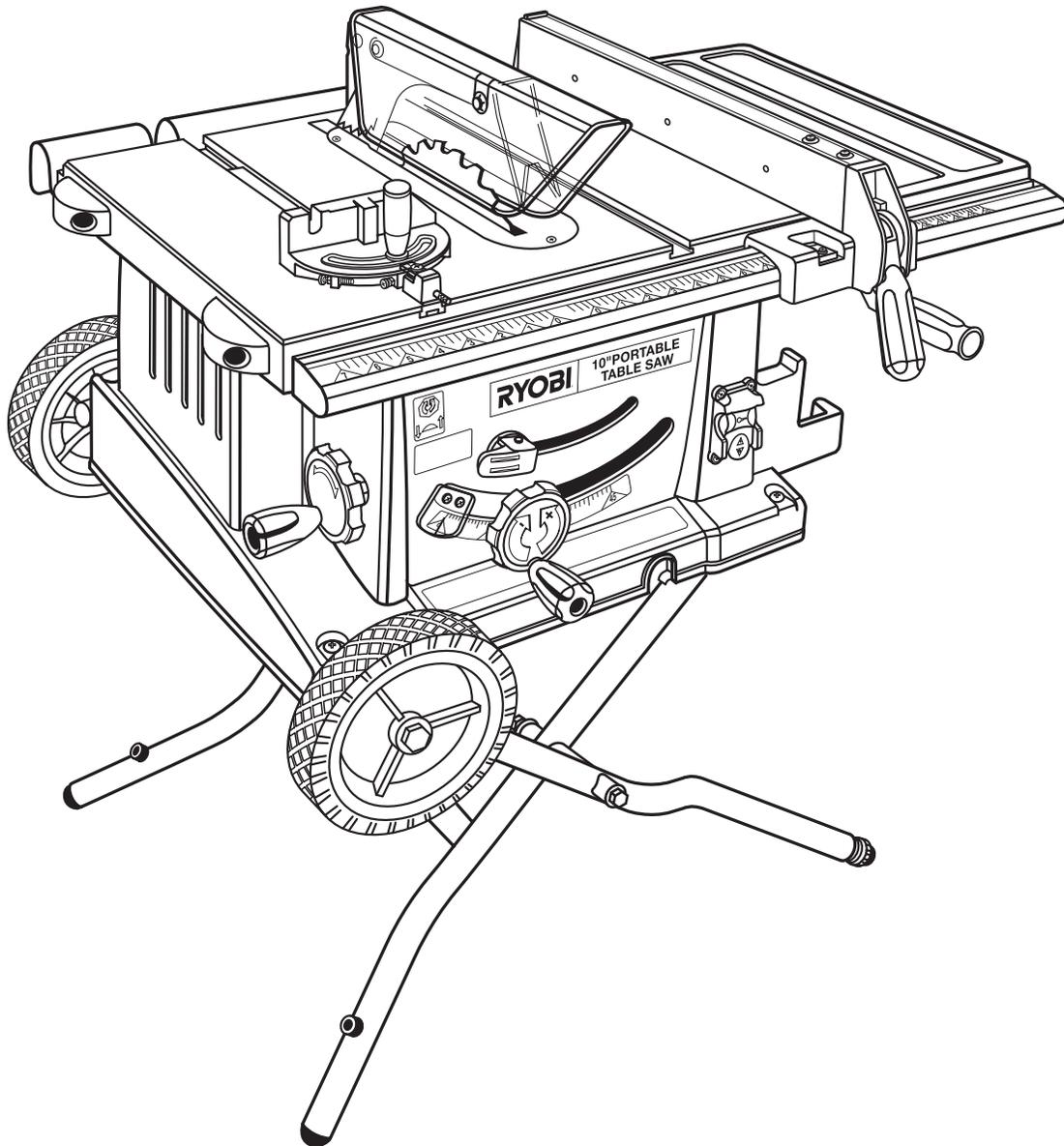




OPERATOR'S MANUAL

10 in. (254 mm) TABLE SAW

BTS20R-1



Your table saw has been engineered and manufactured to our high standards for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.

WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for your purchase.

SAVE THIS MANUAL FOR FUTURE REFERENCE

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INTRODUCTION

This tool has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

WARRANTY

RYOBI® POWER TOOL - LIMITED TWO YEAR WARRANTY AND 30 DAY EXCHANGE POLICY

One World Technologies, Inc., warrants its RYOBI® power tools with the following conditions:

30-DAY EXCHANGE POLICY: During the first 30 days after date of purchase, you may either request service under this warranty or you may exchange any RYOBI® power tool which does not work properly due to defective workmanship or materials by returning the power tool to the dealer from which it was purchased. To receive a replacement power tool or requested warranty service, you must present proof of purchase and return all original equipment packaged with the original product. The replacement power tool will be covered by the limited warranty for the balance of the two year period from the date of the original purchase.

WHAT THIS WARRANTY COVERS: This warranty covers all defects in workmanship or materials in your RYOBI® power tool for a period of two years from the date of purchase. With the exception of batteries, power tool accessories are warranted for ninety (90) days. Batteries are warranted for two years.

HOW TO GET SERVICE: Just return the power tool, properly packaged and postage prepaid, to an Authorized Service Center. You can obtain the location of the Service Center nearest you by contacting a service representative at One World Technologies, Inc., P.O. Box 1207, Anderson, SC 29622-1207, by calling 1-800-525-2579 or by logging on to www.ryobitools.com. When you request warranty service, you must also present proof of purchase documentation, which includes the date of purchase (for example, a bill of sale). We will repair any faulty workmanship, and either repair or replace any defective part, at our option. We will do so without any charge to you. We will complete the work in a reasonable time, but, in any case, within ninety (90) days or less.

WHAT'S NOT COVERED: This warranty applies only to the original purchaser at retail and may not be transferred. This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defects resulting from misuse, abuse, neglect, alteration, modification or repairs by other than Authorized Service Centers. One World Technologies, Inc. makes no warranties, representations or promises as to the quality or performance of its power tools other than those specifically stated in this warranty.

ADDITIONAL LIMITATIONS: Any implied warranties granted under state law, including warranties of merchantability or fitness for a particular purpose, are limited to two years from the date of purchase. One World Technologies, Inc. is not responsible for direct, indirect, or incidental damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

GENERAL SAFETY RULES



WARNING:

Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

READ ALL INSTRUCTIONS

- **KNOW YOUR POWER TOOL.** Read the operator's manual carefully. Learn the saw's applications and limitations as well as the specific potential hazards related to this tool.
- **GUARD AGAINST ELECTRICAL SHOCK BY PREVENTING BODY CONTACT WITH GROUNDED SURFACES.** For example, pipes, radiators, ranges, refrigerator enclosures.
- **KEEP GUARDS IN PLACE** and in good working order.
- **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents. **DO NOT** leave tools or pieces of wood on the saw while it is in operation.
- **DO NOT USE IN DANGEROUS ENVIRONMENTS.** Do not use power tools in damp or wet locations or expose to rain. Keep the work area well lit.
- **KEEP CHILDREN AND VISITORS AWAY.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord while operating.
- **MAKE WORKSHOP CHILDPROOF** with padlocks and master switches, or by removing starter keys.
- **DON'T FORCE TOOL.** It will do the job better and safer at the feed rate for which it was designed.
- **USE RIGHT TOOL.** Don't force the tool or attachment to do a job it was not designed for. Don't use it for a purpose not intended.
- **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. Use only a cord heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. A wire gauge size (A.W.G.) of at least **14** is recommended for an extension cord 25 feet or less in length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
- **DRESS PROPERLY.** Do not wear loose clothing, gloves, neckties, or jewelry. They can get caught and draw you into moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors. Also wear protective hair covering to contain long hair.
- **ALWAYS WEAR SAFETY GLASSES WITH SIDE SHIELDS.** Everyday eyeglasses have only impact-resistant lenses, they are **NOT** safety glasses.
- **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
- **DON'T OVERREACH.** Keep proper footing and balance at all times.
- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
- **DISCONNECT TOOLS.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, etc., all tools should be disconnected.
- **AVOID ACCIDENTAL STARTING.** Be sure switch is off when plugging in any tool.
- **USE RECOMMENDED ACCESSORIES.** Consult the operator's manual for recommended accessories. The use of improper accessories may risk injury.
- **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
- **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, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged must be properly repaired or replaced by an authorized service center to avoid risk of personal injury.
- **USE THE RIGHT DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of blade or cutter only.
- **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave tool until it comes to a complete stop.
- **PROTECT YOUR LUNGS.** Wear a face or dust mask if the cutting operation is dusty.
- **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
- **DO NOT ABUSE CORD.** Never yank cord to disconnect from receptacle. Keep cord away from heat, oil, and sharp edges.
- **USE OUTDOOR EXTENSION CORDS.** When tool is used outdoors, use only extension cords with approved ground connection that are intended for use outdoors and so marked.
- **ALWAYS KEEP THE BLADE GUARD AND SPREADER (SPLITTER) IN PLACE** and in working order.
- **KEEP BLADES CLEAN, SHARP, AND WITH SUFFICIENT SET.** Sharp blades minimize stalling and kickback.
- **KEEP HANDS AWAY FROM CUTTING AREA.** Keep hands away from blades. Do not reach underneath

GENERAL SAFETY RULES

work or around or over the blade while blade is rotating. Do not attempt to remove cut material when blade is moving.

- **BLADE COASTS AFTER BEING TURNED OFF.**
- **NEVER USE IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.
- **INSPECT TOOL CORDS PERIODICALLY.** If damaged, have repaired by a qualified service technician at an authorized service facility. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Repair or replace a damaged or worn cord immediately. Stay constantly aware of cord location and keep it well away from the rotating blade.
- **INSPECT EXTENSION CORDS PERIODICALLY** and replace if damaged.
- **GROUND ALL TOOLS.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle.
- **CHECK WITH A QUALIFIED ELECTRICIAN** or service personnel if the grounding instructions are not completely understood or if in doubt as to whether the tool is properly grounded.
- **USE ONLY CORRECT ELECTRICAL DEVICES:** 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
- **DO NOT MODIFY** the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.
- **KEEP TOOL 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 solvents to clean tool.

- **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.
- **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by an authorized service center.
- **USE ONLY CORRECT BLADES.** Do not use blades with incorrect size holes. Never use blade washers or blade bolts that are defective or incorrect. The maximum blade capacity of your saw is 10 in. (254 mm).
- **BEFORE MAKING A CUT, BE SURE ALL ADJUSTMENTS ARE SECURE.**
- **BE SURE BLADE PATH IS FREE OF NAILS.** Inspect for and remove all nails from lumber before cutting.
- **NEVER TOUCH BLADE** or other moving parts during use.
- **NEVER START A TOOL WHEN ANY ROTATING COMPONENT IS IN CONTACT WITH THE WORKPIECE.**
- **DO NOT OPERATE A TOOL WHILE UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR ANY MEDICATION.**
- **WHEN SERVICING** use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.
- **USE ONLY RECOMMENDED ACCESSORIES** listed in this manual or addendums. Use of accessories that are not listed may cause the risk of personal injury. Instructions for safe use of accessories are included with the accessory.
- **DOUBLE CHECK ALL SETUPS.** Make sure blade is tight and not making contact with saw or workpiece before connecting to power supply.

SPECIFIC SAFETY RULES

- **FIRMLY BOLT THE SAW TO A WORK BENCH OR LEG STAND** at approximately hip height.
- **NEVER OPERATE THE SAW ON THE FLOOR.**
- **GUARD AGAINST KICKBACK.** Kickback occurs when the blade stalls rapidly and workpiece is driven back towards the operator. It can pull your hand into the blade resulting in serious personal injury. Stay out of blade path and turn switch off immediately if blade binds or stalls.
- **USE RIP FENCE.** Always use a fence or straight edge guide when ripping.
- **SUPPORT LARGE PANELS.** To minimize risk of blade pinching and kickback, always support large panels.
- **REMOVE ALL FENCES AND AUXILIARY TABLES** before transporting saw. Failure to do so can result in an accident causing possible serious personal injury.
- **ALWAYS USE BLADE GUARD, SPREADER, AND ANTI-KICKBACK PAWLS** on all "through-sawing" operations.

Through-sawing operations are those in which the blade cuts completely through the workpiece as in ripping or cross cutting. Keep the blade guard down, the anti-kickback pawls down, and the spreader in place over the blade.

- **ALWAYS SECURE WORK** firmly against the rip fence or miter gauge. **NEVER** use the rip fence during the same operation as the miter gauge.
- **ALWAYS USE A PUSH STICK FOR RIPPING NARROW STOCK.** A push stick is a device used to push a workpiece through the blade instead of using your hands. Size and shape can vary but the push stick must always be narrower than the workpiece to prevent the push stick from contacting the saw blade. When ripping narrow stock, always use a push stick, so your hand does not come close to the saw blade. Use a featherboard and push blocks for non-through cuts.

SPECIFIC SAFETY RULES

- **NEVER** perform any operation “freehand” which means using only your hands to support or guide the workpiece. Always use either the rip fence or miter fence to position and guide the work.
- **NEVER** stand or have any part of your body in line with the path of the saw blade.
- **NEVER** reach behind, over, or within three inches of the blade or cutter with either hand for any reason.
- **MOVE THE RIP FENCE** out of the way when cross cutting.
- **DO NOT USE THE MITER GAUGE AND RIP FENCE** during the same operation.
- **NEVER** use rip fence as cutoff gauge when cross cutting.
- **NEVER** attempt to free a stalled saw blade without first turning the saw **OFF** and disconnecting the saw from the power source.
- **PROVIDE ADEQUATE SUPPORT** to the rear and sides of the saw table for wide or long work pieces. Use a sturdy “outrigger” support if a table extension more than 24 inches long is attached to the saw.
- **AVOID KICKBACKS** (work thrown back toward you) by:
 - a) Keeping blade sharp.
 - b) Keeping rip fence parallel to the saw blade.
 - c) Keeping spreader, anti-kickback pawls, and blade guard in place and operating.
 - d) Not releasing the work before it is pushed all the way past the saw blade using a push stick.
 - e) Not ripping work that is twisted or warped or does not have a straight edge to guide along the fence.
- **IF THE POWER SUPPLY CORD IS DAMAGED**, it must be replaced only by the manufacturer or by an authorized service center to avoid risk.
- **AVOID AWKWARD OPERATIONS AND HAND POSITIONS** where a sudden slip could cause your hand to move into the cutting tool.
- **USE ONLY RECOMMENDED ACCESSORIES** listed in this manual or addendums. Use of accessories that are not listed may cause the risk of personal injury. Instructions for safe use of accessories are included with the accessory.
- **MAKE SURE THE WORK AREA HAS AMPLE LIGHTING** to see the work and that no obstructions will interfere with safe operation **BEFORE** performing any work using the table saw.
- **ALWAYS TURN OFF SAW** before disconnecting it, to avoid accidental starting when reconnecting to power supply.
- **THIS TOOL** should have the following markings:
 - a) Wear eye protection.
 - b) Use saw blade guard and spreader/ripping knife for every operation for which it can be used, including all through sawing.
 - c) Keep hands out of the line of saw blade.
 - d) Use a push stick when required.
 - e) Pay particular attention to instructions on reducing risk of kickback.
 - f) Do not perform any operation freehand.
 - g) Never reach around or over the saw blade.
- **SAVE THESE INSTRUCTIONS.** Refer to them frequently and use to instruct other users. If you loan someone this tool, loan them these instructions also.



WARNING:

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SYMBOLS

Some of the following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
~	Alternating Current	Type of current
≡	Direct Current	Type or a characteristic of current
n_0	No Load Speed	Rotational speed, at no load
	Class II Construction	Double-insulated construction
.../min	Per Minute	Revolutions, strokes, surface speed, orbits, etc., per minute
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and, as necessary, a full face shield when operating this product.
	Safety Alert	Precautions that involve your safety.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Hot Surface	To reduce the risk of injury or damage, avoid contact with any hot surface.

SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	DANGER:	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING:	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to the nearest **AUTHORIZED SERVICE CENTER** for repair. When servicing, use only identical replacement parts.

WARNING:

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call Ryobi customer service for assistance.

WARNING:



The operation of any power 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, when needed, a full face shield. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.

SAVE THESE INSTRUCTIONS

ELECTRICAL

EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. When using a power tool at a considerable distance from the power source, use an extension cord heavy enough to carry the current that the tool will draw. An undersized extension cord will cause a drop in line voltage, resulting in a loss of power and causing the motor to overheat. Use the chart provided below to determine the minimum wire size required in an extension cord. Only round jacketed cords listed by Underwriter's Laboratories (UL) should be used.

**Ampere rating (on tool data plate)

Cord Length	Wire Size (A.W.G.)					
	0-2.0	2.1-3.4	3.5-5.0	5.1-7.0	7.1-12.0	12.1-16.0
25'	16	16	16	16	14	14
50'	16	16	16	14	14	12
100'	16	16	14	12	10	—

**Used on 12 gauge - 20 amp circuit.

NOTE: AWG = American Wire Gauge

When working with the tool outdoors, use an extension cord that is designed for outside use. This is indicated by the letters "WA" on the cord's jacket.

Before using an extension cord, inspect it for loose or exposed wires and cut or worn insulation.

⚠ WARNING:

Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools or other obstructions while you are working with a power tool. Failure to do so can result in serious personal injury.

⚠ 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.

ELECTRICAL CONNECTION

This tool is powered by a precision built electric motor. It should be connected to a **power supply that is 120 volts, 60 Hz, AC only (normal household current)**. Do not operate this tool on direct current (DC). A substantial voltage drop will cause a loss of power and the motor will overheat. If the saw does not operate when plugged into an outlet, double check the power supply.

SPEED AND WIRING

The no-load speed of this tool is approximately 4,800 rpm. This speed is not constant and decreases under a load or with lower voltage. For voltage, the wiring in a shop is as important as the motor's horsepower rating. A line intended only for lights cannot properly carry a power tool motor. Wire that is heavy enough for a short distance will be too light for a greater distance. A line that can support one power tool may not be able to support two or three tools.

GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Repair or replace a damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet like the one shown in figure 1. It also has a grounding pin like the one shown.

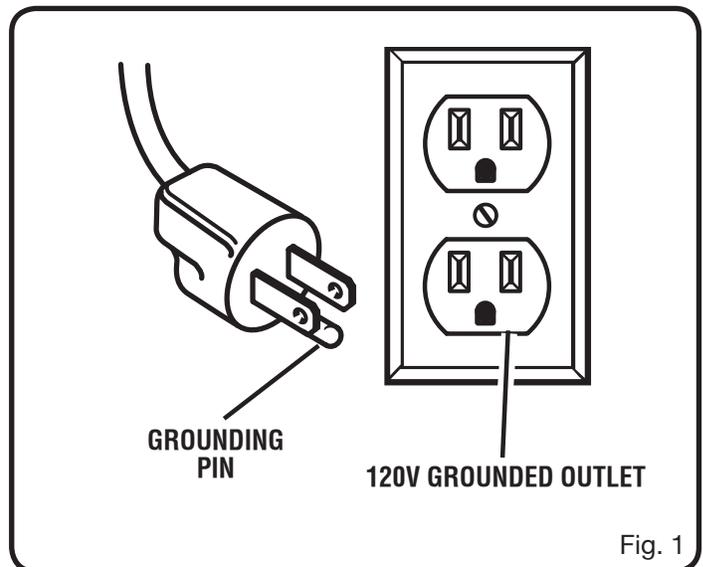


Fig. 1

GLOSSARY OF TERMS

Anti-Kickback Pawls (radial arm and table saws)

A device which, when properly installed and maintained, is designed to stop the workpiece from being kicked back toward the front of the saw during a ripping operation.

Arbor

The shaft on which a blade or cutting tool is mounted.

Bevel Cut

A cutting operation made with the blade at any angle other than 90° to the table surface.

Chamfer

A cut removing a wedge from a block so the end (or part of the end) is angled rather than at 90°.

Compound Cut

A cross cut made with both a miter and a bevel angle.

Cross Cut

A cutting or shaping operation made across the grain or the width of the workpiece.

Cutterhead (planers and jointer planers)

A rotating cutterhead with adjustable blades or knives. The blades or knives remove material from the workpiece.

Dado Cut

A non-through cut which produces a square-sided notch or trough in the workpiece (requires a special blade).

Featherboard

A device used to help control the workpiece by guiding it securely against the table or fence during any ripping operation.

FPM or SPM

Feet per minute (or strokes per minute), used in reference to blade movement.

Freehand

Performing a cut without the workpiece being guided by a fence, miter gauge, or other aids.

Gum

A sticky, sap-based residue from wood products.

Heel

Alignment of the blade to the fence.

Kerf

The material removed by the blade in a through cut or the slot produced by the blade in a non-through or partial cut.

Kickback

A hazard that can occur when the blade binds or stalls, throwing the workpiece back toward operator.

Leading End

The end of the workpiece pushed into the tool first.

Miter Cut

A cutting operation made with the workpiece at any angle to the blade other than 90°.

Non-Through Cuts

Any cutting operation where the blade does not extend completely through the thickness of the workpiece.

Push Blocks (for jointer planers)

Device used to feed the workpiece over the jointer planer cutterhead during any operation. This aid helps keep the operator's hands well away from the cutterhead.

Push Blocks and Push Sticks (for table saws)

Devices used to feed the workpiece through the saw blade during cutting operations. A push stick (not a push block) should be used for narrow ripping operations. These aids help keep the operator's hands well away from the blade.

Pilot Hole (drill presses)

A small hole drilled in a workpiece that serves as a guide for drilling large holes accurately.

Resaw

A cutting operation to reduce the thickness of the workpiece to make thinner pieces.

Resin

A sticky, sap-based substance that has hardened.

Revolutions Per Minute (RPM)

The number of turns completed by a spinning object in one minute.

Ripping or Rip Cut

A cutting operation along the length of the workpiece.

Riving Knife/Spreader/Splitter (table saws)

A metal piece, slightly thinner than the blade, which helps keep the kerf open and also helps to prevent kickback.

Saw Blade Path

The area over, under, behind, or in front of the blade. As it applies to the workpiece, that area which will be or has been cut by the blade.

Set

The distance that the tip of the saw blade tooth is bent (or set) outward from the face of the blade.

Snipe (planers)

Depression made at either end of a workpiece by cutter blades when the workpiece is not properly supported.

Through Sawing

Any cutting operation where the blade extends completely through the thickness of the workpiece.

Throw-Back

The throwing back of a workpiece usually caused by the workpiece being dropped into the blade or being placed inadvertently in contact with the blade.

Workpiece or Material

The item on which the operation is being done.

Worktable

Surface where the workpiece rests while performing a cutting, drilling, planing, or sanding operation.

FEATURES

PRODUCT SPECIFICATIONS

Blade Diameter.....	10 in.	Input	120 V, 60 Hz, AC only, 15 amps
Blade Arbor	5/8 in.	No Load Speed	4,800 r/min. (RPM)
Cutting Depth at 0°.....	3-5/8 in.	Net Weight.....	89.73 lbs.
Cutting Depth at 45°.....	2-1/2 in.		

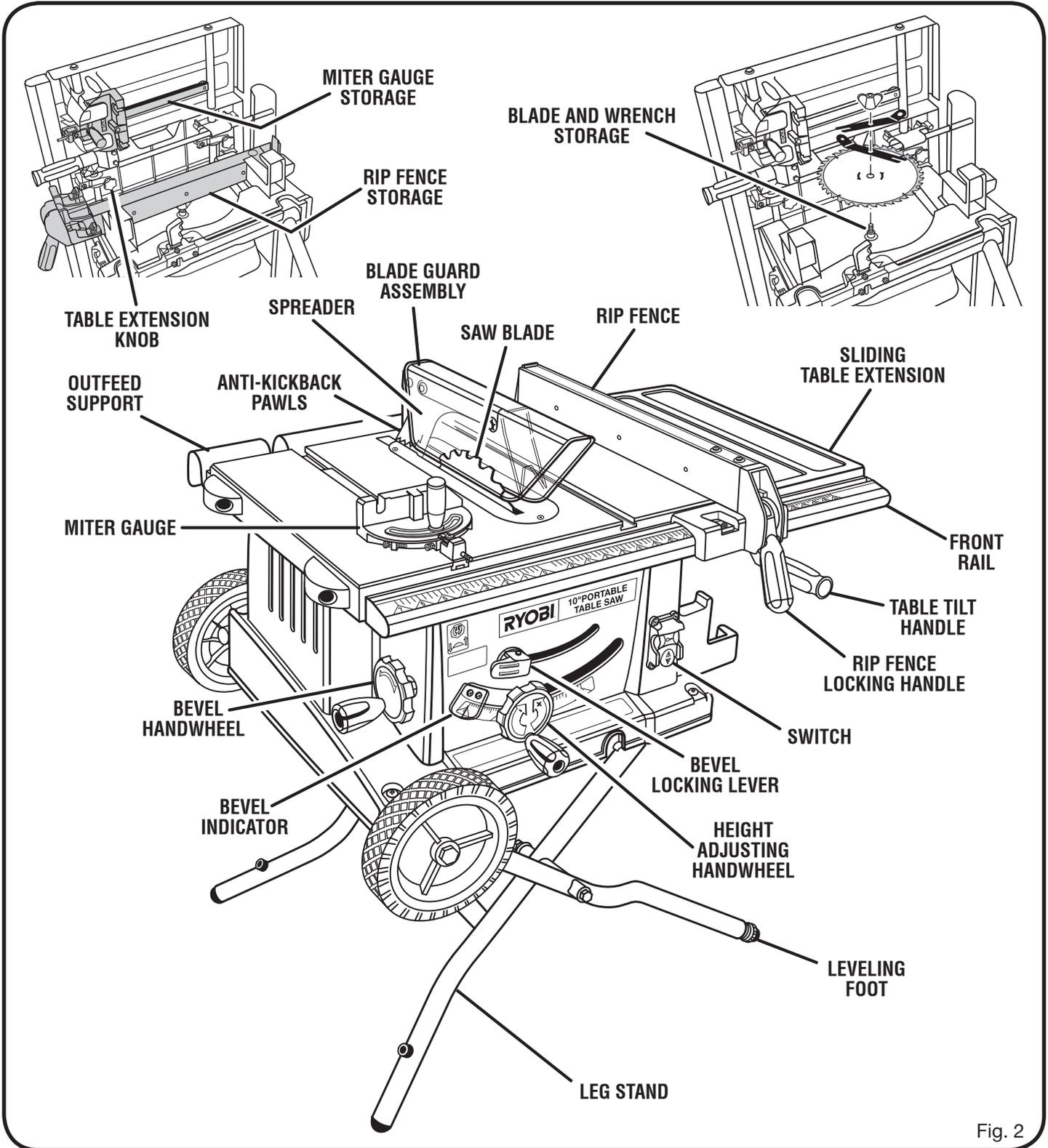


Fig. 2

FEATURES

KNOW YOUR TABLE SAW

See Figure 2.

The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

ANTI-KICKBACK PAWLS - Kickback is a hazard in which the workpiece is thrown back toward the operator. The toothed pawls are designed to snag the workpiece to prevent or reduce injury should kickback occur.

BEVEL HANDWHEEL - Use this handwheel to set the angle of the blade for bevel cuts. It is located on the side of the cabinet.

BEVEL LOCKING LEVER - This lever locks the angle setting of the blade. Be sure the lever is unlocked before tilting the blade. If it is not unlocked, it may jam and bend the locking bolt.

BEVEL SCALE - The easy-to-read scale on the front of the tool shows the exact blade angle.

BLADE - For maximum performance, it is recommended that you use the 36-tooth, 10 in. carbide tipped combination blade provided with your saw. Additional blade styles of the same high quality are available for specific operations such as ripping. Your local dealer can provide you with complete information.



WARNING:

Do not use blades rated less than the speed of this tool. Failure to heed this warning could result in personal injury.

BLADE GUARD - Always keep the guard down over the blade for through-sawing cuts.

HEIGHT ADJUSTING HANDWHEEL - Use this handwheel to lower and raise the blade for adjustments or replacement. It is located on the front of the cabinet.

MITER GAUGE - This miter gauge aligns the wood for a crosscut. The easy-to-read indicator shows the exact angle for a miter cut, with positive stops at 90° and 45°.

RIP FENCE - A sturdy metal fence guides the workpiece and is secured with the locking lever. Grooves run along the top and sides of the rip fence for use with clamps and jigs.

RIP FENCE LOCKING LEVER - The lever on the front of the rip fence releases the rip fence or locks it in place.

SCALE - Found on the front rail, the easy-to-read scale provides precise measurements.

SPREADER - A metal piece, slightly thinner than the saw blade which helps keep the kerf open and prevent kickback.

SWITCH ASSEMBLY - This saw has an easy access power switch located below the front rail. To lock the switch in the **OFF** position, remove the switch key from the switch. Place the key in a location that is inaccessible to children and others not qualified to use the tool.

FEATURES

OPERATING COMPONENTS

The upper portion of the blade projects up through the table, surrounded by an insert called the throat plate. To cut wood at a bevel, the blade must be tilted, using the bevel handwheel, scale, and bevel indicator found on the front of the cabinet. Inside the cabinet, adjustable positive stops are provided for 0° and 45°.

Your saw includes a rip fence and miter gauge with under table storage for easy accessibility. The sliding table extension can be moved to provide 27 inches of rip capacity. The rip fence is used to position work that will be cut lengthwise. A scale on the front rail shows the distance between the rip fence and the blade.

The leg stand places the table saw at convenient working level. Once folded, the leg stand wheels make moving and storage easy.

The blade guard assembly includes a spreader, which is a metal device directly behind and above the blade. It is used to help keep the cut wood from binding together and causing possible kickback. It is very important to use the spreader for all through-sawing operations. The anti-kickback pawls (also a part of the blade guard assembly) are toothed plates mounted on the spreader. Their teeth point away from the work in case the work should be pulled back, toward the operator. Then the teeth dig into the wood to help prevent or reduce the possibility of kickback.

POWER SWITCH

This saw is equipped with a power switch that has a built-in locking feature. This feature is intended to prevent unauthorized and possible hazardous use by children and others.

TO TURN YOUR SAW ON:

1. With the switch key inserted into the switch, lift the switch button to turn **ON** (▲).

TO TURN YOUR SAW OFF:

1. Press the switch button down to turn **OFF** (▽).

TO LOCK YOUR SAW :

1. Press the switch button down.
2. Remove the switch key from the switch and store in a safe, secure location.

! WARNING:

Always remove the switch key when the tool is not in use and keep it in a safe place. In the event of a power failure, turn the switch **OFF** (▽) and remove the key. This action will prevent the tool from accidentally starting when power returns.

! WARNING:

ALWAYS make sure your workpiece is not in contact with the blade before operating the switch to start the tool. Failure to heed this warning may cause the workpiece to be kicked back toward the operator and result in serious personal injury.

! WARNING:

To reduce the risk of accidental starting, always make sure the switch is in the **OFF** (▽) position before plugging tool into the power source .

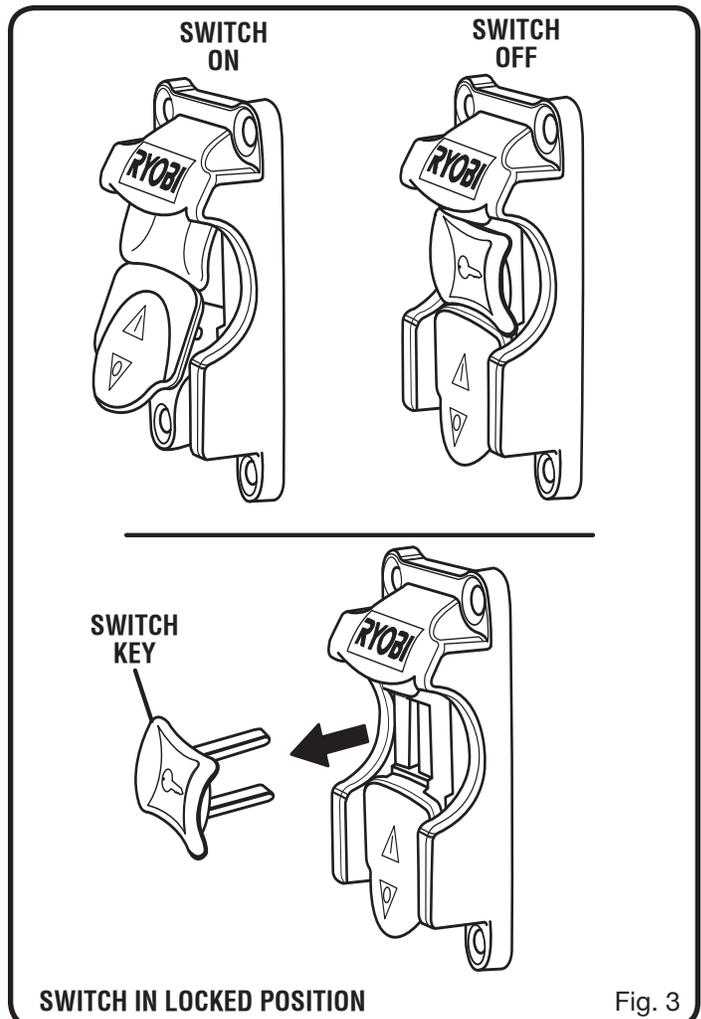


Fig. 3

TOOLS NEEDED

The following tools (not included) are needed for making adjustments:

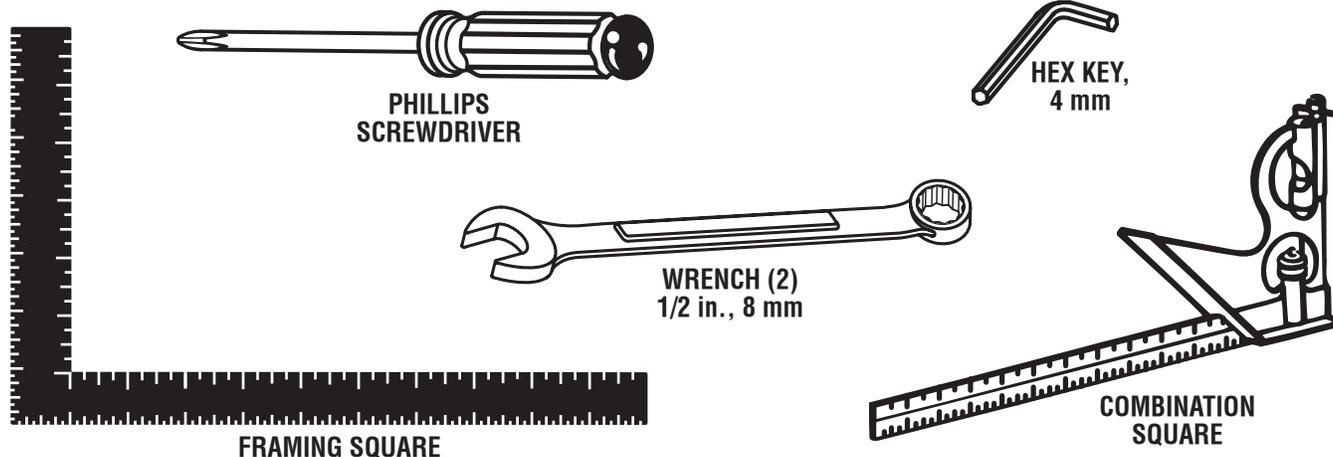


Fig. 4

LOOSE PARTS LIST

Rip Fence	1	Large Wrench	1
Miter Gauge.....	1	Small Wrench	1
Blade Guard Assembly.....	1	Bumper.....	2
Wheel.....	2	Screw	4
Washer	2	Operator's Manual (Not Shown)	
Shoulder Bolt.....	2		

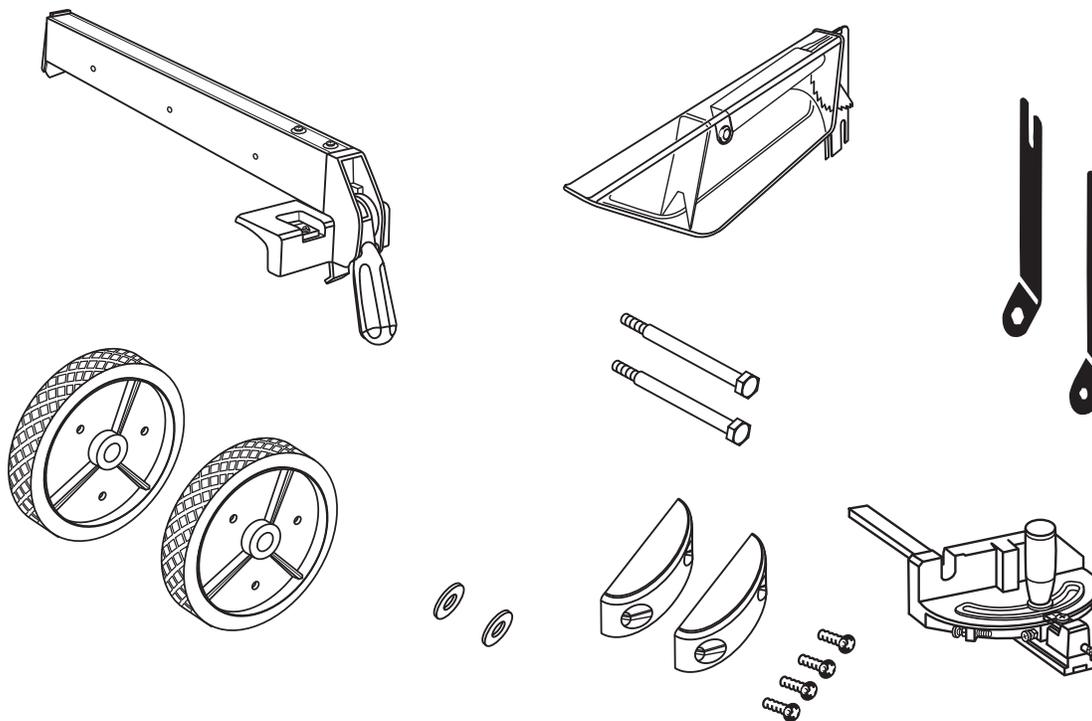


Fig. 5

ASSEMBLY

UNPACKING

This product requires assembly.

- Carefully lift saw from the carton and place it on a level work surface.

NOTE: This tool is heavy. To avoid back injury, keep your knees bent and lift with your legs, not your back, and get help when needed.

- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.

NOTE: Remove the foam block from between the saw's housing and the motor.

- The saw is factory set for accurate cutting. After assembling it, check for accuracy. If shipping has influenced the settings, refer to specific procedures explained in this manual.
- If any parts are damaged or missing, please call 1-800-525-2579 for assistance.

WARNING:

If any parts are damaged or missing, do not operate this tool until the missing parts are replaced. Failure to heed this warning could result in serious personal injury.

WARNING:

Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

WARNING:

Do not connect to power supply until assembly is complete. Failure to comply could result in accidental starting and possible serious personal injury.

WARNING:

Do not lift the saw without help. Hold it close to your body. Keep your knees bent and lift with your legs, not your back. Ignoring these precautions can result in back injury.

WARNING:

Never stand directly in line with the blade or allow hands to come closer than 3 in. to the blade. Do not reach over or across the blade. Failure to heed this warning can result in serious personal injury.

WARNING:

To avoid serious personal injury, always make sure the table saw is securely mounted to a workbench or an approved leg stand. NEVER operate the saw on the floor.

MOUNTING HOLES

This tool comes mounted to a leg stand. If you chose to remove the leg stand, the table saw must be mounted to a firm supporting surface such as a workbench or leg stand. Four bolt holes have been provided in the saw's base for this purpose. Each of the four mounting holes should be bolted securely using 3/8 in. machine bolts, lock washers, and hex nuts (not included). Bolts should be of sufficient length to accommodate the saw base, lock washers, hex nuts, and the thickness of the workbench. Tighten all four bolts securely.

Carefully check the workbench after mounting to make sure that no movement can occur during use. If any tipping, sliding, or walking is noted, secure the workbench to the floor before operating.

ASSEMBLY

ASSEMBLING WHEELS

See Figures 6 - 7.

- Remove the following hardware from the bag:
 - 2 wheels
 - 2 washers
 - 2 shoulder bolts
 - Place the table saw on end.
 - Loosen bolts on each side of the table saw by turning counterclockwise. See Figure 6.
- NOTE:** To prevent the leg stand from slipping from the frame, do not remove both bolts at the same time.
- Place a wheel and washer on the shoulder bolt in the following order: washer, wheel.
 - Insert the shoulder bolt, wheel, and washer combination into the leg stand and frame. Securely tighten.

NOTE: The short bolts removed from the leg stand should be kept for future use if wheels are removed. There must always be bolts in both sides of the axle for safe operation.

ASSEMBLING BUMPERS

See Figure 8.

- Place saw table on end as shown in figure 8.
- Align the holes in the bumper with the holes in the side of the saw.
- Securely tighten bumpers in place using the screws.

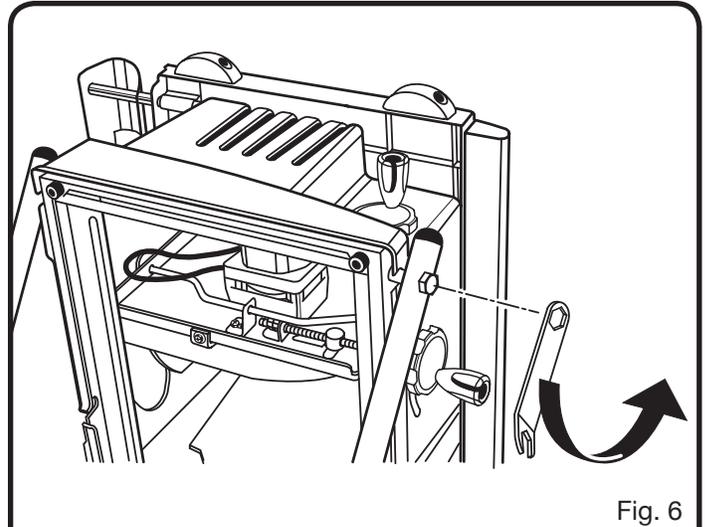


Fig. 6

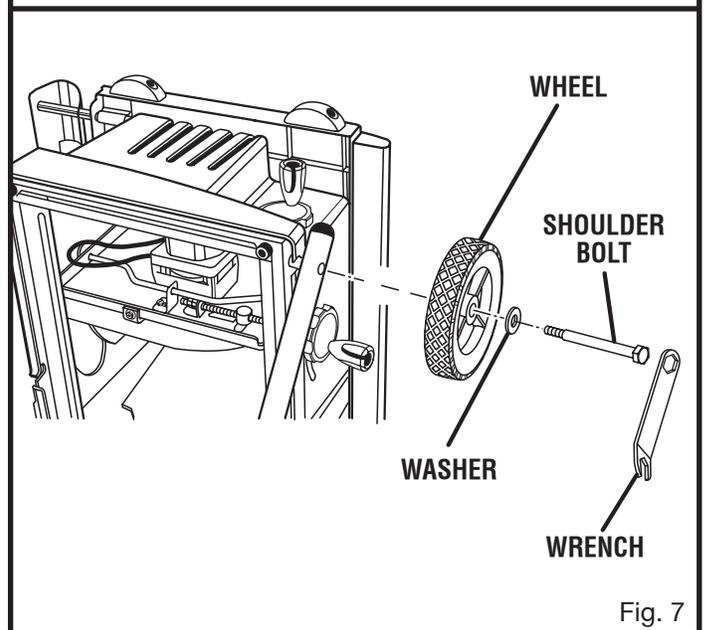


Fig. 7

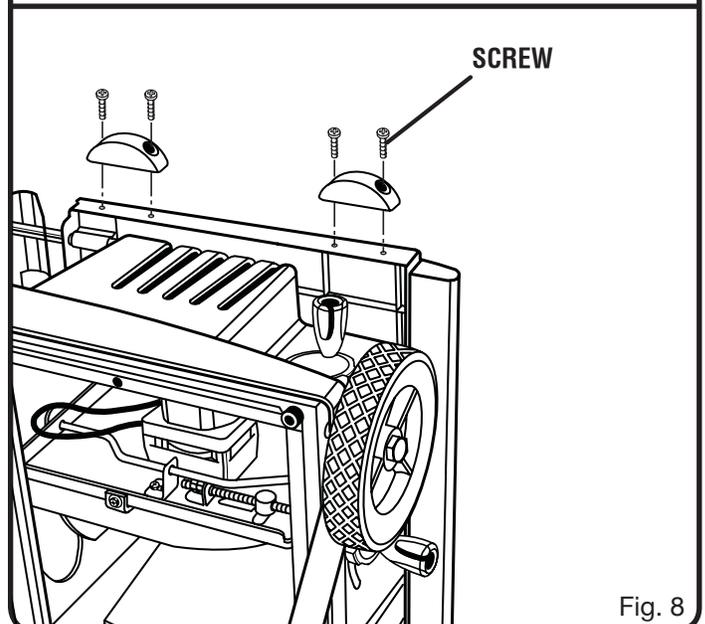


Fig. 8

ASSEMBLY

OPENING THE LEG STAND

See Figure 9.

NOTE: You can also refer to the blue label on the right-hand side of the table saw for setup procedures.

- Standing to the front side of the table saw, use your left hand to pull the leg stand latch towards you. See 1.
- Once the leg stand is released from the table saw base, ease the legs of the leg stand toward the floor. See 2.
- Grasp the leg firmly with your right hand. Keeping your left hand clear of the leg stand, pull the leg stand up until it locks into place. See 3 and 4.
- With your left hand firmly on the table tilt handle, grasp the leg with your right hand. See 5.
- Push the leg stand towards the ground with your right hand and pull in the same direction with your left hand until the table saw is in an upright position. See 6 and 7.

CLOSING THE LEG STAND

See Figure 9.

NOTE: You can also refer to the blue label on the top of the table saw for tear-down procedures.

- Standing to the front side of the table saw, grasp the table tilt handle with your left hand. Tilt the table saw to your left and grab the leg with your right hand. Gently lower the table saw on its side. See 1 and 2.
- With your right hand on the leg, use your left hand to release the leg stand latch. See 3 and 4.
- Once the leg stand is released from the table saw base, ease the legs of the leg stand toward the floor. See 5.
- Place your right hand palm up near the bumper and lift the lower leg of the leg stand up until it locks into place. See 6 and 7.

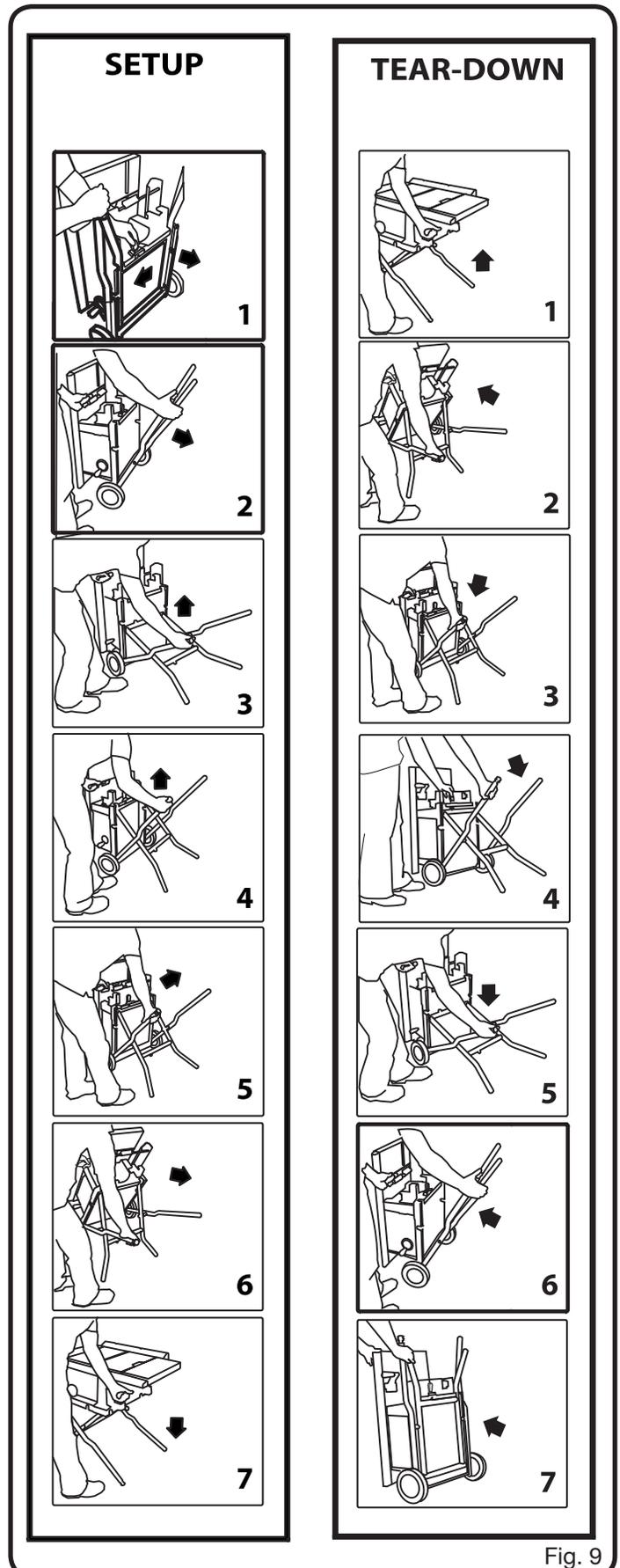


Fig. 9

ASSEMBLY

REMOVING/REPLACING THE THROAT PLATE

See Figure 10.

- Unplug the saw.
- Lower the blade by turning the height adjusting handwheel counterclockwise.
- Loosen the screws in the throat plate.
- Lift the throat plate from the saw.
- To reinstall the throat plate, align the holes in the throat plate with the holes in the saw table.
- Retighten the screws, being careful not to overtighten, which can cause the throat plate to bow or bend.

TO CHECK SAW BLADE INSTALLATION

See Figures 11 - 12.

- Unplug the saw.
- Remove the throat plate.
- Make sure the bevel locking lever is locked. Raise the blade arbor to its full height by turning the height adjusting handwheel counterclockwise.
- Using the smaller wrench, insert the flat open end into the flats on the arbor shaft as shown. Insert the larger wrench over the arbor nut, and, holding both wrenches firmly, pull the larger wrench forward to the front of the machine to loosen and push to tighten. Make sure the arbor nut is securely tightened. Do not overtighten.

NOTE: Arbor shaft has right-hand threads.

- Check all clearances for free blade rotation.

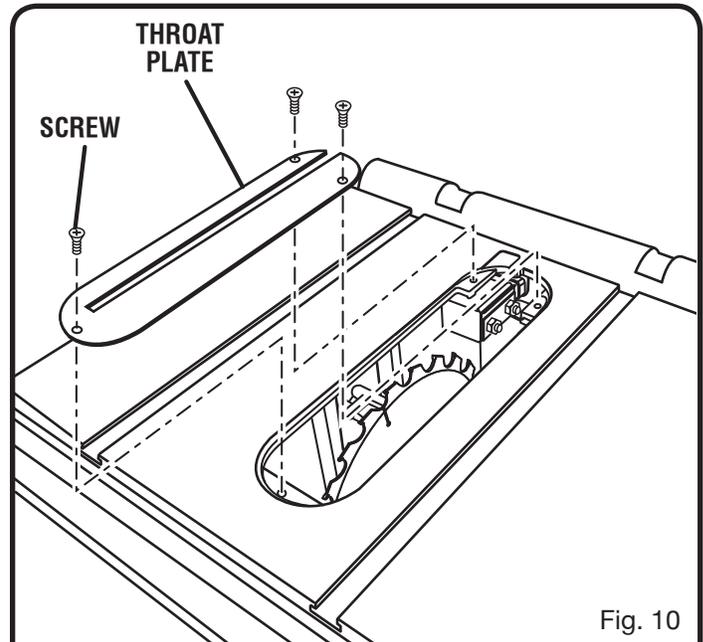


Fig. 10

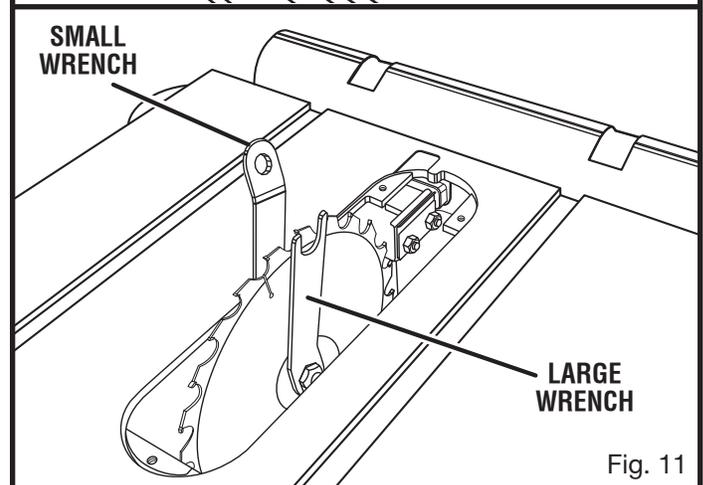


Fig. 11

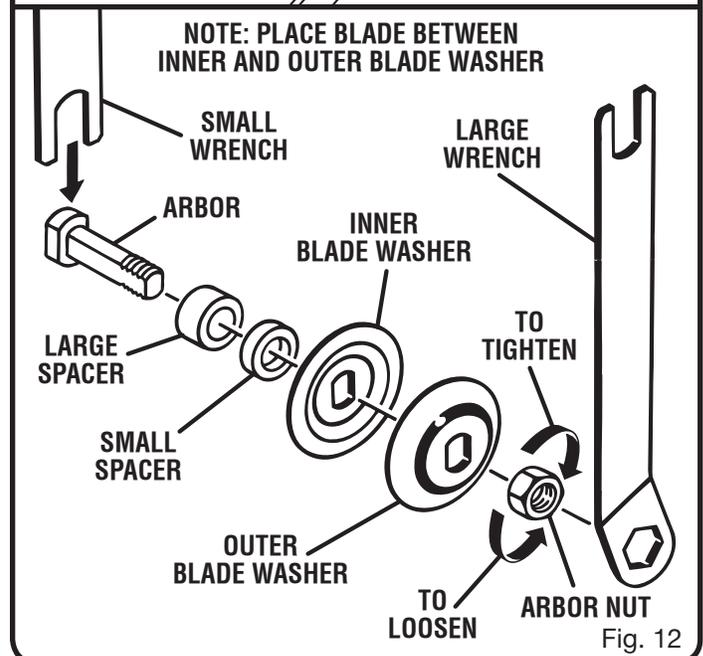


Fig. 12

ASSEMBLY

TO INSTALL BLADE GUARD ASSEMBLY

See Figure 13.

- Lower the blade by turning the height adjusting handwheel clockwise.
- Using the small wrench, install the blade guard assembly by loosening the two hex nuts enough to slide the spreader down between the shims. Partially retighten the two nuts. Make sure the spreader clears the blade by 1/8 in.
- Correctly align the blade and spreader, as described below. Tighten nuts securely when properly aligned.

TO CHECK, REPLACE OR ADJUST THE BLADE GUARD ASSEMBLY

See Figures 14 - 15.

Proper installation of the blade guard assembly means that the saw blade and spreader are in alignment. ALWAYS align the spreader to the saw blade prior to turning on the table saw.

The spreader is mounted between several shims that can be relocated as needed to center the blade. It is held in place by two bolts and hex nuts at its base. The bolts are set in slots that permit front-to-back adjustment.

To check alignment of the spreader:

- Unplug the saw, lower the blade, and remove the throat plate.
- Make sure the bevel locking lever is securely pushed to the left. Raise the blade by turning the height adjusting handwheel counterclockwise.
- Lift the anti-kickback pawls and place a framing square against both the saw blade and spreader.
- The saw blade and spreader are aligned when the framing square contacts both the blade and spreader evenly with no gaps.

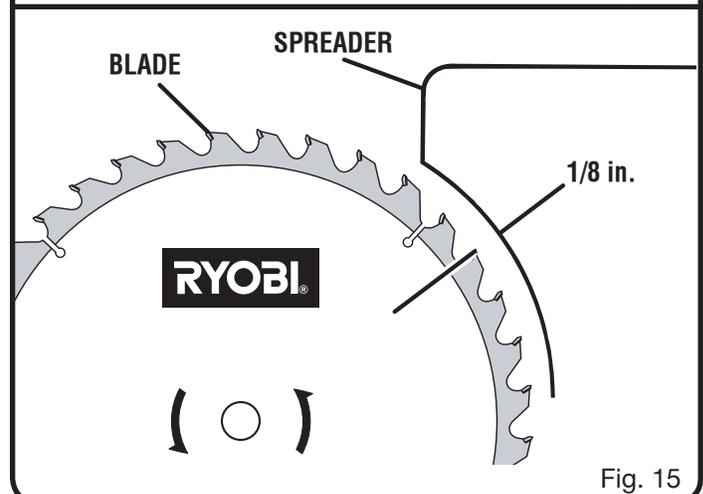
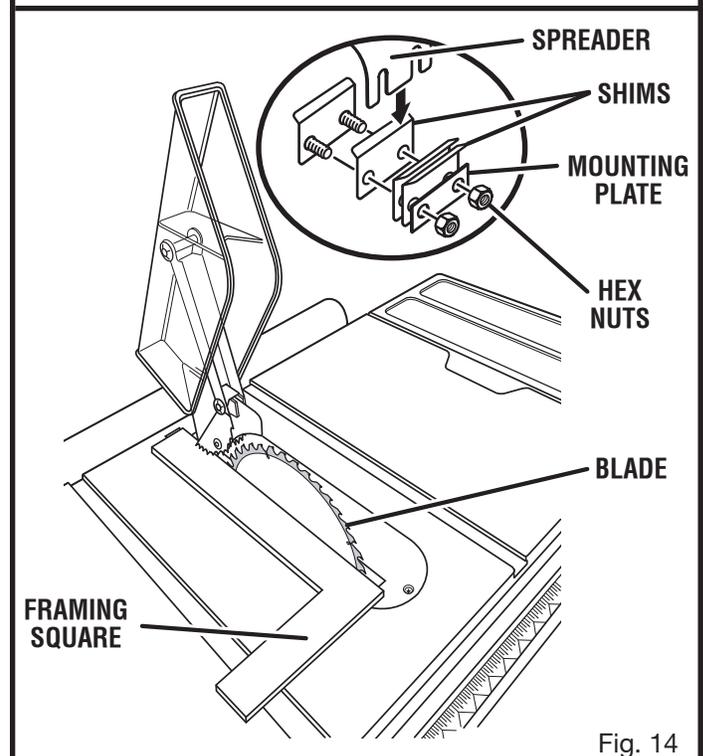
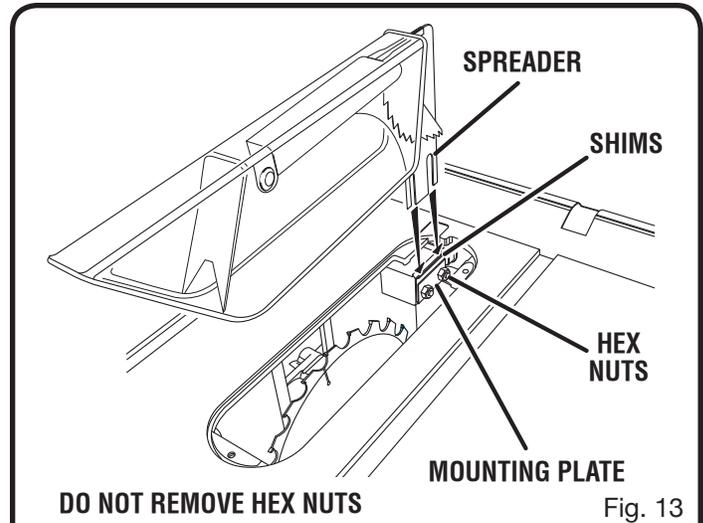
If the spreader and saw blade are not in alignment, adjustment is needed. To adjust:

- Unplug the saw, lower the blade, and remove the throat plate.
- With the box end of the small wrench, remove the two nuts at the base of the spreader. Remove the blade guard assembly.
- Move the shims to bring the spreader into alignment with the saw blade. Reinstall the spreader between the shims.

NOTE: It may be necessary to remove the shims and turn them in an opposite direction.

- Recheck the alignment by placing the framing square beside the saw blade as explained above.
- Bring the blade back to the desired angle and height. Lower the blade, insert the throat plate, then securely tighten the throat plate screw.

NOTE: Anti-kickback pawls must be above the spreader before tightening the throat plate screws.



OPERATION

⚠ WARNING:

Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict severe injury.

⚠ WARNING:

Always wear safety goggles or safety glasses with side shields when operating tools. Failure to do so could result in objects being thrown into your eyes resulting in possible serious injury.

⚠ WARNING:

Do not use any attachments or accessories not recommended by the manufacturer of this tool. The use of attachments or accessories not recommended can result in serious personal injury.

⚠ WARNING:

Although some of the illustrations in this manual are shown with the blade guard removed for clarity, do not operate the saw without the blade guard unless specifically instructed to do so.

APPLICATIONS

You may use this tool for the purposes listed below:

- Straight line cutting operations such as cross cutting, ripping, mitering, beveling, and compound cutting
- Dado or molding cuts with optional accessories
- Cabinet making and woodworking

NOTE: This table saw is designed to cut wood and wood composition products only.

BASIC OPERATION OF THE TABLE SAW

The 3-prong plug must be plugged into a matching outlet that is properly installed and grounded according to all local codes and ordinances. Improper connection of the equipment can result in electric shock. Do not modify the plug if it will not fit the outlet. Have the correct outlet installed by a qualified electrician. Refer to the *Electrical* section in this manual.

CAUSES OF KICKBACK

Kickback can occur when the blade stalls or binds, kicking the workpiece back toward you with great force and speed. If your hands are near the saw blade, they may be jerked loose from the workpiece and may contact the blade. Obviously, kickback can cause serious injury, and it is well worth using precautions to avoid the risks.

Kickback can be caused by any action that pinches the blade in the wood, such as the following:

- Making a cut with incorrect blade depth
- Sawing into knots or nails in the workpiece
- Twisting the wood while making a cut
- Failing to support work
- Forcing a cut
- Cutting warped or wet lumber

- Using the wrong blade for the type of cut
- Not following correct operating procedures
- Misusing the saw
- Failing to use the anti-kickback pawls
- Cutting with a dull, gummed-up, or improperly set blade

AVOIDING KICKBACK

- Always use the correct blade depth setting. The top of the blade teeth should clear the workpiece by 1/8 in. to 1/4 in.
- Inspect the work for knots or nails before beginning a cut. Knock out any loose knots with a hammer. Never saw into a loose knot or nail.
- Always use the rip fence when rip cutting and the miter gauge when cross cutting. This helps prevent twisting the wood in the cut.
- Always use clean, sharp, and properly-set blades. Never make cuts with dull blades.
- To avoid pinching the blade, support the work properly before beginning a cut.
- When making a cut, use steady, even pressure. Never force cuts.
- Do not cut wet or warped lumber.
- Always hold your workpiece firmly with both hands or with pushsticks. Keep your body in a balanced position to be ready to resist kickback should it occur. Never stand directly in line with the blade.
- Use the right type of blade for the cut being made.
- Use the blade guard assembly for all through cuts.

CUTTING AIDS

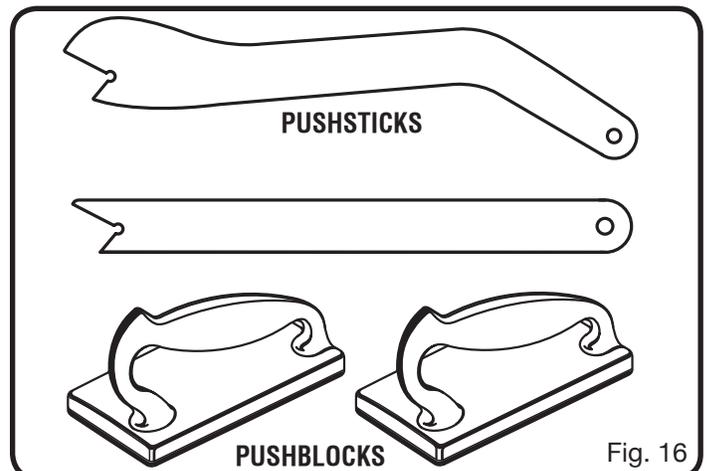
See Figure 16.

Pushsticks are devices used for safely pushing a workpiece through the blade instead of using your hands. They can be made in various sizes and shapes from scrap wood to use in a specific project. The stick must be narrower than the workpiece, with a 90° notch in one end and shaping for a grip on the other end.

A pushblock has a handle fastened by recessed screws from the underside. Use it on non-through cuts.

⚠ CAUTION:

Be sure the screw is recessed to avoid damaging the saw or workpiece.



OPERATION

TYPES OF CUTS

See Figure 17.

There are six basic cuts: 1) the cross cut, 2) the rip cut, 3) the miter cut, 4) the bevel cross cut, 5) the bevel rip cut, and 6) the compound (bevel) miter cut. All other cuts are combinations of these basic six. Operating procedures for making each kind of cut are given later in this section.

WARNING:

Always make sure the blade guard and anti-kickback pawls are in place and working properly when making these cuts to avoid possible injury.

Cross cuts are straight 90° cuts made across the grain of the workpiece. The wood is fed into the cut at a 90° angle to the blade, and the blade is vertical.

Rip cuts are made with the grain of the wood. To avoid kickback while making a rip cut, make sure one side of the wood rides firmly against the rip fence.

Miter cuts are made with the wood at any angle to the blade other than 90°. The blade is vertical.

WARNING:

Always use a pushstick when cutting small pieces of wood, and also to finish the cut when ripping a long narrow piece of wood, to prevent your hands from getting close to the blade.

Bevel cuts are made with an angled blade. Bevel cross cuts are across the wood grain, and bevel rip cuts are with the grain. The rip fence must always be on the right side of the blade for bevel rip cuts.

Compound (or bevel) miter cuts are made with an angled blade on wood that is angled to the blade. Be thoroughly familiar with making cross cuts, rip cuts, bevel cuts, and miter cuts before trying a compound miter cut.

CUTTING TIPS

Dado and rabbet cuts are non-through cuts which can be either rip cuts or cross cuts. Carefully read and understand all sections of this operator's manual before attempting any operation.

WARNING:

Do not use blades rated less than the speed of this tool. Failure to heed this warning could result in personal injury.

- The kerf (the cut made by the blade in the wood) will be wider than the blade to avoid overheating or binding. Make allowance for the kerf when measuring wood.

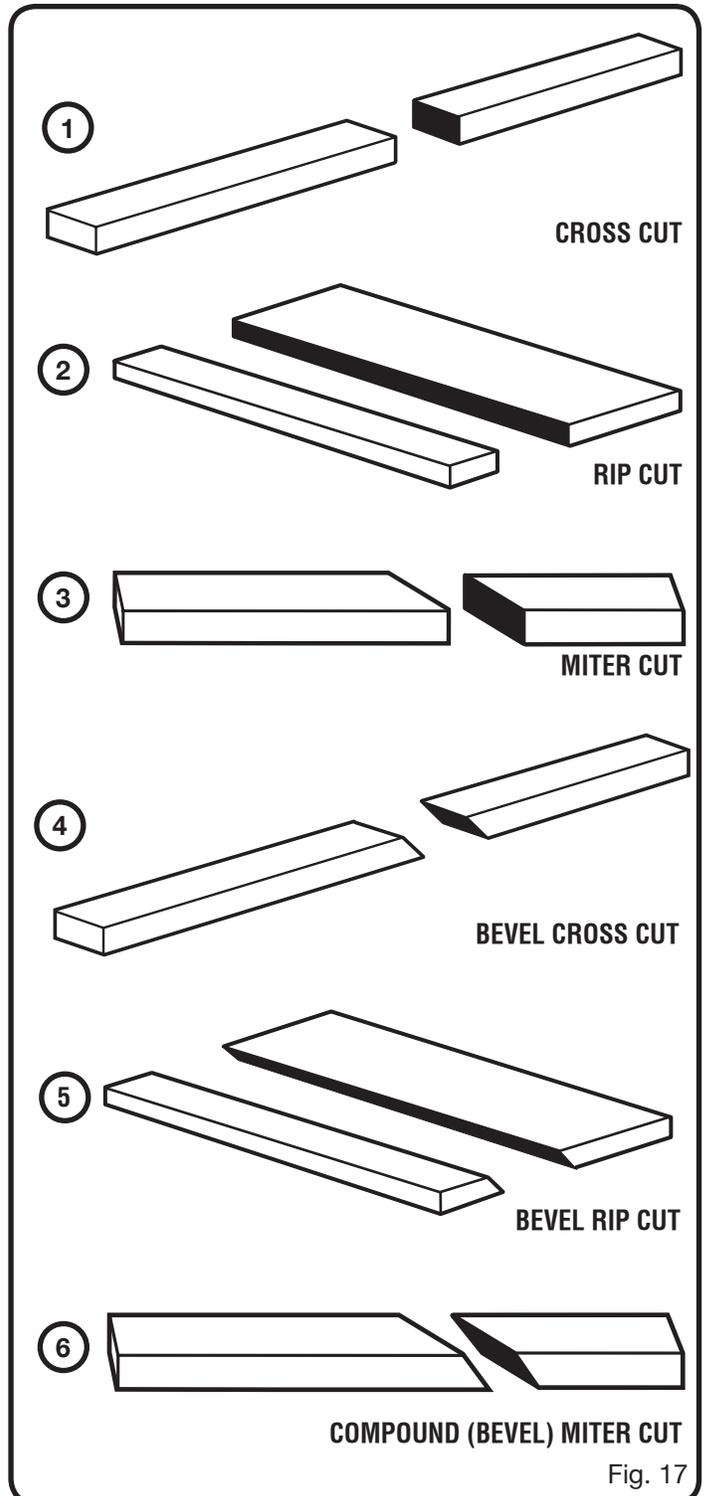


Fig. 17

- Make sure the kerf is made on the waste side of the measuring line.
- Cut the wood with the finish side up.
- Knock out any loose knots with a hammer before making the cut.
- Always provide proper support for the wood as it comes out of the saw.

OPERATION

TO CHANGE BLADE DEPTH

See Figure 18.

The blade depth should be set so that the outer points of the blade are higher than the workpiece by approximately 1/8 in. to 1/4 in. but the lowest points (gullets) are below the top surface.

- Push the bevel locking lever to the left for elevation mode.
- Raise the blade by turning the height adjusting handwheel counterclockwise or lower it by turning the handle clockwise.

TO CHANGE BLADE ANGLE

See Figure 19.

- Unlock the bevel locking lever.
- Angle the blade by turning the bevel handwheel until the bevel indicator shows the correct angle.
- Lock the bevel locking lever securely while holding the bevel handwheel in place.

TO SET THE RIP FENCE SCALE INDICATOR TO THE BLADE

See Figure 20.

The scale is usable from 0-27 in. (0-686 mm) to the right side of the blade and 0-6 3/4 in. (0-171 mm) on the left side of the blade. The operator can select any desired dimension within those ranges. Use the following steps to set the scale to the blade and scale indicator. Begin with the blade at a zero angle (straight up).

- Loosen the rip fence by raising the locking handle.
- Using a framing square, set the rip fence 2 in. from the blade tip edge.
- Loosen the screw on the scale indicator.
- Align the scale indicator to the 2 in. mark.
- Tighten the screw and check the dimension and the rip fence.

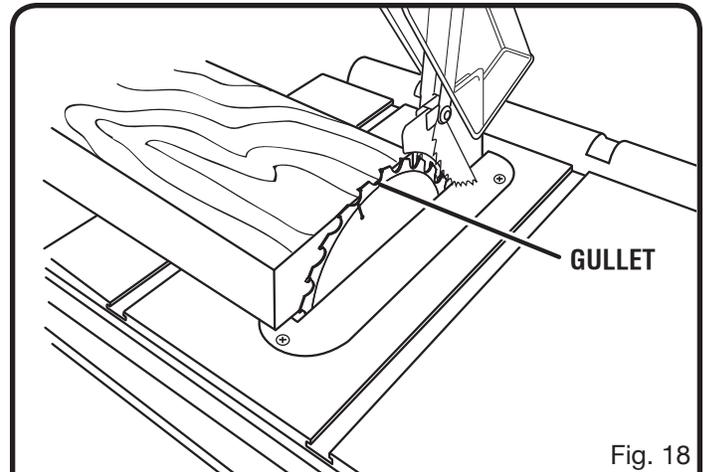


Fig. 18

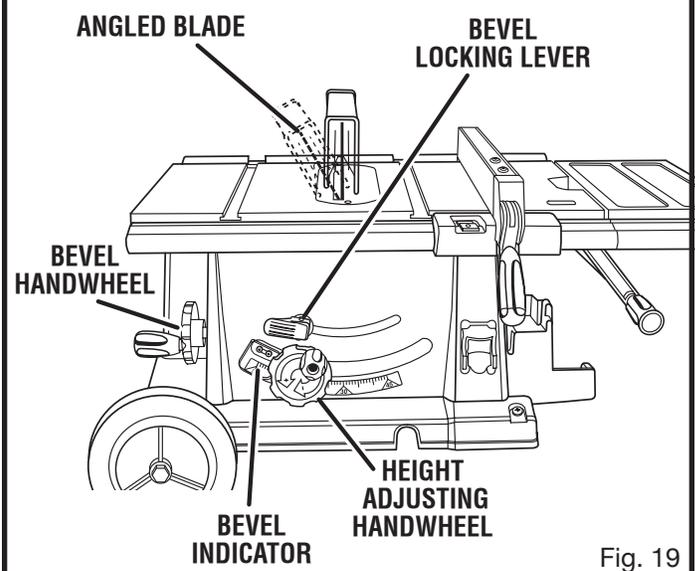


Fig. 19

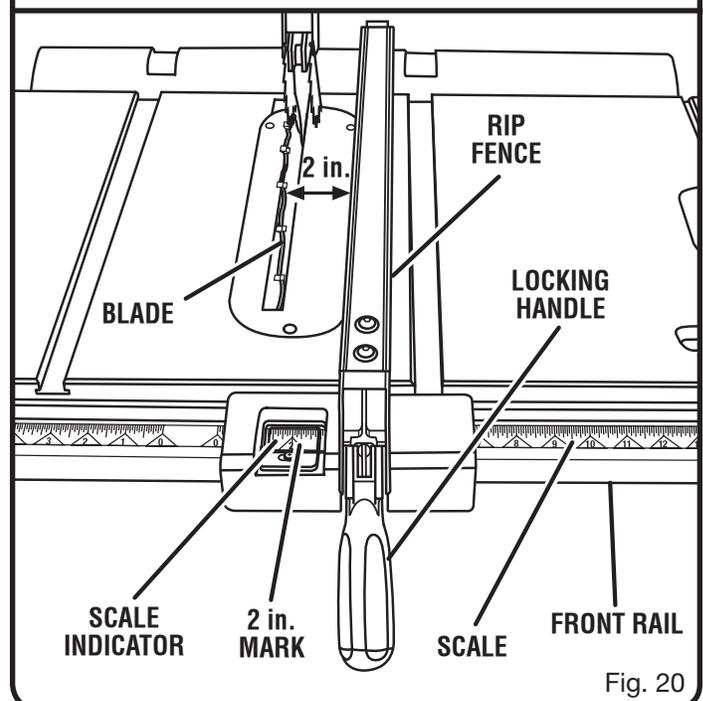


Fig. 20

OPERATION

TO USE THE RIP FENCE

See Figure 21.

- Place the front lip on the front rail and push slightly toward the rear of the unit.
- Lower the rear of the rip fence onto the guide surfaces on top of the rear rail.
- Push the locking lever down to automatically align and secure the fence.

Check for a smooth gliding action. If adjustments are needed, see **To Check the Alignment of the Rip Fence to the Blade** in the *Adjustment* section of this manual.

TO USE THE MITER GAUGE

See Figure 22.

The miter gauge provides greater accuracy in angled cuts. For very close tolerances, test cuts are recommended.

There are two miter gauge channels, one on either side of the blade. When making a 90° cross cut, you can use either miter gauge channel. When making a beveled cross cut (the blade tilted in relation to the table) the miter gauge should be located in the slot on the right so that the blade is tilted away from the miter gauge and your hands.

The miter gauge can be turned 60° to the right or left.

- Loosen the lock knob.
- With the miter gauge in the miter gauge slot, rotate the gauge until the desired angle is reached on the scale.
- Retighten the lock knob.

TO USE OUTFEED SUPPORT

See Figure 23.

The outfeed support slides to give the operator additional support for cutting long workpieces.

- With the table saw in the **OFF** (⏻) position, stand behind the saw.
- Grasp the outfeed support with both hands and pull the outfeed support until it is fully extended.

TO USE SLIDING TABLE EXTENSION

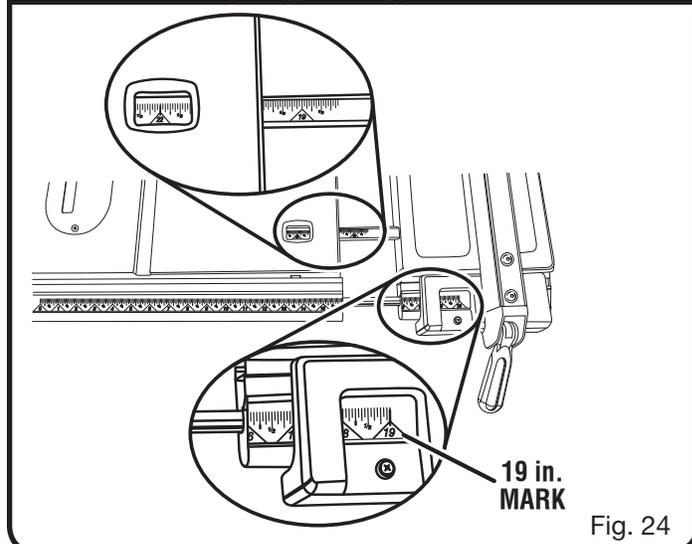
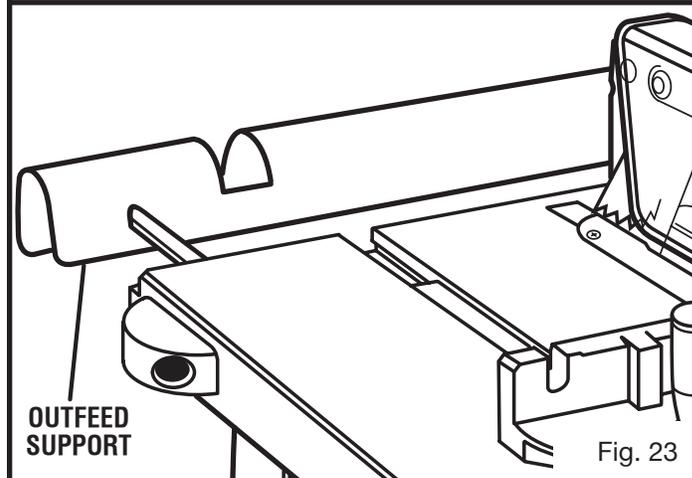
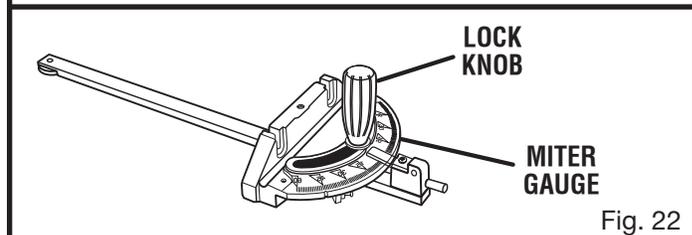
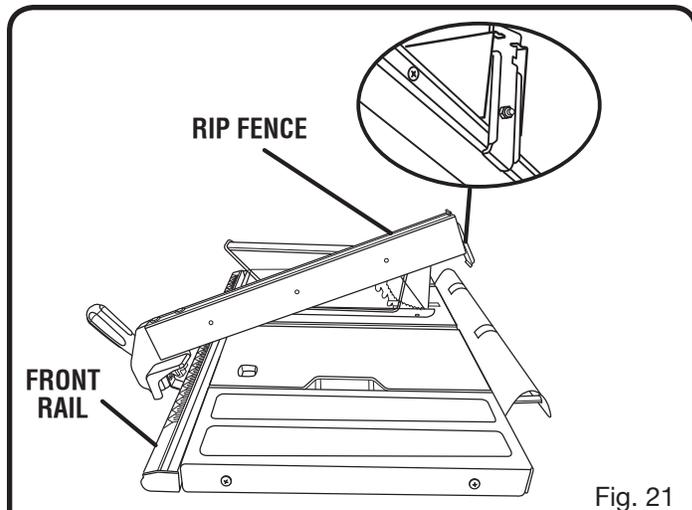
See Figure 24.

The sliding table extension provides the operator with additional table width for supporting wider workpieces.

- Set the rip fence to 19 in.
- Loosen the table extension knobs beneath the sliding table extension by turning them counterclockwise.
- Using the extension scale window, grasp the sliding table extension with both hands and pull the sliding extension table until it indicates the desired measurement.

NOTE: The sliding extension table will extend to 27 in. of rip capacity.

- Retighten the table extension knobs.



OPERATION

HEELING (PARALLELING) THE BLADE TO THE MITER GAUGE GROOVE

See Figures 25 - 27.

WARNING:

The blade must parallel the miter gauge slot so the wood does not bind resulting in kickback. Failure to do so could result in serious personal injury.

Do not loosen any screws for this adjustment until you have checked with a combination square and made test cuts to be sure adjustments are necessary. Once the screws are loosened, these items must be reset.

- Unplug your saw.
- Lift the blade guard. Raise the blade all the way by turning the height adjusting handwheel.
- Mark beside one of the blade teeth at the front of the blade. Place the body of a combination square against the miter gauge groove as shown in figure 25. Measure the distance to the right miter gauge groove.
- Turn the blade so the marked tooth is at the back.
- Move the combination square to the rear and again measure the distance to the right miter gauge groove. If the distances are the same, the blade and the miter gauge groove are parallel.
- If the distances measured are different, loosen the screws at the back of the table using a 4 mm hex key.
- If the back of the blade was too far from the miter gauge groove, place a block of wood on the left side of the blade and push it into the blade until the blade is parallel to the miter gauge groove. Retighten the screws.
- If the back of the blade was too close to the miter gauge groove, place a block of wood on the right side of the blade and push it into the blade until the blade is parallel to the miter gauge groove. Retighten the screws.

WARNING:

To reduce the risk of injury from kickback, align the rip fence to the blade following any blade adjustments. Always make sure the rip fence is parallel to the blade before beginning any operation.

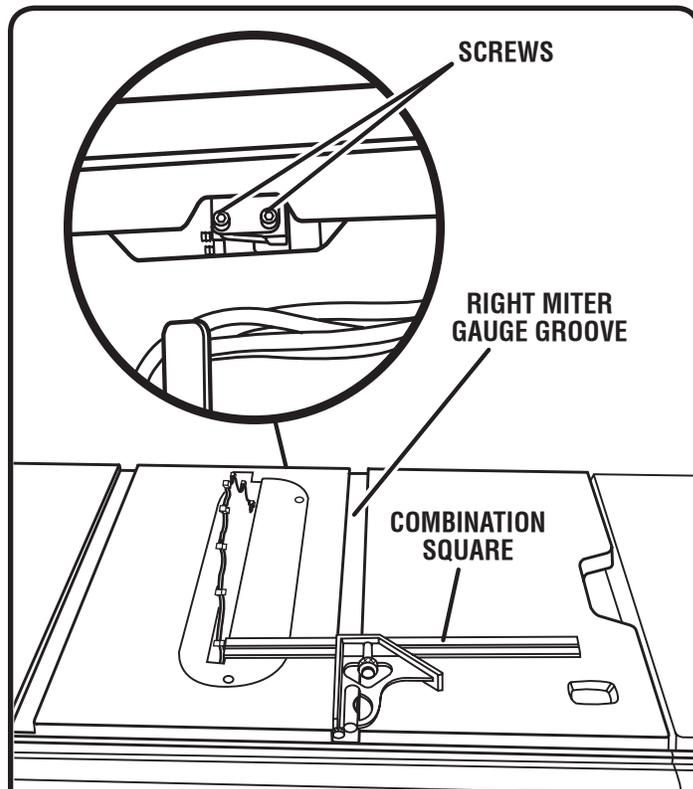


Fig. 25

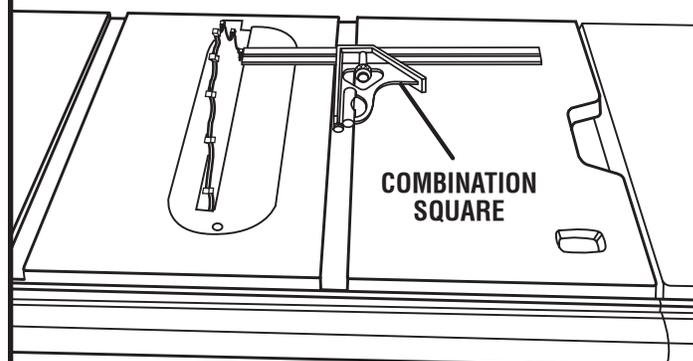
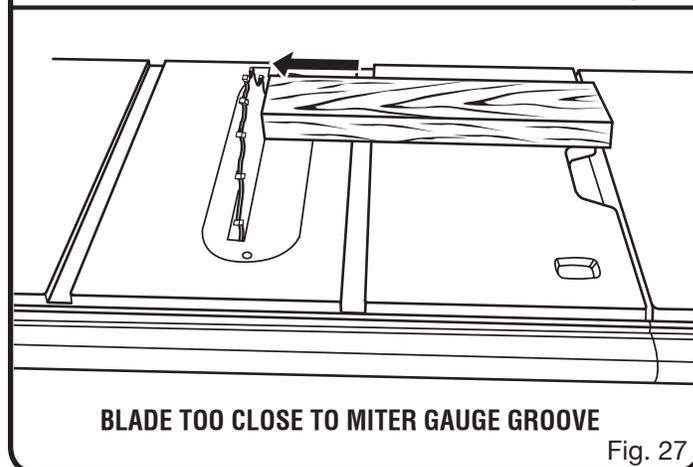


Fig. 26



BLADE TOO CLOSE TO MITER GAUGE GROOVE

Fig. 27

OPERATION

MAKING CUTS

The blade provided with your saw is a high-quality combination blade suitable for ripping and crosscut operations.

⚠ WARNING:

Do not use blades rated less than the speed of this tool. Failure to heed this warning could result in personal injury.

Use the miter gauge when making cross, miter, bevel, and compound miter cuts. To secure the angle, lock the miter gauge in place by twisting the lock knob clockwise. Always tighten the lock knob securely in place before use.

NOTE: It is recommended that you place the piece to be saved on the left side of the blade and that you make a test cut on scrap wood first.

MAKING A CROSS CUT

See Figures 28 - 29.

⚠ WARNING:

Using the rip fence as a cutoff gauge when crosscutting will result in kickback which can cause serious personal injury.

⚠ WARNING:

Make sure the blade guard assembly is installed and working properly to avoid serious possible injury.

It is recommended you make test cuts on scrap wood.

- Remove the rip fence by lifting the locking handle.
- Set the blade to the correct depth for the workpiece.
- Set the miter gauge to 0° and tighten the lock knob.
- Make sure the wood is clear of the blade before turning on the saw.
- To turn the saw **ON** (), lift the switch button.
- To turn saw **OFF** (), press the switch button down.

NOTE: To prevent unauthorized use, remove the switch key as shown in figure 28.

- Let the blade build up to full speed before moving the workpiece into the blade.
- Hold the workpiece firmly with both hands and feed the workpiece into the blade.

NOTE: The hand closest to the blade should be placed on the miter gauge lock knob and the hand farthest from the blade should be placed on the workpiece.

- When the cut is made, turn the saw **OFF** (). Wait for the blade to come to a complete stop before removing the workpiece.

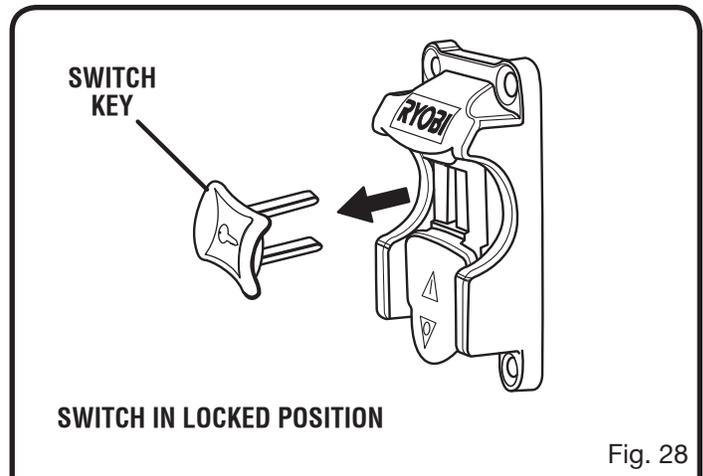


Fig. 28

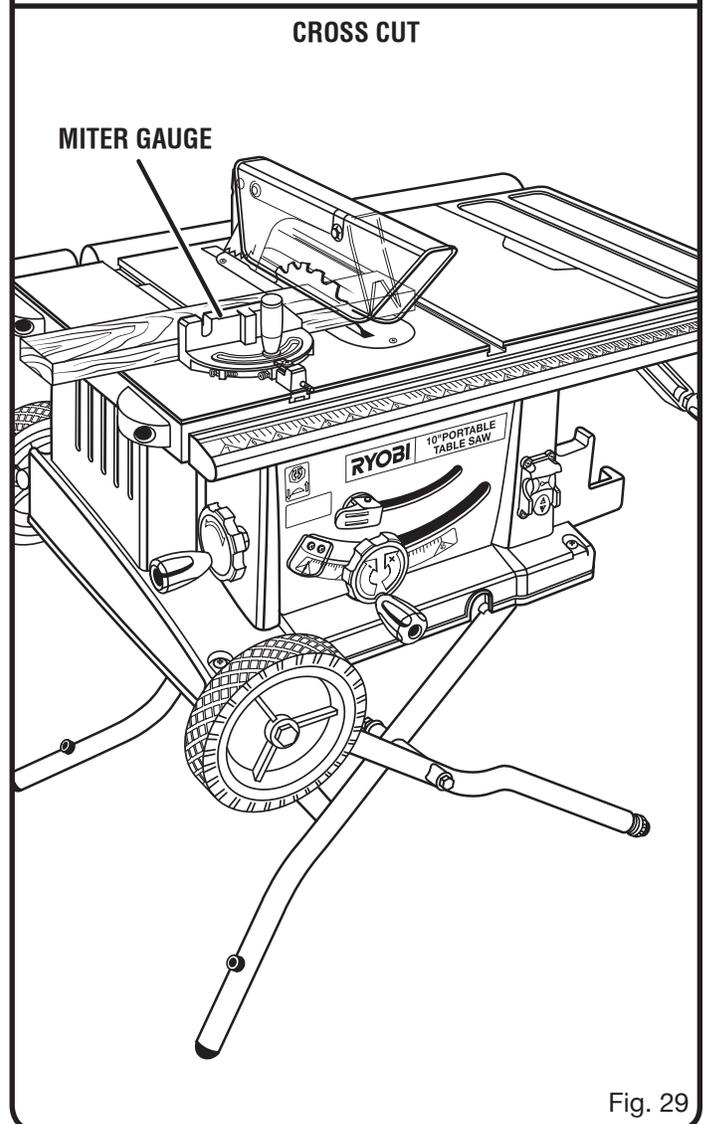


Fig. 29

OPERATION

MAKING A MITER CUT

See Figure 30.

It is recommended you make test cuts on scrap wood.

⚠ WARNING:

Make sure the blade guard assembly is installed and working properly to avoid serious personal injury.

- Remove the rip fence by lifting the locking handle.
- Set the miter gauge to the desired angle and tighten the lock knob.
- Make sure the wood is clear of the blade before turning on the saw.
- Let the blade build up to full speed before moving the workpiece into the blade.
- Feed the workpiece into the blade until the cut has been completed.

MAKING A RIP CUT

See Figure 31.

It is recommended you make a test cut on scrap wood.

⚠ WARNING:

Make sure the blade guard assembly is installed and working properly to avoid serious personal injury.

- Position the rip fence the desired distance from the blade for the cut and securely lock the handle. Adjust the scale to zero at the cutting edge of the blade.
- Place a support (the same height as saw table) behind the saw for the cut work.
- Make sure the wood is clear of the blade before turning on the saw.
- Let the blade build up to full speed before feeding the workpiece into the blade.
- Use a pushblock or pushstick to move the wood through the cut past the blade. **Never push a small piece of wood into the blade with your hand, always use a pushstick.** The use of pushblocks, pushsticks, and featherboards are necessary when making non-through cuts. See figure 34.
- Stand to the side of the wood as it contacts the blade to reduce the chance of injury should kickback occur. **Never stand directly in the line of cut.**
- When the cut is made, turn the saw **OFF** (). Wait for the blade to come to a complete stop before removing the workpiece.

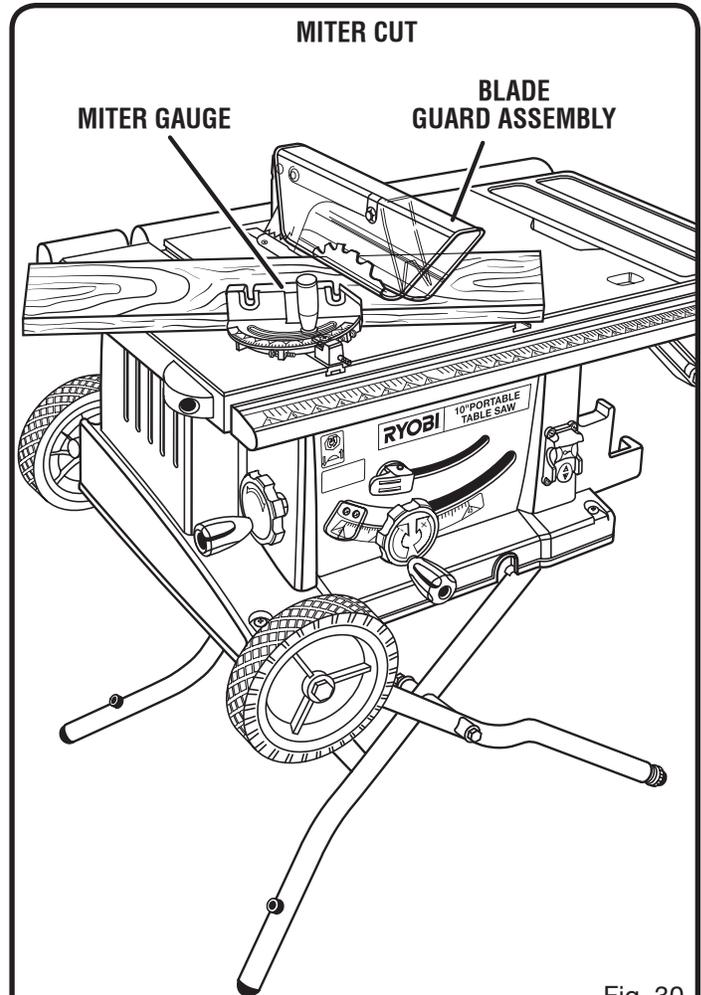


Fig. 30

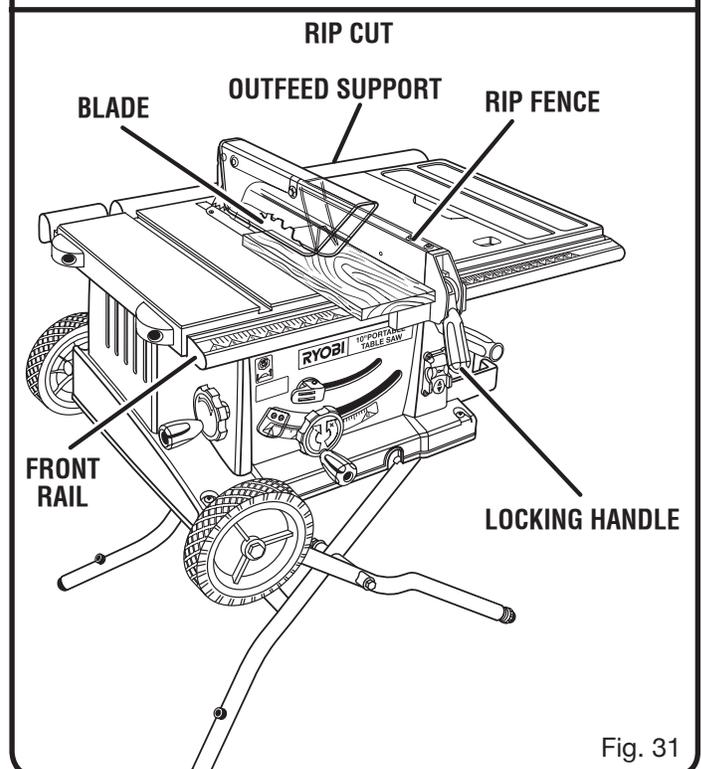


Fig. 31

OPERATION

MAKING A BEVEL CROSS CUT

See Figure 32.

It is recommended that you place the piece to be saved on the left side of the blade and that you make a test cut on scrap wood.

WARNING:

Make sure the blade guard assembly is installed and working properly to avoid serious personal injury.

- Unlock the bevel locking lever.
- Remove the rip fence by lifting the locking handle.
- Turn the bevel handwheel until the bevel indicator is at the desired angle. Push the bevel locking lever securely to the left to lock the angle.
- Set the blade to the correct depth for the workpiece.
- Set the miter gauge to 90° and press the bevel locking lever towards the table to lock.
- Make sure the wood is clear of the blade before turning on the saw.
- Let the saw blade build up to full speed before moving the miter gauge and the workpiece into the blade.
- Hold the workpiece firmly with both hands and feed the workpiece into the blade.

NOTE: The hand closest to the blade should be placed on the miter gauge lock knob and the hand farthest from the blade should be placed on the workpiece.

- When the cut is made, turn the saw **OFF** (⏏). Wait for the blade to come to a complete stop before removing the workpiece.

MAKING A BEVEL RIP CUT

See Figure 33.

It is recommended you make test cuts on scrap wood.

WARNING:

The rip fence must be on the right side of the blade to avoid trapping the wood and causing kickback.

WARNING:

Make sure the blade guard assembly is installed and working properly to reduce the risk of serious personal injury.

- Remove the miter gauge.
- Position the rip fence the desired distance from the right side of the blade and lock down the handle.
- Adjust the bevel angle to the desired setting.
- Set the blade to the correct depth.
- If ripping a piece larger than 36 in. long, place a support the same height as the table surface behind the saw for the cut work.

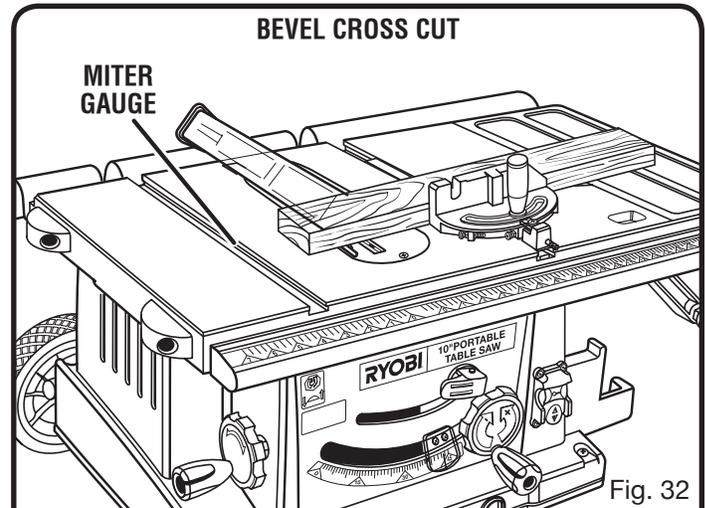


Fig. 32

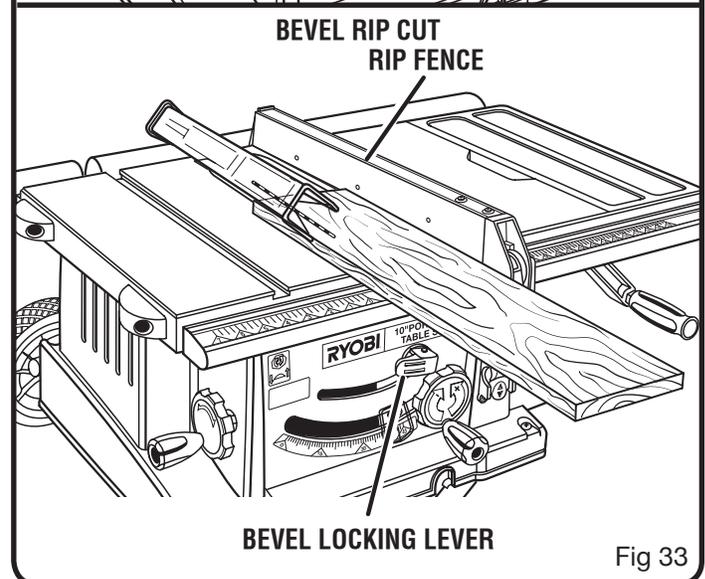


Fig. 33

- Turn the power switch to the **ON** (⏻) position.
- Position the workpiece flat on the table with the edge flush against the rip fence. Let the blade build up to full speed before feeding the workpiece into the blade.
- Using a pushstick and/or pushblocks, slowly feed the workpiece toward the blade. Stand slightly to the side of the wood as it contacts the blade to reduce the chance of injury should kickback occur. See figure 34.
- Once the blade has made contact with the workpiece, use the hand closest to the rip fence to guide it. Make sure the edge of the workpiece remains in solid contact with both the rip fence and the surface of the table. If ripping a narrow piece, use a pushstick to move the piece through the cut and past the blade.
- When the cut is made, turn the saw **OFF** (⏏). Wait for the blade to come to a complete stop before removing the workpiece.
- After the blade has stopped completely, remove the cutoff stock.
- Grasp the workpiece from the lead end (the end fed into the blade first) and carefully remove it from the table.

OPERATION

MAKING A COMPOUND MITER CUT

It is recommended that you place the piece to be saved on the left side of the blade and that you make a test cut on scrap wood first.

⚠ WARNING:

Make sure the blade guard assembly is securely installed and working properly to avoid serious personal injury.

- Remove the rip fence by lifting the lock down handle.
- Unlock the bevel locking lever.
- Adjust the bevel angle to the desired setting.
- Lock the bevel locking lever.
- Set the saw blade to the correct depth.
- Loosen the lock knob on the miter gauge, set the miter gauge to the desired angle and tighten lock knob.
- Turn the power switch to the **ON** () position.
- Position the workpiece flat on the table with the edge flush against the miter gauge. Let the blade build up to full speed before feeding the workpiece into the blade.
- Advance the workpiece and the miter gauge toward the blade. Keep the workpiece flush against the miter gauge. Push the miter gauge and workpiece toward the blade. Stand slightly to the side of the wood as it contacts the blade to reduce the chance of injury should kickback occur.
- When the cut is made, turn the saw **OFF** (). Wait for the blade to come to a complete stop before removing the workpiece.
- After the blade has stopped completely, remove the cutoff stock.

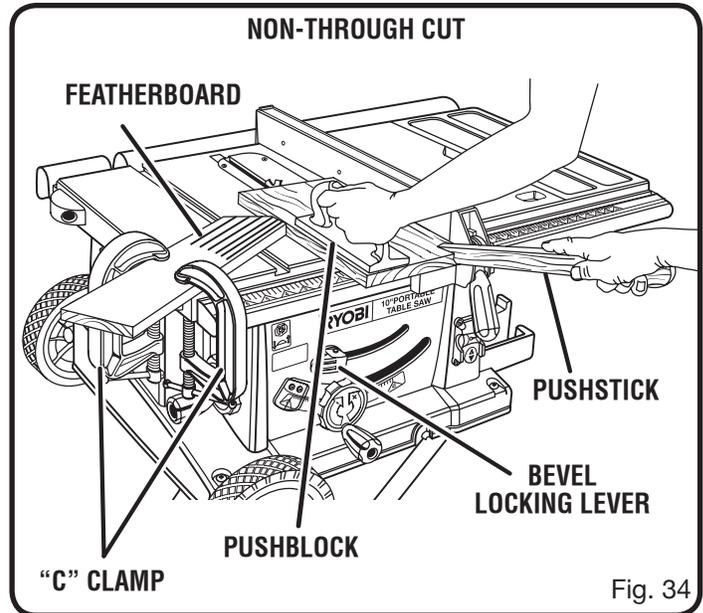
MAKING NON-THROUGH CUTS

Non-through cuts can be made with the grain (ripping) or across the grain (crosscut). The use of a non-through cut is essential to cutting grooves, rabbets, and dados.

NOTE: This is the only type cut that is made without the blade guard installed. Make sure the blade guard assembly is reinstalled upon completion of this type of cut.

Read the appropriate section which describes the type of cut in addition to this section on non-through or dado cuts. For example, if your non-through cut is a straight cross cut, read and understand the section on straight cross cuts before proceeding.

- Unplug your saw.
- Lower the blade and remove the screw holding the throat plate in place. Remove the throat plate.
- Loosen the two hex nuts at the base of the spreader. **Do not remove hex nuts.** Remove the blade guard assembly. Retighten the two hex nuts on the base.



- Insert the throat plate, then securely tighten the throat plate screw.
 - Raise the blade to the correct height by turning the height adjusting handwheel counterclockwise.
 - Feed the workpiece into the blade.
- NOTE:** Carefully check all setups and rotate the blade one full revolution to assure proper clearance before connecting saw to power source.
- Always use pushblocks, pushsticks, and featherboards when making non-through cuts to avoid the risk of serious injury. See Figure 34.

⚠ WARNING:

When making a non-through cut, the cutter is covered by the workpiece during most of the cut. Be alert to the exposed cutter at the start and finish of every cut to avoid the risk of serious personal injury.

OPERATION

WARNING:

Never feed wood with your hands when making any non-through cut such as rabbets or dados.

WARNING:

When making a non-through cut, the cutter is covered by the workpiece during most of the cut. Be alert to the exposed cutter at the start and finish of every cut to avoid the risk of serious personal injury.

- When the cut is made, turn the saw **OFF** (). Wait for the blade to come to a complete stop before removing the workpiece.
- Unplug your saw.
- Lower the blade and remove the screw holding the throat plate in place. Remove the throat plate.
- Install the spreader and retighten the nuts at the base of the spreader. Check spreader alignment to the blade and adjust shims if necessary.
- Lower the blade, insert the throat plate, then securely tighten the throat plate screw.

NOTE: Anti-kickback pawls must be above the spreader before tightening the throat plate screws.

MAKING A DADO CUT

An optional dado throat plate is required for this procedure (max. dado width 13/16 in.). Do not use blades rated less than the speed of this tool. (The Ryobi part number for the dado set is 4650306.)

NOTE: This saw cannot be used to make a bevel dado cut.

- Unplug the saw.
- Remove the blade guard assembly.
- Retighten the two hex nuts.
- Remove the saw blade.
- Remove the inner blade washer and both the small and large spacers.
- Add the small spacer then the inner blade washer to the blader arbor.
- Mount the dado blade, using the blade and chippers appropriate for the desired width of cut.
- Reinstall the outer blade washer and the arbor nut.
- Make sure the arbor nut is fully engaged and the arbor extends at least one full thread past a securely tightened arbor nut.
- When mounting dado blades, make sure both the inner blade washer and outer blade washer are used.
- Replace the throat plate with optional Dado Throat Plate (#0131030330-35). When ordering parts, always give the model number. Call 1-800-525-2579 for assistance.

WARNING:

Always put all spacers in proper location when changing back to saw blade. Failure to do so may result in possible injury and damage to the tool.

WARNING:

Always use pushblocks, pushsticks, or featherboards when making dado cuts to avoid the risk of serious injury.

ADJUSTMENTS

WARNING:

Before performing any adjustment, make sure the tool is unplugged from the power supply. Failure to heed this warning could result in serious personal injury.

The table saw has been adjusted at the factory for making very accurate cuts. However, some of the components might have been jarred out of alignment during shipping. Also, over a period of time, readjustment will probably become necessary due to wear.

To avoid unnecessary set-ups and adjustments, a good practice is to check your setups carefully with a framing square and make practice cuts in scrap wood before making finish cuts in good workpieces. Do not start any adjustments until you have checked with a square and made test cuts to be sure adjustments are needed.

TO REPLACE THE BLADE

See Figures 35 - 37.

- Unplug the saw.
- Lower the saw blade, raise the blade guard, and remove the throat plate.
- Make sure the bevel locking lever is securely pushed to the left. Raise the blade to its full height by turning the height adjusting handwheel clockwise.
- Using the smaller wrench, insert the flat open end into the flats on the arbor shaft as shown. Insert the larger wrench over the arbor nut, and, holding both wrenches firmly, pull the larger wrench forward to the front of the machine to loosen and push to tighten. Make sure the arbor nut is securely tightened. Do not overtighten.
- Remove the outer blade washer from the arbor then remove the blade. Make sure that the inner blade washer and both spacers are tight against arbor shoulder.
- Place the new blade on the arbor shaft (the teeth must point down toward the front of the saw to work properly).
- Put the outer blade washer and arbor nut over the arbor. Tighten securely.
- Rotate the blade by hand to make sure it turns freely.
- Check the spreader and adjust if needed.
- Lower the saw blade and reinstall the throat plate.

NOTE: Securely tighten throat plate screws. Do not allow the throat plate to bow up above the table surface.

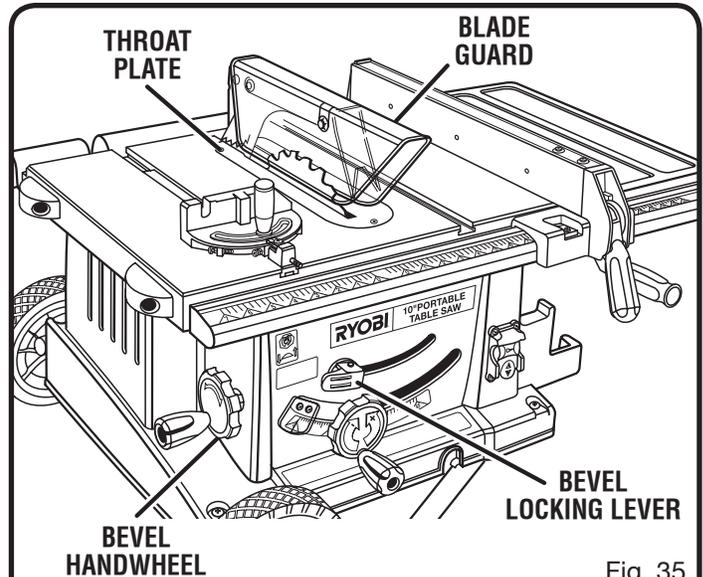


Fig. 35

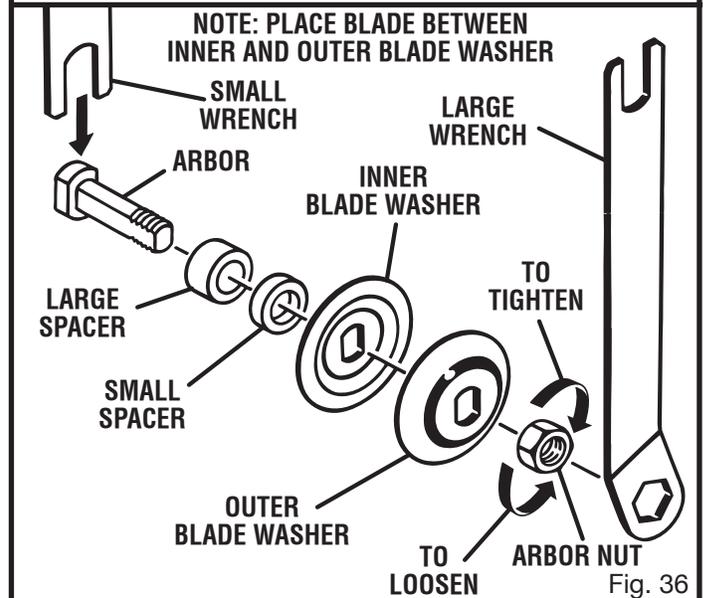


Fig. 36

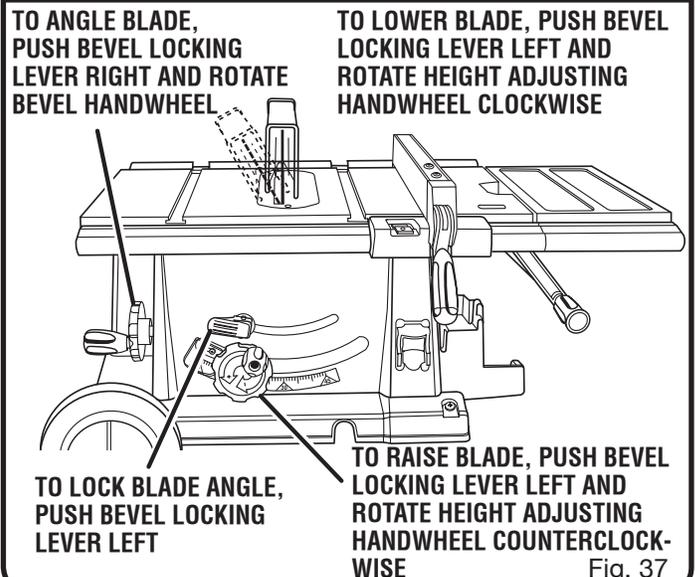


Fig. 37

ADJUSTMENTS

TO SET BLADE INDICATOR AND BEVEL STOPS AT 0° OR 45° (SQUARING THE BLADE)

See Figure 38.

The angle settings of your saw have been set at the factory and, unless damaged in shipping, should not require setting during assembly. After extensive use, it may need to be checked.

- Unplug the saw.
- If the blade is not perfectly vertical (0°), loosen the nuts on the stop bolt inside the cabinet, position the blade, adjust the stop bolt, then retighten nut. See Figure 38, insert.
- Unlock the bevel locking lever.
- Turn the bevel handwheel until the blade has moved completely to the left. Lock the angle by pushing the bevel locking lever.
- If the blade is not an exact 45°, loosen the nuts on the stop bolt inside the cabinet, position the blade, adjust the stop bolt, then retighten lock nut. See Figure 38, insert.
- Make a test cut.

TO ADJUST THE MITER GAUGE

See Figure 39.

You can set the miter gauge at 0° and plus or minus 45° with the miter gauge stop pin and adjustable stop screws.

NOTE The miter gauge provides close accuracy in angled cuts. For very close tolerances, test cuts are recommended.

- Loosen knob and pull out stop pin to rotate miter gauge base past stop screws.
- Loosen the lock nut of the 0° stop screw at the stop pin with a 8 mm wrench.
- Place a 90° square against the miter gauge rod and the miter gauge base.
- If the rod is not square, loosen the knob, adjust the rod, and tighten the knob.
- Adjust the 0° stop screw until it rests against the stop pin.
- Adjust the plus and minus 45° stop screws using a 45° triangle and the steps above.

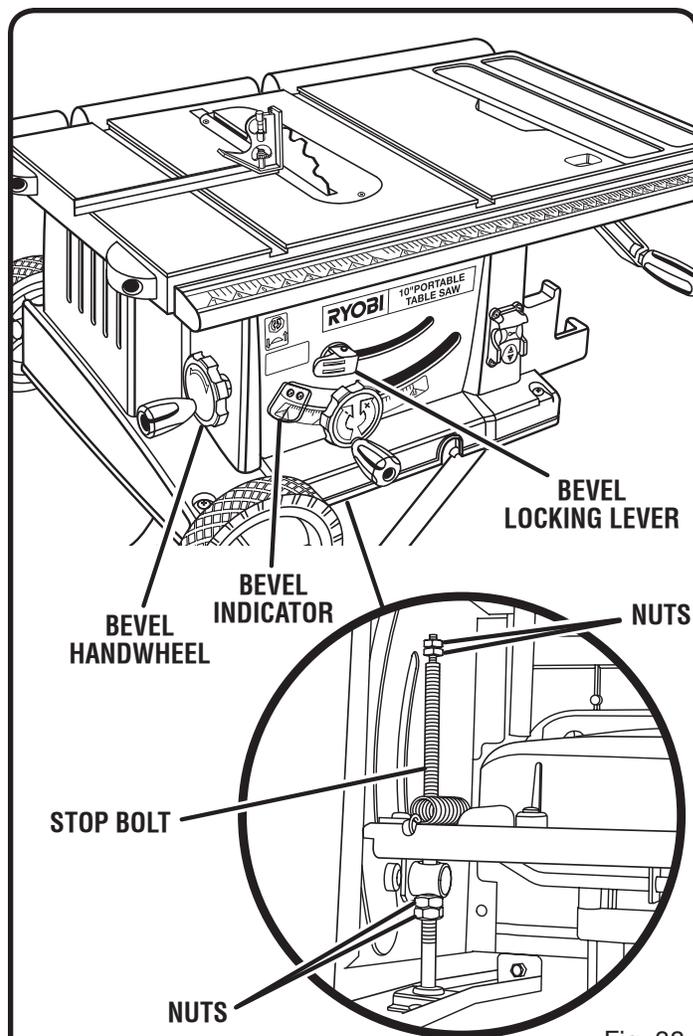


Fig. 38

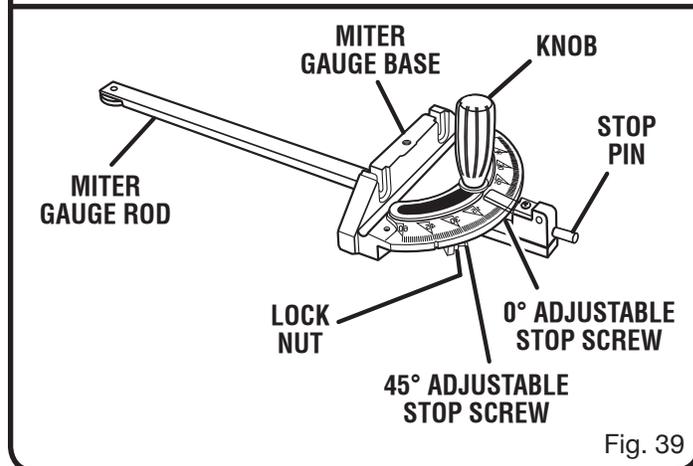


Fig. 39

ADJUSTMENTS

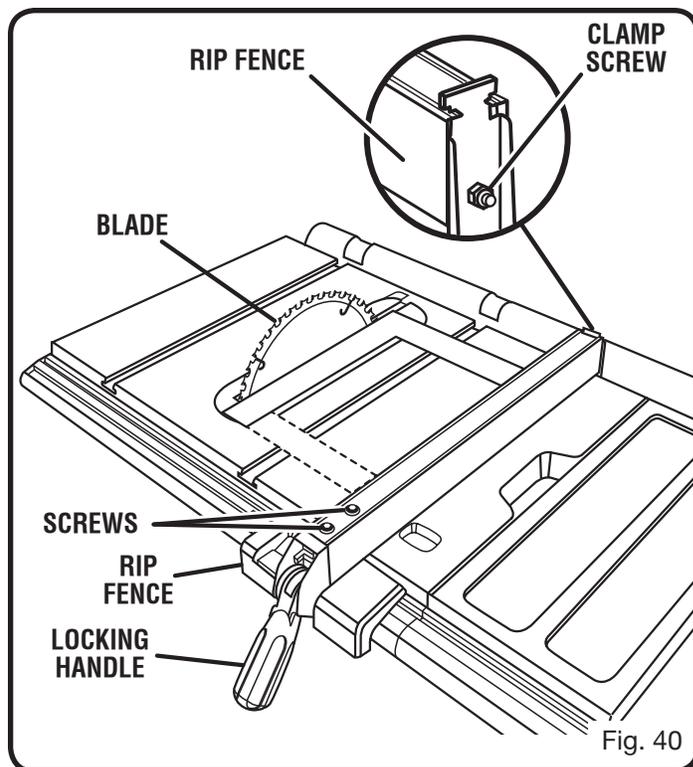
TO CHECK THE ALIGNMENT OF THE RIP FENCE TO THE BLADE

See Figure 40.

- Raise the locking handle to permit the rip fence to be moved.
- Place a framing square beside the blade and move the rip fence up to the square. Take the dimension on the rip scale.
- Move the fence back and turn the framing square 180° to check the other side.
- If the two dimensions are not the same, loosen the two screws on the fence and align it.
- Retighten the two screws.
- Make two or three test cuts on scrap wood. If the cuts are not true, repeat the process.

WARNING:

Before plugging the saw back in to make test cuts, make sure the switch is in the **OFF** () position and the blade guard is in place. Failure to do so may result in serious injury.



MAINTENANCE

WARNING:

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

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.

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, dust, oil, grease, etc.

WARNING:

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken, or destroy plastic which may result in serious personal injury.

- Periodically check all clamps, nuts, bolts, screws, and belts for tightness and condition. Make sure the throat plate is in good condition and in position.
- Check the blade guard assembly.
- To maintain the table surfaces, fence, and rails, periodically apply paste wax to them and buff to provide smooth functioning. To prevent work from slipping during cutting operation, **Do not** wax the working face of the miter fence.
- Protect the blade by cleaning out saw dust from underneath the table and in the blade teeth. Use a resin solvent on the blade teeth.
- **Clean plastic parts only with a soft damp cloth. Do not** use any aerosol or petroleum solvents.

LUBRICATION

This saw has been lubricated at the factory prior to shipment. Following extended use, you should inspect and lubricate the following areas to assure smooth operation.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excess Vibration.	<ol style="list-style-type: none"> 1. Blade is out of balance. 2. Blade is warped or damaged. 3. Saw is not mounted securely to a level work surface. 	<ol style="list-style-type: none"> 1. Remount and recheck blade. Replace if necessary. 2. Replace blade immediately. <i>See page 29.</i> 3. Reposition on a level surface and tighten all mounting hardware securely.
Rip fence does not operate smoothly.	<ol style="list-style-type: none"> 1. Rip fence not mounted correctly. 2. Rails are dirty or sticky. 3. Adjustment nut needs adjusting. 	<ol style="list-style-type: none"> 1. Remount the rip fence. <i>See page 22.</i> 2. Wax underneath front bar of rip fence and front rail. 3. Adjust nut counterclockwise.
Cutting binds or burns work.	<ol style="list-style-type: none"> 1. Blade is dull. 2. Work is fed too fast. 3. Wood is warped. 4. Blade is heeling. 	<ol style="list-style-type: none"> 1. Replace or have blade sharpened. 2. Slow the feed rate. 3. Replace wood. 4. Call Ryobi Technical Service at 1-800-525-2579.
Wood edges away from rip fence when ripping.	<ol style="list-style-type: none"> 1. Blade not properly sharpened. 	<ol style="list-style-type: none"> 1. Have blade resharpened.
Saw does not make accurate 90° or 45° bevel cuts.	<ol style="list-style-type: none"> 1. Stop bolt needs adjusting. 	<ol style="list-style-type: none"> 1. Adjust stop bolt. <i>See page 30.</i>
Saw does not make accurate 90° or 45° miter cuts.	<ol style="list-style-type: none"> 1. Miter gauge is misaligned. 	<ol style="list-style-type: none"> 1. Recheck setting on miter scale.
Blade makes poor cuts.	<ol style="list-style-type: none"> 1. Blade is dull or dirty. 2. Blade is wrong type for cut. 3. Blade is mounted backwards. 	<ol style="list-style-type: none"> 1. Clean blade or have blade sharpened. 2. Replace with correct type. 3. Remount blade.
Blade does not lower when turning blade control handle.	<ol style="list-style-type: none"> 1. Saw dust build up underneath saw. 	<ol style="list-style-type: none"> 1. Clean underside of saw.

