# **Operating Instructions & Parts Manual**



# Model 9683412



# 10″ Table Saw

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described.

Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

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# SAFETY GUIDELINES

Be sure to read and understand this manual for your safety. When using this product, it is important to read and understand this information. It will protect you and help prevent any problems

- **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 a 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 operators should wear safety glasses and be kept a safe distance from work area. Do not contact tool or extension cord while operating.
- MAKE WORKSHOP CHILDPROOF with padlocks and master switches, or by removing starter keys.

Here are the guidelines to help you understand the symbols used in this guide.

#### DANGER!

Indicates a potentially hazardous situation which could result in death or serious injury.

## WARNING!

Indicates a situation which could result in death or serious injury

## CAUTION!

Indicates a potentially hazardous situation which could result in mild to moderate injury

#### NOTICE:

When used without the Safety Alert symbol, this indicates a potentially hazardous situation which, if not avoided, can result in property damage

# **SAFETY GUIDELINES**

- **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 only have 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 instruction manual for recommended accessories. 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. Only feed work into a blade or cutter against the direction of rotation of blade or cutter.
- 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.

# SAFETY GUIDELINES

- WHEN OPERATING A POWER TOOL OUTSIDE, USE AN OUTDOOR EXTENSION CORD MARKED "W-A" OR "W". These cords are rated for outdoor use and reduce the risk of electric shock.
- **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 work, around or over the blade while blade is rotating. Do not attempt to remove cut material when blade is moving.

# SPECIFIC SAFTEY 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 gauge 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.
- AVOID KICKBACKS (work thrown back toward you) by:
  - a) Keeping blade sharp.
  - b) Keeping rip fence parallel to the saw blade.
  - c) Keeping riving knife, 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, warped or does not have a straight edge to guide along the fence.

# **SAFETY GUIDELINES**

- 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 to avoid accidental starting when reconnecting to power supply.
- **ONLY USE BLADES** within the thickness range stamped on the saw blade and on instruction manual.
- THIS TOOL should have the following markings:
  - a) Wear eye protection.
  - b) Use saw blade guard and riving 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.
  - h) Never operate saw on floor or below waist height.
- NEVER CUT MORE THAN ONE PIECE OF MATERIAL AT A TIME.
- **SAVE THESE INSTRUCTIONS.** Refer to them frequently and use to instruct other users. If you loan someone this tool, loan them these instructions also.

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# **Specifications**

Blade Arbor: 5/8" Blade Diameter: 10" 24t Blade Tilt: 0° - 45° Rating: 120v, Ac Only, 60 Hz Input: 15 A No Load Speed: 5,000 Rpm Cutting Range: 0° - 45° Cutting Depth At 0°: 3-1/4" Cutting Depth At 45°: 2-1/4" Table Size: 25" x 19" 6' Cord With UI Plug

# **ELECTRICAL**

**A WARNING** All electrical connections must be performed by a qualified electrician.

# Power Source

Connect table saw to a supply circuit protected by a circuit breaker or time-delay fuse.

The motor is designed for operation on the voltage and frequency specified. Normal loads will be handled safely on voltages not more than 10% above or below the specified voltage.

Running the unit on voltages which are not within the range may cause overheating and motor burn-out. Heavy loads require that the voltage at motor terminals be no less than the voltage specified. Power supply to the motor is controlled by a single pole locking rocker switch. Remove the key to prevent unauthorized use.

# **Grounding Instructions**

**A WARNING** Improper connection of equipment grounding conductor can result in the risk of electrical shock. Equipment should be grounded while in use to protect operator from electrical shock.

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

This tool is equipped with an approved 3-conductor cord rated at 300V and a 3-prong grounding type plug for your protection against shock hazards.

Grounding plug should be plugged directly into a properly installed and grounded 3prong grounding-type receptacle, as shown.

Do not remove or alter grounding prong in any manner. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electrical shock.



# **A WARNING** Do not permit fingers to touch the terminals of plug when installing or removing from outlet.

Plug must be plugged into matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify plug provided. If it will not fit in outlet, have proper outlet installed by a qualified electrician.

Inspect tool cords periodically, and if damaged, have repaired by an authorized service facility.

Green (or green and yellow) conductor in cord is the grounding wire. If repair or replacement of the electric cord or plug is necessary, do not connect the green (or green and yellow) wire to a live terminal.

Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with National Electric Code and local codes and ordinances.

# **A WARNING** This work should be performed by a qualified electrician.

A temporary 3-prong to 2-prong grounding adapter is available for connecting plugs to a two pole outlet if it is properly grounded.

Do not use a 3-prong to 2-prong grounding adapter unless permitted by local and national codes and ordinances.



(A 3-prong to 2-prong grounding adapter is not permitted in Canada.) Where permitted, the rigid green tab or terminal on the side of the adapter must be securely connected to a permanent electrical ground such as a properly grounded water pipe, a properly grounded outlet box or a properly grounded wire system.

Many cover plate screws, water pipes and outlet boxes are not properly grounded. To ensure proper ground, grounding means must be tested by a qualified electrician.

# Extension Cords

- The use of any extension cord will cause some drop in voltage and loss of power.
- Wires of the extension cord must be of sufficient size to carry the current and maintain adequate voltage.
- Use the table to determine the minimum wire size (A.W.G.) extension cord.
- Use only 3-wire extension cords having 3-prong grounding type plugs and 3-pole receptacles which accept the tool plug.
- If the extension cord is worn, cut or damaged in any way, replace it immediately.

# Extension Cord Length and Gauge (120V

Wire Size A.W.G.
18
16

NOTE: Using extension cords over 50 ft. long is not recommended.

# **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 anual, 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 teeth on the removable anti-kickback pawls point away from the workpiece. If the workpiece should be pulled back toward the operator, the teeth dig into the wood to help prevent or reduce the possibility of kickback.



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

**BLADE** - This saw is provided with a 24-tooth, 10 in. carbide blade. The blade is raised and lowered with the height/bevel adjusting handwheel. Bevel angles are locked with the bevel locking lever.



## 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 removable blade guard down over the saw blade for through-sawing cuts. BEVEL LOCKING LEVER - This lever, placed just under the saw table surface on the front of the cabinet, locks the angle setting of the blade.

**HEIGHT/BEVEL ADJUSTING HANDWHEEL** - Located on the front of the cabinet, use this handwheel to lower and raise the blade for height adjustments or blade replacement. This handwheel also makes the adjustment for bevel angles easy.

**MITER GAUGE** - The miter gauge aligns the wood for a cross cut. The easy-to-read indicator shows the exact angle for a miter cut.

MITER GAUGE GROOVES - The miter gauge rides in the grooves on the saw table.

**RIP FENCE** - A sturdy metal fence guides the workpiece and is secured with the locking lever. RIVING KNIFE - A removable metal piece of the blade guard assembly, slightly thinner than the saw blade, which helps keep the kerf open and prevent kickback. When in the through sawing, or up position, it is higher than the saw blade. When in the non-through sawing, or down position, it is below the saw blade teeth.

**SCALE** - Located on the front rail, the easy-to-read scale provides precise measurements for rip cuts.

## **OPERATING COMPONENTS**

The upper portion of the blade projects up through the table and is surrounded by an insert called the table insert. The height of the blade is set with a handwheel on the front of the cabinet. To accommodate wide panels, the saw table has rails on each side. Detailed instructions are provided in the Operation section of this manual for the basic cuts: cross

# **FEATURES**

cuts, miter cuts, bevel cuts, and compound cuts.

The rip fence is used to position work for lengthwise cuts.

A scale on the front rail shows the distance between the rip fence and the blade.

It is very important to use the blade guard assembly for all through-sawing operations. The blade guard assembly includes: riving knife, anti-kickback pawls, and plastic blade guard.

## **ON/OFF SWITCH**

- To turn the saw on, press the green button "I". Wait for the blade to reach its maximum speed of rotation before commencing with the cut.
- To turn the machine off again, press the red button "O".





#### 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 (  ${\rm O}$  ) position before plugging tool into the power source.

#### BLADES

For maximum performance, it is recommended that you use the 24-tooth, 10" carbidetipped 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. Kerf width must be within the limits stamped on the riving knife.



#### WARNING!

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





LOOSE PARTS



## <u>Unpacking</u>

This product requires assembly.

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

<u>NOTE:</u> 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.

A WARNING Do not use this product if any parts on the loose parts lists are already assembled to your product when you unpack it. Parts on this list are not assembled to the product by the manufacturer and require customer installation. Use of a product that may have been improperly assembled could result in serious personal injury.

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



fully inspected the tool, identified all loose parts, and satisfactorily operated the tool.

<u>NOTE:</u> Remove the foam block from between the saw's housing and the motor by first beveling the blade.

 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.

**A WARNING** If any parts are damaged or missing, do not operate this tool until the parts are replaced. Use of this product with damaged or missing parts could result in serious personal injury.

**A 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.

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

# LOOSE PARTS



#### 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.

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# MOUNTING THE TABLE SAW BASE ON THE LEG STAND

• Take the following from the table saw base: 8 hex bolts

### NOTE

- Place the table saw base on the leg stand. Align the holes in the table.
- Place a bolt in each hole. Hand tighten.
- Repeat for three remaining holes. Tighten all hardware securely with the socket wrench.

# TO INSTALL THE HANDLE

See Figure 9.

 Hold the nylon nut securely and turn the screw counterclockwise to remove the nut completely.

NOTE: Do not remove the screw from the handle.

- Place the nylon nut into the recessed hole on the back of the height/bevel adjusting handwheel and hold in place.
- $\cdot\,$  Slide the handle, screw, and washer into the hole on the height/bevel adjusting handwheel.
- · Using a flathead screwdriver, turn the screw clockwise and tighten in place.

#### TO REMOVE/REPLACE THE TABLE INSERT

See Figure 10.

- Lower the blade by turning the height/bevel adjusting handwheel counterclockwise.
- · Remove the table insert.



# TO CHANGE RIVING KNIFE POSITIONS

See Figure 11.

This saw is shipped with a riving knife that should be placed in the "down" position for non-through cutting and must be placed in the "up" position for all other cutting operations.

Unplug the saw.

# To place in the "up" position for all through cutting:

- · Remove the table insert.
- Raise the saw blade by turning the height/bevel adjusting handwheel clockwise.
- Unlock the release lever by pulling it up.
- Grasp the riving knife and pull it towards the right side of the saw to release the riving knife from the spring-loaded riving clamp.
- Pull the riving knife up until the internal pins are engaged and the riving knife is above the saw blade.
- Lock the release lever by pushing the lever down.
- Reinstall the table insert.

# To place in riving knife "down" position for all nonthrough cutting:

- Remove the table insert.
- Raise the saw blade by turning the height/bevel adjusting handwheel clockwise.
- Unlock the release lever by pulling it up.
- Grasp the riving knife and pull it towards the right side of the saw to release the riving knife from the spring-loaded riving clamp.
- Push the riving knife down until it is below the saw blade.
- Pull the riving knife up until the internal pins are engaged and the riving knife is above the saw blade.
- Lock the release lever by pushing the lever down.
- Reinstall the table insert.



# TO CHECK SAW BLADE INSTALLATION

See Figure 12.

**NOTICE:** To work properly, the saw blade teeth must point down toward the front of the saw. Failure to do so could cause damage to the saw blade, the saw, or the workpiece.

- Unplug the saw.
- Lower the saw blade and remove the table insert.
- Make sure the bevel locking lever is securely pushed to the right. Raise the saw blade to its full height by turning the height/bevel adjusting handwheel clockwise.
- Place riving knife in "up" position.

#### To loosen the blade:



- Insert the closed end wrench on the blade washer.
- Insert the closed end blade wrench over the blade nut. Holding both wrenches firmly, pull the closed end wrench forward to the front of the machine.

#### To tighten the blade:

- Insert the closed end wrench on the blade washer.
- Insert the closed end blade wrench over the blade nut. Holding both wrenches firmly, push the closed end wrench to the back of the machine. Make sure the blade nut is securely tightened. Do not overtighten.
- Reinstall the table insert.
- Check all clearances for free blade rotation.

# TO INSTALL THE BLADE GUARD AND ANTI-KICKBACK PAWLS

See Figures 13 - 15.



## WARNING!

Replace dull or damaged anti-kickback pawls. Dull or damaged pawls may not stop a kickback, increasing the risk of serious personal injury.

Anti-kickback pawls should only be installed for through cuts.

- Unplug the saw.
- Raise the saw blade by turning the height/bevel adjusting handwheel clockwise.
- Place riving knife in "up" position.
- Reinstall the table insert.

#### To install anti-kickback pawls:

- Press and hold the button on the right side of the anti-kickback pawls.
- Align the slot in the pawls over the rear hole in the riving knife.
- Push the pawl handle down, snapping them into place and release the button.

**NOTE:** Pull on the pawl handle to make sure pawls are securely locked.

## TO INSTALL THE BLADE GUARD:

- Lift the guard lever up to unlock.
- With the front of the blade guard raised, lower the back of the guard into the middle hole of the riving knife. Push the front of the guard down until it is parallel to the table (see figure 15). If the blade guard is not parallel to the table, the riving knife is not in the "up" position.
- Lock the guard in place by pushing the guard lever down.

**NOTE:** Blade alignment can be adjusted for different blade widths. Refer to: To Check and Align the Riving Knife and Saw Blade. Check the blade guard assembly for clearances and free movement.



# TO CHECK AND ALIGN THE RIVING KNIFE AND SAW BLADE

See Figures 16 - 17.

# To check alignment of the riving knife:

- Unplug the saw.
- Raise the saw blade by turning the height/bevel adjusting handwheel clockwise.
- Remove the anti-kickback pawls and blade guard assembly. Place a framing square or straight edge against both the saw blade and the riving knife.

**NOTE:** Place framing square between carbide teeth and measure from blade. This step will insure framing square is square against blade from the front to back of blade.

 The saw blade and riving knife are aligned when the framing square contacts both the blade and riving knife evenly with no gaps. If the riving knife is out of alignment with the saw blade, adjustment is needed. The riving knife must be in alignment front to back (horizontally) and top to bottom (vertically).

# To adjust (horizontally and vertically):

- Remove the anti-kickback pawls and blade guard assembly.
- Grasp the outfeed support with both hands and pull it until it is fully extended.
- From the back of the saw, loosen the screws holding the mounting bracket.
- Reposition the riving knife left or right as needed to align the riving knife with the saw blade.
- Once properly aligned, securely retighten all screws.
- Check again for squareness and continue to adjust if needed.

# WRENCH AND BLADE STORAGE

See Figure 18.

Insert Blade and wrench into the holes on the side of the table saw, tighten screws securely. The push stick and power cable have on board storage as shown in Fig. 18.





#### 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 eye protection with side shields marked to comply with ANSI Z87.1. 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 many 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
- 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 polarized 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. Kickback can cause serious injury. Use precautions to avoid the risks.

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

- 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. Use 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.
- Use extra caution when cutting some prefinished or composition wood products as the anti-kickback pawls may not always be effective.
- Always guide your workpiece with both hands or with push sticks and/or push blocks. 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 of a featherboard will help hold the workpiece securely against the saw table or fence.
- Clean the saw, blade guard, under the table insert, and any areas where saw dust or scrap workpieces may gather.
- Use the right type of blade for the cut being made.
- Always use the riving knife for every operation where it is allowed. The use of this device will greatly reduce the risk of kickback.

## **CUTTING AIDS**

See Figure 19.

Push sticks are devices that may be used for pushing a workpiece through the blade in any rip cut. When making non-through cuts or ripping narrow stock, always use a push stick, push block, and/or feather- board so your hands do not come within 3 inches of the saw blade. They can be made in various sizes and shapes from scrap wood and used 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 push block has a handle fastened by recessed screws from the underside. Use push blocks for narrow cuts and all non-through cuts.

**NOTICE:** Be sure the screws in a push block are recessed to avoid damaging the saw or workpiece.

## TYPE OF CUTS

See Figure 24.

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. Miter cuts tend to "creep" during cutting. This can be controlled by holding the workpiece securely against the miter gauge.

#### WARNING!

Always use a push stick with 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.

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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.

• Always provide proper support for the wood as it comes out of the saw.

# TO CHANGE BLADE DEPTH

See Figure 25.

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.

- Turn the bevel lock lever to the right.
- Raise the blade by turning the height/bevel adjusting handwheel clockwise or lower it by turning the handwheel counterclockwise.

# TO CHANGE BLADE ANGLE (BEVEL)

See Figure 26.

This table saw has a rack and pinion bevel control that allows you to make angled cuts from 90° to 45°.

**NOTE:** A 90° cut has a 0° bevel and a 45° cut has a 45° bevel.

- Unplug the saw.
- Loosen bevel locking knob. Move the height adjusting handwheel to the right to bevel to a 45° angle. Then tighten bevel locking knob.



Fig. 26



**WARNING!** To reduce the risk of injury, always make sure the rip fence is parallel to the blade before beginning any operation.

# TO USE THE RIP FENCE

See Figure 29.

- Place the rear lip on the rear of the saw table and pull slightly toward the front of the unit.
- Lower the front end of the rip fence onto the guide surfaces on top of the front rail.
- With the rip fence flat on the saw table, push the fence towards the front rail to align the fence to the saw table.
- Push the locking lever down to 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.
- Make two or three test cuts on scrap wood. If the cuts are not true, repeat the
  process.

**NOTE:** The rip fence must be secure when the locking handle is engaged. To increase the grip of the rip fence on the rear lip of the table, tighten the clamp screw on the rear of the rip fence by turning it clockwise.



## TO SET THE RIP FENCE SCALE INDICATOR TO THE BLADE

See Figure 29.

Use the indicator on the rip fence to position the fence along the scale on the front rail.

**NOTE:** The anti-kickback pawls and blade guard assembly must be removed to perform this adjustment. Reinstall the blade guard assembly when the adjustment is complete.

Begin with the blade at a zero angle (straight up).

- Unplug the saw.
- Loosen the rip fence by lifting the locking lever.
- Using a framing square, set the rip fence 2 in. from the blade tip edge.
- Loosen the screw on the scale indicator and align with the 2 in. mark as shown.
- Tighten the screw and check the dimension and the rip fence.

# TO USE THE MITER GAUGE

See Figure 30.

The miter gauge provides greater accuracy in angled cuts. For very close tolerances, test cuts are recommended. There are two miter gauge grooves, one on either side of the blade. When making a 90° cross cut, you can use either miter gauge groove. When making a beveled cross cut (the blade tilted in relation to the table) the miter gauge should be located in the groove 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 groove, rotate the gauge until the desired angle is reached on the scale.
- Retighten the lock knob.





#### WARNING!

The blade must be parallel to the miter gauge groove 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 square and made test cuts to be sure adjustments are necessary. Once the screws are loosened, these items must be reset.

# HEELING (PARALLELING) THE BLADE TO THE MITER GAUGE GROOVE

See Figures 31 - 33.

- · Unplug the saw.
- Remove the blade guard and anti-kickback pawls. Raise the blade by turning the height/ bevel adjusting handwheel.
- Mark beside one of the blade teeth at the front of the blade. Place a combination square even with the front of the saw table and the side of the saw blade as shown in figure 31.
- Turn the blade so the marked tooth is at the back.
- Move the combination square to the rear and again measure the distance. If the distances are the same, the blade is square. If the distances are different:
- Place riving knife in "down" position.
- Loosen the adjusting screws, located on top of the saw table.

**NOTE:** If the back of the blade was too far from the combination square, place a block of wood on the left side of the blade and push it into the blade until the blade is square. Retighten the screws.

If the back of the blade was too close to the combination square, place a block of wood on the right side of the blade and push it into the blade until the blade is square.

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.

# **BLADE ADJUSTMENTS**

#### WARNING!

Before performing any adjustment, make sure the tool is unplugged from the power supply and the switch is in the OFF position. 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 43 - 45.

- Unplug the saw.
- Remove the blade guard and anti-kickback pawls.
- Lower the saw blade and remove the table insert.
- Make sure the bevel locking lever is locked.
- Raise the saw blade to full height.
- Insert the closed-end blade wrench on the blade washer.
- Insert the closed-end blade wrench over the blade nut. Holding both wrenches firmly, pull the closed end wrench (right side) forward while pushing the closed end wrench (left side) to the back of the saw. Remove the nut.
- Unlock the release locking lever and remove the blade.

#### To install a standard blade:

- Place the new blade on the arbor shaft (the teeth must point down toward the front of the saw to work properly).
- Place the blade washer and the blade nut over the arbor shaft. Be sure the dome side of the blade washer faces the blade and that all items are snug against the arbor housing. Make sure the blade nut is securely tightened. Do not overtighten.
- Lock the release lever.
- Rotate the blade by hand to make sure it turns freely.
- Lower the saw blade and reinstall the table insert.

**NOTE:** To replace the blade with an accessory blade, follow the instructions provided with the accessory.



# **BLADE ADJUSTMENTS**

# TO SET THE BLADE AT 0° AND 45°

See Figures 46 - 48.

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

- Unplug the saw.
- Raise the blade.
- Remove the blade guard assembly.

# If the blade is not perfectly vertical (0°):

- Loosen the adjustment screw and the bevel locking knob.
- Place a combination square beside the blade on the left.
- Lock the angle by pushing the bevel locking lever down and retighten the adjustment screw.
- Turn the handle until the bevel indicator points to zero. If the handle is turned as far as possible and doesn't indicate zero properly, you may need to adjust the bevel indicator.

#### NOTE:

handle to adjust the bevel indicator.

## If the blade is not an exact 45°:

- Loosen the adjustment screw and the bevel locking knob.
- Place a combination square beside the blade on the left.
- Turn the handle until the bottom of the blade has moved completely to the left side of the slot. Lock the angle by pushing the bevel locking lever.

- If the blade is not an exact 45°, loosen the 45° adjustment screw and the bevel locking lever.
- Adjust the bevel indicator to 45°.
- Make a test cut.



# **BLADE ADJUSTMENTS**

#### TO CHECK THE ALIGNMENT OF THE RIP FENCE TO THE BLADE

See Figure 49.

- Unplug the saw.
- Raise the locking lever 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 bolts on the fence and align it.
- Retighten the two bolts.
- Make two or three test cuts on scrap wood. If the cuts are not true, repeat the process.

# **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.



#### WARNING!

Before performing any maintenance, make sure the tool is unplugged from the power supply and the switch is in the off (  ${\rm O}$  ) position. Failure to heed this warning could result in serious personal injury.

## **GENERAL MAINTENANCE**

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, and screws for tightness and condition. Make sure the table insert 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.

# **MAINTENANCE**

- Protect the blade by cleaning out sawdust 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

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.

PROBLEM	CAUSE	SOLUTION		
Excess vibration	Blade is out of balance.	Replace blade.		
	Blade is damaged.	Replace blade.		
	Saw is not mounted securely.	Tighten all hardware.		
	Work surface is uneven.	Reposition on flat surface.		
	Blade is warped	Check saw blade installation. Replace blade if necessary.		
Rip fence does not move smoothly.	Rip fence not mounted correctly.	Remount the rip fence.		
	Rails are dirty or sticky.	Clean and wax rails.		
	Clamp screw is out of adjustment.	Adjust clamp screw counterclockwise.		
Rip fence does not lock at rear.	Clamp screw is out of adjustment.	Adjust clamp screw clockwise.		
Cutting binds or burns work.	Blade is dull.	Replace or sharpen blade.		
	Blade is heeling.	See "Heeling the Blade" in the Operations section.		
	Work is fed too fast.	Slow the feed rate.		
	Rip fence is misaligned.	Align the rip fence.		
	Wood is warped.	Replace the wood. Always cut with convex side to table surface.		
	Riving knife is out of alignment.	See "To check and align the riving knife and saw blade" in the Assembly section.		
Wood edges away from rip fence when ripping.	Blade not properly sharpened or set.	Resharpen or set blade.		
Saw does not make accurate 90° or 45° cuts.	Positive stops inside cabinet need adjusting (Bevel Cuts).	Adjust positive steps.		
	Miter gauge is misaligned (Miter Cuts).	Adjust the miter gauge.		

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# TROUBLESHOOTING

# **MAINTENANCE**

# TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION		
Hight/bevel adjusting handwheel is hard to turn.	Gears or screw post inside cabinet are clogged with saw dust.	Clean the gears or screw post.		
Saw does not start.	Motor cord or wall cord not plugged in.	Plug in motor cord or wall cord.		
	Circuit fuse is blown.	Replace circuit fuse.		
	Circuit breaker is tripped.	Reset circuit breaker.		
	Cord or switch is damaged.	Have the cord or switch replaced at your nearest authorized service center.		
Blade makes poor cuts.	Blade is dull or dirty.	Clean, sharpen or replace blade.		
	Blade is wrong type for cut being made.	Replace with correct type.		
	Blade is mounted backwards.	Remount blade.		
Blade does not lower when turning height/bevel adjusting handwheel.	Locking lever is not at full left position.	Move locking lever to left.		
Motor labors to rip cut.	Blade is not proper for rip cut.	Change blade; rip blade typically has fewer teeth.		

## MAINTENANCE AND SERVICE

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

#### WARNING!

Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE: Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

#### **Cleaning, Maintenance and Lubrication**

- BEFORE EACH USE, inspect the general condition of the tool. Check for: loose hardware, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
- AFTER USE, wipe external surfaces of the tool with clean cloth.



#### WARNING!

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

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



# PARTS LIST

Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Table insert	9643343.01	1	75	Self tapping screws	*	2	206	Label	9643410.01	1
2	Table insert assy.	9643345.01	1		M4 x 20			207	Bearing	9643411.01	1
3	Screw	*	4	76	Bevel gear	9643374.01	2	208	Pin M5 x 16	*	1
4	Blade guard holder	9643405.01	1	77	Bushing - driving rod	9643375.01	1	209	Top barrier	9643412.01	1
5	Rear Fence Rail	9645081.01	1	78	Actuating arm	9643376.01	1	210	Coil spring	9643413.01	1
6	Screw M6 x30	*	4	79	Spring pin M3 x 20	*	1	211	Pin	9643414.01	1
7	Short sliding rail	9643346.01	1	80	Bevel gear pad	9643377.01	1	212	Pin M5 x 30	*	1
8	Knob M6 x 25	9643347.01	2	81	Limit block	9643378.01	1	213	Warning label (left)	9643415.01	1
9	Spring	9643348.01	1	82	Elevation crank shaft	9643379.01	1	214	Blade guard (right)	9643416.01	1
12	Motor housing field assy.	9643349.01	1	83	Double nut M12	9643380.01	1	215	Warning label (right)	9643417.01	1
23	Spring washer M5	*	14	84	Cotter pin M2.5 x 20	*	1	216	Guard nameplate (right)	9643418.01	1
24	Washer M5	*	3	85	Bracket - driving rod	9643381.01	1	217	Warning label	9643419.01	2
29	Riving knife bracket	9643350.01	1	86	Washer	9643382.01	1	218	Guard nameplate (left)	9643420.01	1
30	Set screw M6 X 10	*	1	87	Spring	9643383.01	1	302	Knob	9643421.01	1
31	Hex bolt M6x25	*	3	88	Bevel gear wheel	9643384.01	1	303	Miter guage	9643422.01	1
39	Flat key M4x12	*	1	89	Locknut M6	*	3	304	Rod - miter gauge	9643423.01	1
40	Arbor	9643351.01	1	90	Bevel crank wheel	9643385.01	1	305	Self tapping screws M5 x 18		1
41	Motor bracket	9643352.01	1	91	Knob	9643386.01	1	306	Hex bolt M6 x 35	*	1
42	Rear mount	9643353.01	1	92	Screw M6	*	1	307	Miter gauge indicator	9643424.01	1
43	Screw M5x18	*	4	93	End cap	9643387.01	2	308	Washer M4	*	1
44	Pivot plate (rear)	9643354.01	1	94	Power cord	9643388.01	1	401	Compression spring	9643425.01	1
44	Locknut M5	*	7	95	Cord press plate	9643389.01	1	401	Clamp bushing	9643426.01	1
45 46	Pivot plate (front)	9643355.01	1	96	Cable sheath	9643390.01	1	402	Riving knife	9643427.01	1
40 47	Front mount	9643356.01	1	90 97		*	5	403	Riving knife clamp	9643427.01	1
47	Screw M6x30	*	4	97	Self tapping screws M4.2 x 16		5	404	Riving lock lever	9643429.01	1
40 49		9643357.01		98	Pad for cord clamp on	9643391.01	1	405	•	9643429.01 9643430.01	1
	Inner blade flange	9043357.01	1	90	•	9043391.01	1		Locking pin	9043430.01 *	
50	Washer M4 Blade	0040050.04	1	99	switch box	9643392.01	1	501	Pin M3 x 18		1
52		9643358.01	1		Switch box			502	Anti-kickback pawl left	9643431.01	1
53	Gutter blade flange	9643359.01	1	101	Switch assembly	9644427.01 *	1	503	Button board	9643432.01	1
54	Hex bolt M8 x 16	•	1	102	Hex bolt M6 x 16		3	504	Torsion spring	9643433.01	1
55	Dust chute	9643360.01	1	103	Washer	9643395.01	5	505	Anti-kickback pawl	9643434.01	1
56	Shoulder screws	9643361.01 *	2	104	Bevel scale	9643396.01	1	506	Anti-kickback pawl right	9643435.01	1
57	Wing nut M6		1	105	90° angle adjustment wheel	9643397.01	1	601	Rip fence lock lever	9643436.01 *	1
58	Wrench B	9643362.01	1	106	Screw M5 x 12	*	3	602	Pin M4 X 16		2
59	Wrench A	9643363.01	1	107	Rack	9643398.01	1	603	Link block	9643437.01	1
60	Washer	9643364.01	1	108	Nut M5	*	5	604	Rod - rip fence	9643438.01	1
61	Nut M6	*	9	109	45° angle adjustment wheel		1	605	Spring	9643439.01	1
62	Knob ring	9643365.01	1	110	Logo	9643400.01	1	606	Rear clamping plate	9643440.01	1
63	Carriage bolt M6 x 25	*	1	111	Square nut M6	*	8	607	Spring holder	9643441.01	1
64	Cabinet	N/A	1	112	Hex bolt M6 x 12	*	24	608	Rip fence	9643442.01	1
65	Scale	9643366.01	1	113	Legs	9643401.01	4	609	Rip fence end cap	9643443.01	1
66	Front extension rod	9643367.01	1	114	Foot	9643402.01	4	610	Barrier	9643444.01	1
67	Push stick	9643368.01	1	115	Cross struts (C)	9643403.01	2	611	Self tapping screw M4 x 8	*	1
68	Cross screws M5 x 10	*	2	116	Cross struts (B)	9643404.01	2	612	Rip fence indicator	9643445.01	1
69	Socket screw M5 x 12	*	5	117	Lock Nut M5	9643405.01	7	613	Hex bolt M6 x 10	*	2
70	Bevel indicator	9643369.01	1	118	Left end cap	9643406.01	1	614	Retaining bracket	964344601	1
71	Mount plate	9643370.01	1	201	Screws M5 x 52	*	2	615	Spine	9643447.01	1
72	Washer	9643371.01	2	202	Washer M5	*	2	617	Spring Holder	9645082.01	1
73	Spring	9643372.01	1	203	Special spring	9643407.01	2	618	Rear Support Bracket Assy.	9645283.01	1
74	Bevel lock knob	9643373.01	1	204	Blade guard (left)	9643408.01	1	Δ	Operating Instructions &	9643342.03	
				205	Upper guard lever	9643409.01	1		Parts Manual		
								Δ	Rip Fence Assembly	9643341.01	

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 $(\Delta) \mbox{ Not shown.}$  (\*) Standard hardware item, available locally.

(N/A) Not available as a replacement part

# **NORSE Warranty**

NORSE by C.H. Hanson warrants their products to be free of defects in material or workmanship. This warranty does not cover defects due directly or indirectly to misuse, abuse, normal wear and tear, failure to properly maintain the product, heated, ground or otherwise altered, or used for a purpose other than that for which it was intended.

The warranty does not cover expendable and/or wear part (i.e. v-belts, screws, abrasives, jaws), damage to tools arising from alteration, abuse or use other than their intended purpose, packing and freight. The duration of this warranty is expressly limited to the terms noted below beginning from the date of delivery to the original user.

The NORSE branded items carry the following warranties on parts:

All NORSE branded Tools and Accessories 1 YEAR

The obligation of NORSE by C.H. Hanson is limited solely to the repair or replacement, at our option, at its factory or authorized repair agent of any part that should prove inoperable. Purchaser must lubricate and maintain the product under normal operating conditions at all times. Prior to operation become familiar with product and the included materials, i.e. warnings, cautions and manuals.

## Failure to follow these instructions will void the warranty.

This warranty is the purchaser's exclusive remedy against C. H. Hanson for any inoperable parts in its product. Under no circumstances is C. H. Hanson liable for any direct, indirect, incidental, special or consequential damages including loss of profits in any way related to the use or inability to use our products. This warranty gives you specific legal rights which may vary from state to state.

# **SERVICE & REPAIR**

- If a NORSE product requires a repair or warranty service **DO NOT** return the product to the place of purchase.
- 2. All warranty related work must be evaluated and approved by NORSE.
- 3. Prior to returning any item the user must obtain factory approval and a valid RGA number.
- 4. For instructions and RGA number call toll free (800) 827-3398.



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