidly against the fence and table top so it will not rock or twist during the cut.
- Make sure there's no debris between the workpiece and its supports.
- Make sure no gaps between the workpiece, fence and table will let the workpiece shift after it is cut in two.
- Keep the cut off piece free to move sideways after its cut off. Otherwise, it could get wedged against the blade and could be thrown violently.
- Clear everything except the workpiece and related support devices off the blade before turning the miter saw on.

- **Secure Work.** Use clamps or a vice to help hold the work when it's practical.

USE EXTRA CAUTION WITH LARGE, VERY SMALL OR AWKWARD WORKPIECES:

- Use extra supports (tables, saw horses, blocks, etc.) for any workpiece large enough to tip when not held down to the table top.
- Never use another person as a substitute for a table extension, or as additional support for a workpiece that is longer or wider than the basic mitre saw table or to help feed, support or pull the workpiece.
- Do not use this saw to cut pieces too small to let you easily hold the work while you keep the thumb side of your index (pointer) finger against the outside edge of the fence.
- When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade and be torn from your hands. A piece of molding, for example, must lie flat or be held by a fixture or jig that will not let it twist, rock or slip while being cut.
- Properly support round material such as dowel rods. They have a tendency to roll while being cut, causing the blade to "bite." To avoid this, always use a fixture designed to properly hold your workpiece.

WHENEVER SAW IS RUNNING



WARNING:

Don't allow familiarity (gained from frequent use of your mitre saw) cause a careless mistake. A careless fraction of a second is enough to cause a severe injury.

Before starting your cut, observe the mitre saw while it runs. If it makes an unfamiliar noise or vibrates excessively, stop immediately. Turn the saw off. Unplug the saw. Do not restart until finding and correcting the problem.

Keep Children Away. Keep all visitors a safe distance from the mitre saw. Make sure bystanders are clear of the mitre saw and workpiece.

Never confine the piece being cut off. Never hold it, clamp it, touch it, or use length stops against it while the blade is spinning. It must be free to move sideways on its own. If confined, it could get wedged against the blade and thrown violently.

Let the blade reach full speed before cutting. This will help reduce the risk of a thrown work piece.

Don't Force Tool. It will do the job better and safer at its designed rate. Feed the saw into the workpiece only fast enough to let the blade cut without bogging down or binding.

BEFORE FREEING JAMMED MATERIAL:

- Turn mitre saw "OFF" by releasing trigger switch.
- Wait for all moving parts to stop.
- Unplug the miter saw.

AFTER FINISHING A CUT:

- Keep holding the powerhead down.
- Release the switch, and wait for all moving parts to stop before moving your hands or raising power head.
- If blade doesn't stop within 6 seconds, unplug the saw and follow the instructions in the Trouble Shooting, section for fixing the blade brake before using the saw again.

BASIC SAW OPERATIONS

MAKING COMMON SLIDE COMPOUND CUTS

There are two types of cuts that can be made with the slide compound mitre saw:

- **Slide Cutting**
 - The slide lock knob is left loose, the cutting head is pulled towards the operator, the saw blade is lowered into the work piece and then pushed to the rear of the saw to complete the cut.
 - Used for cutting wide pieces.
- **Chop Cutting**
 - The slide lock knob is tightened and the saw handle is pushed down to cut through the work piece.
 - This type of cut is used mainly for narrow pieces.



WARNING:

For your convenient use, your saw has a blade brake. The brake is not a safety device. Never rely on it to replace proper use of the guard on your saw. If the blade does not stop within 6 seconds, unplug the saw and follow the instructions in the Trouble Shooting section for fixing the brake before using saw again.



WARNING:

Do not try to cut short pieces. You cannot properly support the work piece and keep your hold down hand the required distance from the blade.

SLIDE CUTTING

Plan your work to avoid the spinning blade and keep the work piece from binding on the blade and flying out of your hands.



DANGER:

Never pull the saw toward you during a cut. The blade can suddenly climb up on top of the work piece and force itself toward you.



DANGER:

Never lower the saw completely in front of the work piece and then cut only on the forward push. The upward moving rear portion of the blade could twist the work piece from your grasp.

Work pieces up to 315mm wide and 110mm thick can be cut following the directions below:

- Put wood against fence and secure with vice as appropriate.

- Loosen the slide lock knob.
- Grasp the saw handle and pull the carriage until the arbor (centre of saw-blade) is over the front edge of the work piece.
- Press the lower guard unlock lever for saw head release.
- Switch on the saw and allow to come to full speed.
- Push the saw handle all the way down and cut through the leading edge of the work piece.
- Gently push the saw handle towards the fence completing the cut.
- Push power head to full rear position after each cut.
- Turn motor off and allow blade to come to a complete stop before moving hands.

CHOP CUTTING

- Slide the cutting head to the rear as far as it will go.
- Lock slide lock knob.
- Position work piece on table and against fence and secure with clamp as appropriate.
- Grasp the saw handle.
- Turn on saw and lower blade into work piece.
- Press the lower guard unlock lever for saw head release.
- Push the saw handle all the way down and cut the work piece.
- After cut is complete turn off saw, allow blade to stop rotating before allowing cutting head to rise up.

BODY AND HAND POSITION

- Never place hands near cutting area. Place hand at least 100mm from path of blade.
- Hold work piece firmly to the fence to prevent movement toward the blade.
- When holding the work piece to the left side of the blade, always use your left hand. Use your right hand to hold the work piece to the right side of the blade.
- Before making a cut, make a "dry run" with the power off so you can see the path of the blade.
- Keep hands in position until trigger has been released and the blade has completely stopped.



WARNING:

Do not try to cut short pieces. you cannot properly support the work piece and keep your hold down hand the required distance from the blade.

MITRE CUTTING.

A mitre angle of up to 55° left or right can be obtained using this unit.

- Loosen the angle locking knob.
- Pull up the angle adjustment lever.
- Turn the table until the desired angle is indicated by the angle pointer.
- Tighten the angle lock knob to hold the desired angle.
- Start the saw and allow it to reach full speed before commencing the cut.

BASIC SAW OPERATIONS

BEVEL CUT

When a bevel cut is required tilt the blade to desired bevel angle. Stand to the left side of the handle to make the cut.

SLIDING FENCE

When beveling the blade to the left or right fence may have to be repositioned. Loosen the fence locking knob and slide the fence to the left or right as needed. Adjust the fence as close to the guard and link as possible to provide maximum support for the work piece. Securely tighten knob and make a dry run with the saw off to check for clearance between the fence and guard. On certain extreme compound cuts it may be necessary to remove a sliding fence to avoid interference. After completing bevel cut(s) remember to replace and/or slide the fence back.

VERNIER BEVEL SCALE OPERATION:

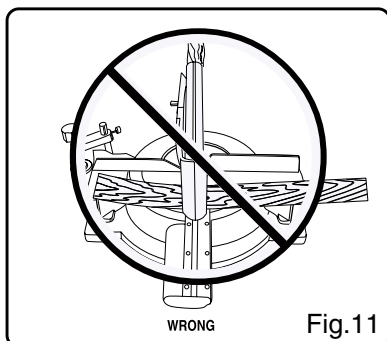
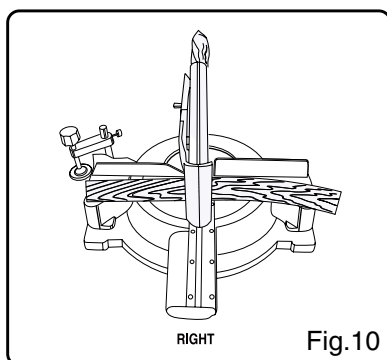
The Vernier bevel scale can quickly and accurately help the user to adjust the saw to any 1/2° increment as illustrated.

COMPOUND CUT

When a compound cut is required, select the desired bevel and mitre positions.

CUTTING BOWED MATERIAL (Fig. 10)

Before cutting a work piece, check to make sure it is not bowed. If it is bowed, the work piece must be positioned and cut as illustrated. Do not position work piece incorrectly or try to cut the work piece without the support of the fence. This will cause pinching of the work piece on the blade. The work piece could suddenly jump or move and your hand could hit the blade.



VICE ATTACHMENT USAGE



WARNING:

Avoid thrown work pieces. Avoid binding the work against the blade:

- Always hold or clamp your work down to the saw.
- Do not hold or clamp the work piece on both sides of the blade. The blade can throw a cut off piece if you confine the work piece on both sides of the blade.
- Read and follow the instructions in your saw's owners manual.
- This accessory was designed to make your mitre saw operations more convenient. Read and understand these instructions completely before use.
- Always perform dry runs. Make sure the saw is unplugged. Completely set up your saw. Pull the blade and power head through the full range of motion to check for interference. The clamp can be used in a left or right configuration. Make sure that your blade, saw guard or motor does not interfere with the clamp. Correct any interference before use.
- Always tighten the vice so that the work piece is secured between the vice and fence, support or base. No visible gap should be present between saw and wood.
- The clamp can be used only in a vertical position.
- Place material to be cut on table of mitre saw. Secure work piece to the fence and table by turning knob to tighten clamp. Do not overtighten the clamp. It should just lightly hold the wood against the fence and table.
- Perform a dry run with saw unplugged. After you believe that the saw is completely set up, pull the power head down as if you were making an actual cut. Check for interferences and for potentially dangerous situations. Adjust the set up so that a safe operation can be completed.
- Complete the cut as instructed in the owners manual.



IMPORTANT:

To help perform the safest and most precise mitre saw cut, make the cut and then release the power switch. Hold the power head down and keep your hands in place until the blade stops rotating. Then raise the power head and remove work piece from work table.

OPERATION

CUTTING COMPOUND MITRES

To aid in making the correct settings, the compound angle setting chart below has been provided. Since compound cuts are the most difficult to accurately obtain, trial cuts should be made in scrap material, and much thought and planning made, prior to making your required cut.

PITCH OF SIDE	NUMBER OF SIDES							
	4	5	6	7	8	9	10	
0°	M- 45.00° B- 0.00°	M- 36.00° B- 0.00°	M- 30.00° B- 0.00°	M- 25.71° B- 0.00°	M- 22.50° B- 0.00°	M- 20.00° B- 0.00°	M- 18.00° B- 0.00°	
5°	M- 44.89° B- 3.53°	M- 35.90° B- 2.94°	M- 29.91° B- 2.50°	M- 25.63° B- 2.17°	M- 22.42° B- 1.91°	M- 19.93° B- 1.71°	M- 17.94° B- 1.54°	
10°	M- 44.56° B- 7.05°	M- 35.58° B- 5.86°	M- 29.62° B- 4.98°	M- 25.37° B- 4.32°	M- 22.19° B- 3.81°	M- 19.72° B- 3.40°	M- 17.74° B- 3.08°	
15°	M- 44.01° B- 10.55°	M- 35.06° B- 8.75°	M- 29.15° B- 7.44°	M- 24.95° B- 6.45°	M- 21.81° B- 5.68°	M- 19.37° B- 5.08°	M- 17.42° B- 4.59°	
20°	M- 43.22° B- 14.00°	M- 34.32° B- 11.60°	M- 28.48° B- 9.85°	M- 24.35° B- 8.53°	M- 21.27° B- 7.52°	M- 18.88° B- 6.72°	M- 16.98° B- 6.07°	
25°	M- 42.19° B- 17.39°	M- 33.36° B- 14.38°	M- 27.62° B- 12.20°	M- 23.56° B- 10.57°	M- 20.58° B- 9.31°	M- 18.26° B- 8.31°	M- 16.41° B- 7.50°	
30°	M- 40.89° B- 20.70°	M- 32.18° B- 17.09°	M- 26.57° B- 14.48°	M- 22.64° B- 12.53°	M- 19.73° B- 11.03°	M- 17.50° B- 9.85°	M- 15.72° B- 8.89°	
35°	M- 39.32° B- 23.93°	M- 30.76° B- 19.70°	M- 25.31° B- 16.67°	M- 21.53° B- 14.41°	M- 18.74° B- 12.68°	M- 16.60° B- 11.31°	M- 14.90° B- 10.21°	
40°	M- 37.45° B- 27.03°	M- 29.10° B- 22.20°	M- 23.86° B- 18.75°	M- 20.25° B- 16.19°	M- 17.60° B- 14.24°	M- 15.58° B- 12.70°	M- 13.98° B- 11.46°	
45°	M- 35.26° B- 30.00°	M- 27.19° B- 24.56°	M- 22.21° B- 20.70°	M- 18.80° B- 17.87°	M- 16.32° B- 15.70°	M- 14.43° B- 14.00°	M- 12.94° B- 12.62°	
50°	M- 32.73° B- 32.80°	M- 25.03° B- 26.76°	M- 20.36° B- 22.52°	M- 17.20° B- 19.41°	M- 14.91° B- 17.05°	M- 13.17° B- 15.19°	M- 11.80° B- 13.69°	
55°	M- 29.84° B- 35.40°	M- 22.62° B- 28.78°	M- 18.32° B- 24.18°	M- 15.44° B- 20.82°	M- 13.36° B- 18.27°	M- 11.79° B- 16.27°	M- 10.56° B- 14.66°	
60°	M- 26.57° B- 37.76°	M- 19.96° B- 30.60°	M- 16.10° B- 25.66°	M- 13.54° B- 22.07°	M- 11.70° B- 19.35°	M- 10.31° B- 17.23°	M- 9.23° B- 15.52°	
65°	M- 22.91° B- 39.86°	M- 17.07° B- 32.19°	M- 13.71° B- 26.95°	M- 11.50° B- 23.16°	M- 9.93° B- 20.29°	M- 8.74° B- 18.06°	M- 7.82° B- 16.26°	
70°	M- 18.88° B- 41.64°	M- 13.95° B- 33.53°	M- 11.17° B- 28.02°	M- 9.35° B- 24.06°	M- 8.06° B- 21.08°	M- 7.10° B- 18.75°	M- 6.34° B- 16.88°	
75°	M- 14.51° B- 43.08°	M- 10.65° B- 34.59°	M- 8.50° B- 28.88°	M- 7.10° B- 24.78°	M- 6.12° B- 21.69°	M- 5.38° B- 19.29°	M- 4.81° B- 17.37°	
80°	M- 9.85° B- 44.14°	M- 7.19° B- 35.37°	M- 5.73° B- 29.50°	M- 4.78° B- 25.30°	M- 4.11° B- 22.14°	M- 3.62° B- 19.68°	M- 3.23° B- 17.72°	
85°	M- 4.98° B- 44.78°	M- 3.62° B- 35.84°	M- 2.88° B- 29.87°	M- 2.40° B- 25.61°	M- 2.07° B- 22.41°	M- 1.82° B- 19.92°	M- 1.62° B- 17.93°	
90°	M- 0.00° B- 45.00°	M- 0.00° B- 36.00°	M- 0.00° B- 30.00°	M- 0.00° B- 25.71°	M- 0.00° B- 22.50°	M- 0.00° B- 20.00°	M- 0.00° B- 18.00°	

Each B (Bevel) and M (Mitre) Setting is Given to the Closest 0.005°.

COMPOUND-ANGLE SETTINGS FOR POPULAR STRUCTURES

OPERATION

CUTTING CROWN MOLDING

Your compound mitre saw does an excellent job of cutting crown molding. In general, compound mitre saws do a better job of cutting crown molding than any other tool made.

In order to fit properly, crown molding must be compound mitred with extreme accuracy.

The two contact surfaces on a piece of crown molding that fit flat against the ceiling and the wall of a room are at angles that, when added together, equal exactly 90°. Most crown molding has a top rear angle (the section that fits flat against the ceiling) of 52° and a bottom rear angle (the section that fits flat against the wall) of 38°.

LAYING MOLDING FLAT ON THE MITRE TABLE

See Fig. 31.

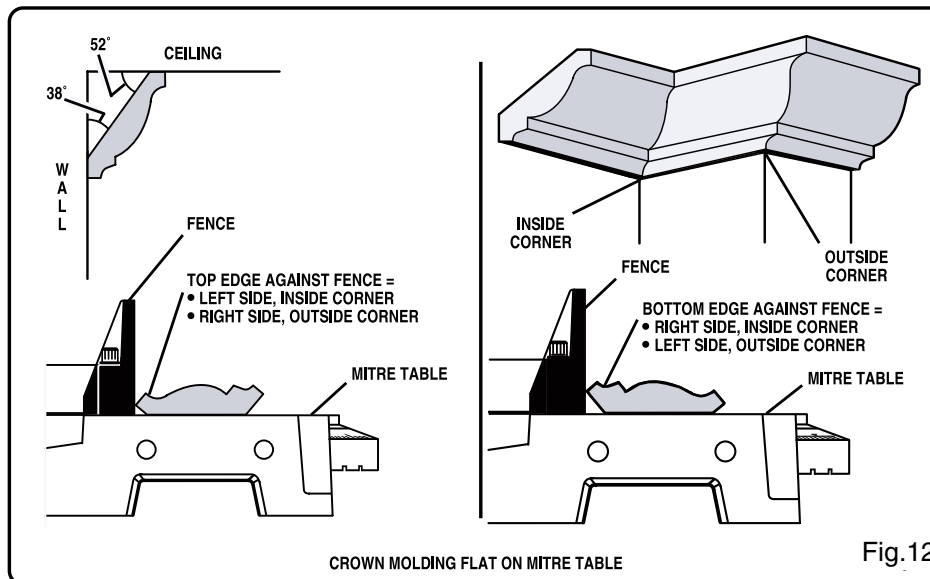
To use this method for accurately cutting crown molding for a 90° inside or outside corner, lay the molding with its broad back surface flat on the mitre table and against the fence.

When setting the bevel and mitre angles for compound mitres, remember that the settings are interdependent; changing one angle changes the other angle as well.

Keep in mind that the angles for crown moldings are very precise and difficult to set. Since it is very easy for these angles to shift, all settings should first be tested on scrap molding. Also most walls do not have angles of exactly 90°, therefore, you will need to fine tune your settings.

When cutting crown molding by this method the bevel angle should be set at 33.85°. The mitre angle should be set at 31.62° either right or left, depending on the desired cut for the application. See the chart below for correct angle settings and correct positioning of crown molding on mitre table.

The settings in the chart below can be used for cutting all standard crown molding with 52° and 38° angles. The crown molding is placed flat on the miter table using the compound features of your mitre saw.



MAINTENANCE

WARNING:

When servicing, use only identical Ryobi replacement parts. Use of any other part may create a hazard or cause product damage.

WARNING:

Check extension cords before each use. If damaged, replace immediately. Never use tool with a damaged cord since touching the damaged area could cause electrical shock resulting in serious injury.

GENERAL

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc.

WARNING:

Do not at any time let brake fluids, gasoline, petroleum based products, penetrating oils, etc. come into contact with plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

WARNING:

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

WARNING:

To ensure safety and reliability, all repairs should be performed by a qualified service technician at a Ryobi Authorized Service Centre to avoid risk of personal injury.

LUBRICATION

All of the bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. Therefore, no further lubrication is required.

EXTENSION CORDS

The use of any extension cord will cause some loss of power. To keep power loss to a minimum and to prevent tool overheating, use an extension cord that is heavy enough to carry the current the tool will draw.

A wire gauge size (A.W.G.) of at least 16 is recommended for an extension cord 7.5 m or less in length. When working outdoors, use an extension cord that is suitable for outdoor use. The cord's jacket will be marked WA.

WARNING:

Keep extension cords away from the cutting area and position the cord so that it will not get caught on timber, tools, etc. during cutting operation. Failure to heed this warning may result in serious personal injury.

CLEANING THE LASER

It may be necessary to clean the aperture opening in the laser for best performance. To clean:

- Unplug the saw.

WARNING:

Failure to unplug your saw could result in accidental starting causing possible serious personal injury.

- Clean the laser using a soft paintbrush or similar device to remove all sawdust and debris from the aperture.

RYOBI TECHNOLOGIES AUSTRALIA PTY. LTD.

GUARANTEE



Subject to the guarantee condition below, this Ryobi tool (hereinafter called "the product") is guaranteed by Ryobi (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 agent. Should service become necessary during the warranty period, the owner should contact the Authorised Ryobi Retailer from whom the Product was purchased, or the nearest Company Branch Office. 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 agent 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 Agent. 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 agent - 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.

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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.