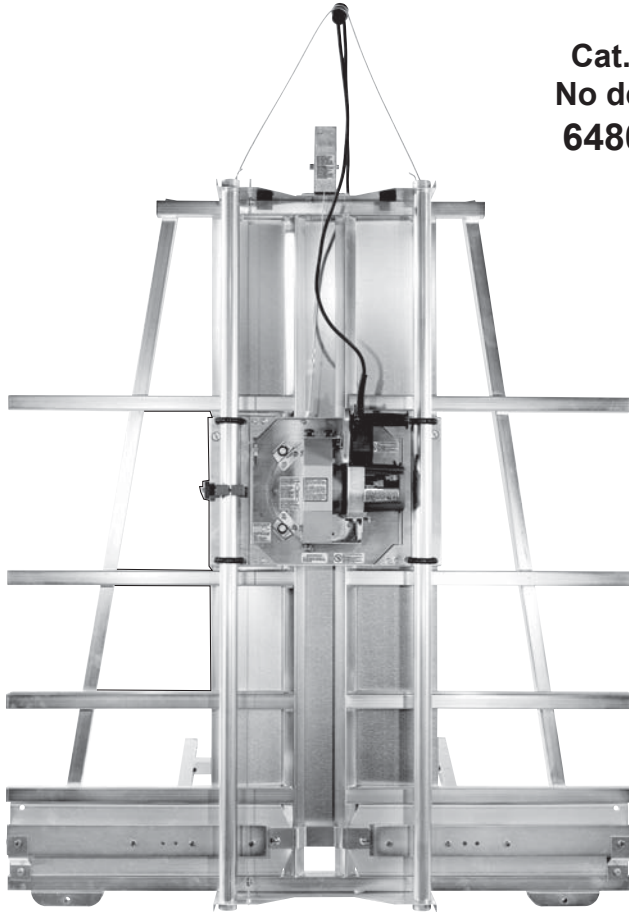




**OPERATOR'S MANUAL
MANUEL de L'UTILISATEUR
MANUAL del OPERADOR**

**Cat. No.
No de cat.
6480-20**



**HEAVY-DUTY 8" PANEL SAW
SCIE À PANNEAU INDUSTRIELLE DE 203 mm (8")
SIERRA PARA TABLEROS DE 203 mm (8") PARA SERVICIO PESADO**

*TO REDUCE THE RISK OF INJURY, USER MUST READ OPERATOR'S MANUAL.
AFIN DE RÉDUIRE LE RISQUE DE BLESSURES, L'UTILISATEUR DOIT LIRE LE
MANUEL DE L'UTILISATEUR.
PARA REDUCIR EL RIESGO DE LESIONES, EL USUARIO DEBE LEER EL MANUAL
DEL OPERADOR.*

GENERAL SAFETY RULES



WARNING

READ ALL INSTRUCTIONS

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


SAVE THESE INSTRUCTIONS

WORK AREA SAFETY

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.
4. **Protect others in the work area** from debris such as chips and sparks. Provide barriers or shields as needed.
5. **Make workshop child proof** with padlocks, master switches, or by removing starter keys.

ELECTRICAL SAFETY

6. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
7. **Double Insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does**

not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation  eliminates the need for the three wire grounded power cord and grounded power supply system.

8. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. When making blind or plunge cuts, always check the work area for hidden wires or pipes. Hold your tool by insulated nonmetal grasping surfaces. Use a Ground Fault Circuit Interrupter (GFCI) to reduce shock hazards.
9. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
10. **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
11. **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.

PERSONAL SAFETY

12. **Know your power tool.** Read this manual carefully to learn your power tool's applications and limitations as well as potential hazards associated with this type of tool.
13. **Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

14. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts. When working outdoors, wear rubber gloves and insulated non-skid footwear. Keep hands and gloves away from moving parts.
15. **Avoid accidental starting. Be sure switch is off before plugging in.** Do not use a tool if the power switch does not turn the tool on and off. Do not carry a plugged-in tool with your finger on the switch.
16. **Remove adjusting keys or wrenches before turning on the tool.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
17. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
18. **Use safety equipment.** Everyone in the work area should wear safety goggles or glasses with side shields complying with current safety standards. Everyday eyeglasses only have impact resistant lenses. They are not safety glasses. Wear hearing protection during extended use and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc., should be used when specified or necessary. Keep a fire extinguisher nearby.
19. **Keep guards in place** and in working order.
20. **Never stand on tool.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
21. **Keep hands away from all cutting edges and moving parts.**
22. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.

TOOL USE AND CARE

23. **Do not force tool.** Your tool will perform best at the rate for which it was designed. Excessive force only causes operator fatigue, increased wear and reduced control.

24. **Use the right tool.** Do not use a tool or attachment to do a job for which it is not recommended. For example, do not use a circular saw to cut tree limbs or logs. Do not alter a tool.
25. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
26. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
27. **Never leave the tool running unattended.** Turn power off. Do not leave the tool until it comes to a complete stop.
28. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
29. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.
30. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.

SERVICE

31. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
32. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

1. **Maintain labels and nameplates.** These carry important information. If unreadable or missing, contact a *MILWAUKEE* service facility for a free replacement.
2. **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 paint
 - 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 specifically designed to filter out microscopic particles.
3. **Handle the counterbalance with care.** The cable is under tension. Always assemble cable to saw carriage before removing cable clip. Do not pull on cable by hand or attempt to disassemble or repair the counterbalance.
4. **Do not defeat the guards or operate the tool without the guards in place.**
5. **Do not use push sticks.** Push sticks or the workpiece can kick back, cause the blade to pinch, or become caught in the blade and be thrown from the tool.
6. **Cross-cutting (vertical cutting) must always be done from the top down.** Saw carriage should be raised to the uppermost position on the guide tubes and locked into position with the carriage lock whenever the tool is not in use. See "Cross-Cutting".
7. **Ripping (horizontal cutting) must rip-ping must always be done by moving the workpiece through the saw in the direction of the arrow on the saw motor.** Saw carriage should be raised to the top of the guide tubes and locked into position with the carriage lock whenever tool is not in use. See "Rip Cutting".

8. **Never cut a workpieces with a width smaller than that of the saw carriage.** Proper support for the workpiece must be maintained to insure safety. When the carriage moves over the workpiece, it would be impossible to safely support the workpiece for the cut. Use a tool better suited for these applications.
9. **Always wait for blade to stop completely before changing positions.** Unplug the tool before transporting or moving it.
10. **Do not place hands on or under saw carriage or in the path of the blade.** Do not attempt to retrieve a piece of material that is cut off while the blade is rotating.
11. **Make workshop child proof** with padlocks, master switches, or by removing starter keys. See "Lock-Off Feature".
12. **Replace guards after blade change.** Maintain guards in working order.
13. **Direction of feed.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
14. **Causes and Operator Prevention of KICKBACK:**

KICKBACK is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator.

When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator when cross-cutting and throws out the workpiece if ripping.

If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward operator.







KICKBACK is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

- **Keep blade clean and sharp.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and KICKBACK. Any blade with a small set, even though sharp, may be likely to kick back. A dull blade encourages the operator to force the saw, causing reduced control and blade binding. The excessive friction generated can cause the blade to warp or bind. Use only blades which are recommended for use with your tool. Do not use blades with incorrect size or shaped mounting holes. Never use defective or incorrect blade washers or bolts. Be sure the blade bolt is tight. Select the proper blade for the application. Blade speed specifications must be at least as high as nameplate RPM.
- **Do not force tool.** Let the saw do the work. A saw is more readily controlled and will do a better job when used in the manner for which it was designed.
- **Stay alert.** Watch what you are doing and use common sense. Do not allow yourself to be distracted. Do not operate tool when tired, under the influence of drugs or alcohol. Hold the tool or material firmly and exercise control at all times. Position yourself and co-work-

ers out of the kick back path. Repetitive cuts which lull the operator into careless movements can also cause kick back. A brief "stretch" may be all that is necessary to avoid a problem.

- **When blade is binding, or when interrupting a cut for any reason, turn the switch off and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or KICKBACK may occur.** Investigate and take corrective actions to eliminate the cause of blade binding.
- **To remove the blade after stopping mid-cut,** allow the blade to stop and then back up the saw (cross-cutting) or board (rip-cutting).
- **When restarting a saw in the workpiece, center the saw blade in the kerf and check that saw teeth are not engaged into the material.** If saw blade is binding, it may walk up or KICKBACK from the workpiece as the saw is restarted.
- **Avoid cutting nails.** Inspect for and remove all nails before cutting.

Symbology

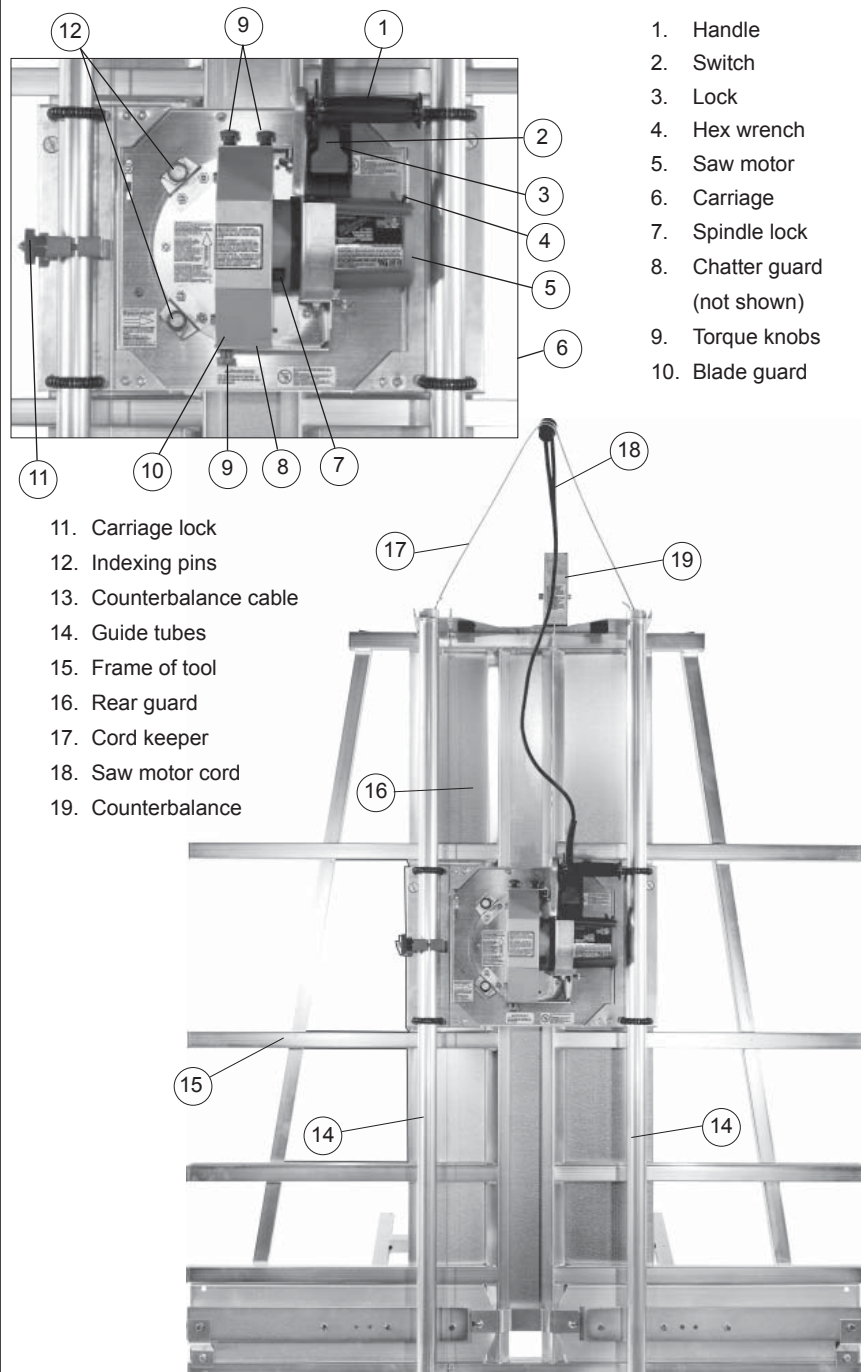
	Double Insulated	n_0 xxxx/min.	No Load Revolutions per Minute (RPM)
	Canadian Standards Association	A	Amperes
	Underwriters Laboratories, Inc.		Do not place hands on or under saw carriage or in the path of the blade.
	Volts Alternating Current		Do not expose to rain or use in damp locations.

Specifications

Cat. No.	Volts AC	Amps	Speed	Blade Size	Arbor	Capacity *	
						Thickness	Height
6480-20	120	15	5800	8-1/4"	5/8"	1-3/4"	50"

* For additional limitations, see the "Rip Cutting" and "Cross-cutting" sections.

FUNCTIONAL DESCRIPTION



1. Handle
2. Switch
3. Lock
4. Hex wrench
5. Saw motor
6. Carriage
7. Spindle lock
8. Chatter guard (not shown)
9. Torque knobs
10. Blade guard

11. Carriage lock
12. Indexing pins
13. Counterbalance cable
14. Guide tubes
15. Frame of tool
16. Rear guard
17. Cord keeper
18. Saw motor cord
19. Counterbalance

GROUNDING



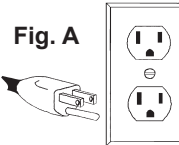
WARNING

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a MILWAUKEE service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounded Tools: Tools with Three Prong Plugs

Tools marked "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet (See Figure A). If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.

Fig. A



The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure A.

Double Insulated Tools: Tools with Two Prong Plugs

Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association and the National Electrical Code. Double Insulated tools may be used in either of the 120 volt outlets shown in Figures B and C.

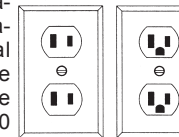


Fig. B Fig. C

EXTENSION CORDS

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. Refer to the table shown to determine the required minimum wire size.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

Guidelines for Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Recommended Minimum Wire Gauge for Extension Cords*

Nameplate Amperes	Extension Cord Length				
	25'	50'	75'	100'	150'
0 - 2.0	18	18	18	18	16
2.1 - 3.4	18	18	18	16	14
3.5 - 5.0	18	18	16	14	12
5.1 - 7.0	18	16	14	12	12
7.1 - 12.0	16	14	12	10	
12.1 - 16.0	14	12	10		
16.1 - 20.0	12	10			

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

**READ AND SAVE ALL
INSTRUCTIONS FOR
FUTURE USE.**

TOOL ASSEMBLY



WARNING

To reduce the risk of injury, always unplug tool before attaching or removing accessories or making adjustments. Use only specifically recommended accessories. Others may be hazardous.

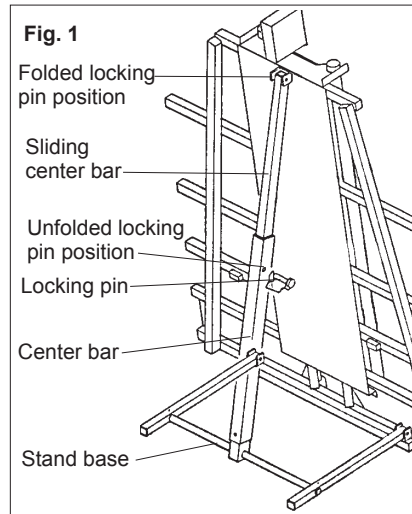
Assembly Order

To avoid injury or damage to the tool, follow the order of sections in "Tool Assembly". Set up the tool in the following order of sections:

1. Setting up the Stand
2. Installing the Counterbalance
3. Mounting the Saw Motor
4. Installing Blades
5. Adjusting the Rulers
6. Installing the Blade Guard
7. Installing the Cord Keeper

Setting up the Stand

Use at least two people to remove packaging and set up the stand. One person should hold the stand in an upright position while the other removes the packaging and sets the folding stand to make the tool free-standing.



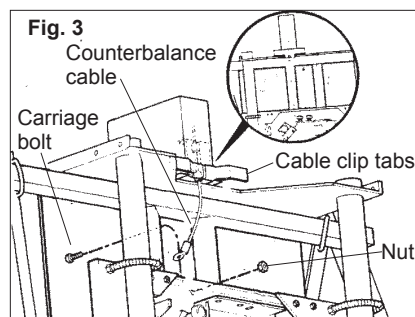
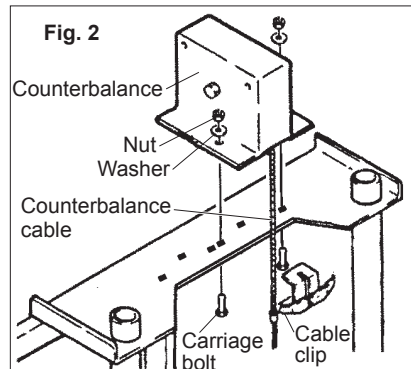
1. While having another person hold the stand in the upright position, stand behind the tool. Remove the locking pin from the folded locking pin position with one hand while holding the stand base with your other hand so it does not unfold onto your feet.
2. Unfold the stand slowly until the hole in the sliding center bar is aligned with the hole in the center bar.
3. Insert the locking pin through the holes and lock it securely.



WARNING

To reduce the risk of injury or damage to components, do not attempt to disassemble or repair the counterbalance. Do not pull on the counterbalance cable. The cable is under strong spring force. Unit must be properly assembled before removing cable clip.

Installing the Counterbalance



8

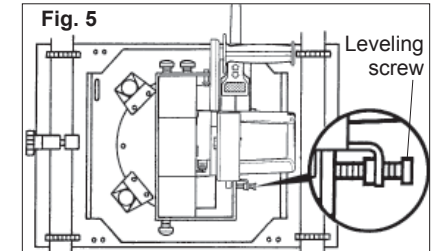
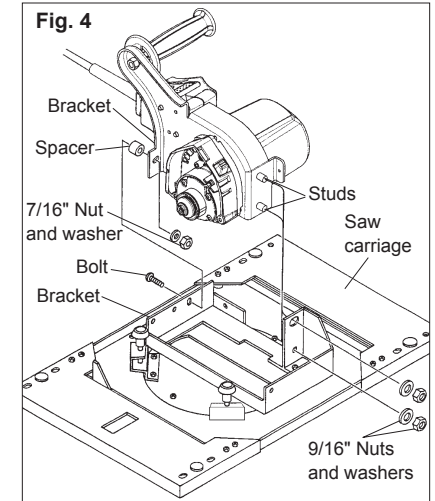
1. Remove the (2) 1/4" - 20 nuts, (2) washers and (2) 1/4"-20 x 5/8" carriage bolts from the counterbalance. Leave the nut and bolt on the counterbalance cable in place.
2. Remove the end of the cable from the inside of the counterbalance. The counterbalance must be installed off-center to the **right** (while facing the saw from the front): holes are cut into the top of the tool frame.

3. Secure the counterbalance to the tool using (2) carriage bolts, (2) washers, and (2) nuts.

NOTE: The carriage bolts are installed from the bottom up. Tighten nuts securely.

4. Hold the saw carriage securely while loosening the carriage lock.
5. Raise the saw carriage until the oval hole in the saw carriage aligns with the eye hole in the counterbalance cable, making sure the cable is behind the saw carriage.
6. Tighten the carriage lock.
7. Remove the nut from the carriage bolt and insert the bolt through the hole in the saw carriage and the eye hole in the counterbalance cable. Thread the nut onto the bolt and tighten securely.
8. Bend the cable clip tabs down by hand.
9. Loosen the carriage lock and lower the saw carriage until the cable clip is fully exposed.
10. Tighten the carriage lock.
11. Remove the cable clip from the counterbalance cable and save it for future use (i.e., if you remove the counterbalance in the future, you will need the cable clip to support the tension in the counterbalance.)

Mounting the Saw Motor



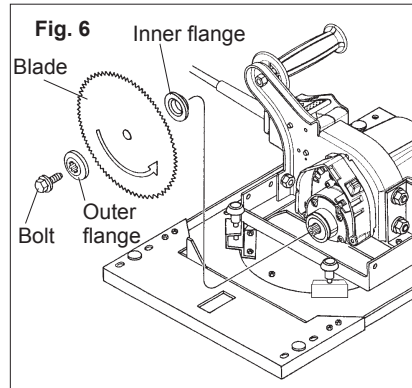
The motor is shipped with (3) washers, (3) nuts, (1) spacer, and (1) bolt. Remove these items to mount the saw.

1. Loosen the carriage lock and lower the saw carriage to a comfortable work height.
2. Tighten the carriage lock securely.
3. Mount the motor to the saw carriage by inserting the studs on the saw motor through the holes in the saw carriage (Fig. 4).
4. Install washers and nuts. Hand-tighten only.
5. Align the hole in the bracket that extends from the saw handle with the hole on the saw carriage.
6. Place the spacer between the bracket on the carriage and bracket on the saw handle.
7. Insert the bolt through the saw handle bracket, through the spacer, and through the hole in the carriage bracket.
8. Thread a nut onto the bolt. Hand-tighten only.

9

- Make sure the plate on the saw motor is flush against the leveling screw to ensure the saw is square (Fig. 5). This screw is factory set and does not require adjustments.
- Tighten the two NUTS ON STUDS FIRST and tighten the NUT ON BOLT LAST.

Installing Blades

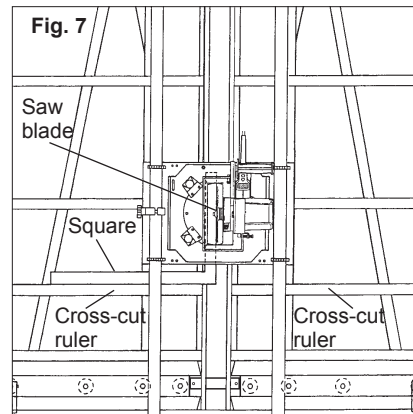


WARNING

To reduce the risk of injury, do not operate the saw without the guards in place (see "Installing the Blade Guard").

- Make sure the tool is unplugged.
- While holding in the spindle lock button, use the wrench provided with the tool to turn the bolt on the saw motor spindle counterclockwise. Remove the bolt.
- Remove the outer flange, but leave the inner flange on the spindle.
- Install the blade with the arrow pointing counterclockwise (Fig. 6).
- Replace the outer flange.
- Tighten the bolt clockwise while holding in the spindle lock button.
- Adjust the rulers (see "Adjusting the Rulers") and install the blade guard (see "Installing the Blade Guard").

Adjusting the Rulers



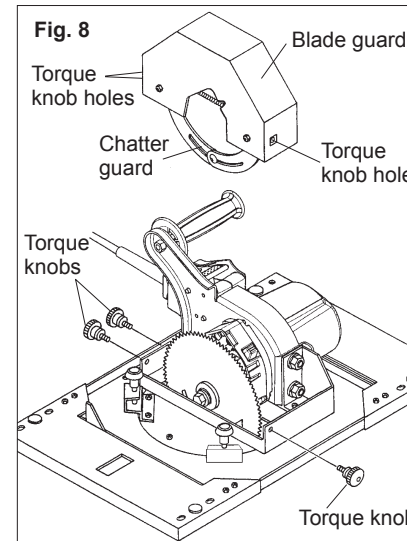
The tool is equipped with a rip ruler and two cross-cut rulers (one on each side of the tool). The rip ruler is adjusted at the factory, but the two cross-cut rulers must be adjusted. The blade must be installed before setting the cross-cut rulers (see "Installing Blades").

- Make sure the tool is unplugged.
 - Loosen the carriage lock and lower the saw carriage.
 - To align the cross-cut ruler, use a square that measures at least 14" on one side.
 - Line up one edge of the square with the tips on the saw blade and the other edge of the square with the ruler.
 - Slide the ruler so its measure matches the measure on the square. A magnet holds the ruler in place, but you may wrap clear tape around the ruler and frame for additional hold.
 - Repeat the steps above to adjust the cross-cut ruler on the other side of the tool.
- NOTE:** After the tool is completely assembled, make a sample cut to verify that the ruler is adjusted correctly.

WARNING

To reduce the risk of injury, do not operate the saw without the guards in place.

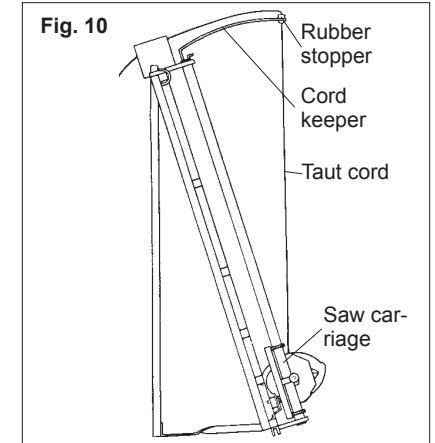
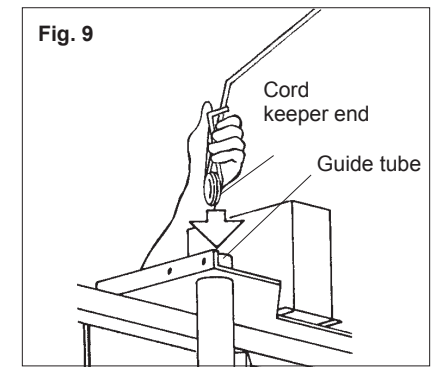
Installing the Blade Guard



Always install the blade guard before operating the saw. The guard is shipped with the chatter guard pushed up inside the blade guard and three torque knobs installed. Reach up into the blade guard and pull down the chatter guard. Remove the knobs to install the guard. Leave the rubber washers on the torque knobs to prevent the knobs from slipping.

- Make sure the tool is unplugged.
- To attach the guard, line up the torque knob holes on the blade guard and the saw carriage (Fig. 8).
- Install the three torque knobs.
- Return carriage to the top of guide tubes and tighten carriage lock.
- Reverse the procedure to remove the blade guard.

Installing the Cord Keeper



The cord keeper keeps the cord away from the saw blade and away from your workpiece.

- Pinch the ends of the cord keeper together while slowly sliding them into the guide tubes (Fig. 9). This will be a very tight fit. Seat the ends securely.
- Remove the rubber stopper from the ring in the cord keeper (Fig. 10).
- Uncoil the cord and place the plug end through the ring.
- Loosen the carriage lock and lower the saw carriage to the bottom of the guide tubes. Tighten the carriage lock.
- Pull the cord keeper so it is parallel to the floor. Pull on the cord to remove slack in the cord.
- Open the rubber stopper and pull it over the cord with the small end of the taper toward the bottom.
- From above the cord keeper, press the rubber stopper into the ring on the cord keeper with the small end facing down.

If the small end of the taper is on the top, the stopper will not keep the cord in place.

- Loosen the carriage lock and allow the saw carriage to return to the top of the guide tubes. Tighten the carriage lock.

NOTE: If you discover there is too much or not enough slack in the cord, readjust as necessary.

- Run the cord over the top of the panel saw to get it out of the path of the saw.

You are now ready to use your panel saw. Refer to the "Operation" section for instruction on proper use.

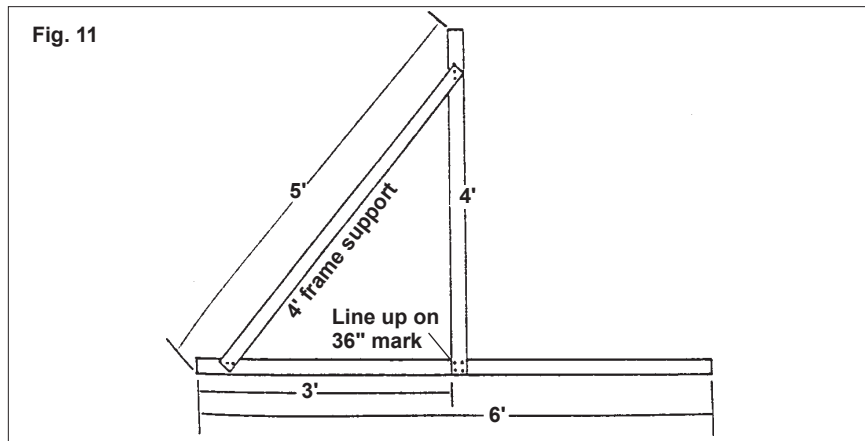
Panel Saw Alignment

The panel saw is aligned during manufacturing to a tolerance of $\pm 1/32"$. Field alignment is required only if the unit is mishandled or abused, or if motor or wheel replacement is required.

Construct a field alignment tool (Fig. 11):

For maximum accuracy, manufacture a test square (Fig. 11) to check the full movement of the saw. Construct the square using one 6' metal ruler and two 4' metal rulers. Using the 3'-4'-5' measurements assures squareness. Drill holes and attach the rulers with pop rivets or small nuts and bolts. Use the 6' ruler to check squareness of the rollers and the 4' ruler to check squareness of the guide tubes. The tool also acts as a giant square for layouts.

The alignment process consists of 4 steps which must be performed in the following order.

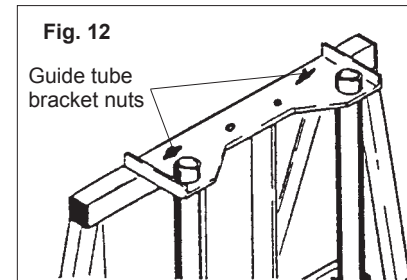


Step 1 - Adjusting the Rollers

- To check roller alignment, remove extensions (if present).
- Retract the stand and lay the tool flat so the roller nuts are easily accessible. With proper care, you may place the tool on a table with guide tubes up.
- The outermost rollers are stationary, so adjust all other wheels to the two outermost rollers. Lay the straight edge of the field alignment tool across the rollers to verify alignment; all rollers should contact the edge.
- If a roller is "high" or "low" to the straight edge, clamp a straight edge at least 5' long to the top of the rollers so it lies flat on the frame and against the outermost rollers, positioning the clamps above the outermost roller.
- With the straight edge clamped securely in place, rotate each roller to be sure that it neither jams nor has excessive clearance to the straight edge. If a roller runs "tight" or "loose" to the straight edge, loosen the roller nut. Roller nuts are torqued and require at least an 18" braker bar to loosen them.
- The rollers are mounted on an eccentric hub. Turning a roller when the roller nut is loose will cause the roller to change its position. You may have to lift the front roller carriage bar to rotate the eccentric hub. Turn the roller until it contacts the straight edge, being careful not to bend or bow the straight edge when repositioning the wheel. Tighten the roller nut securely, making sure the roller does not change position. Repeat this process as needed for the remaining rollers.
- Reposition the tool upright.

If the saw does not cut at 90°, the guide tubes may not be perpendicular to the rollers. Unplug the saw cord before testing alignment or making adjustments. Check the alignment of the rollers before adjusting the guide tubes (see "Adjusting the Rollers").

- To check the guide tube alignment, remove the upper guard assembly to expose the blade. Mark a tooth to use as a reference. If using a high-speed steel blade, mark a tooth pointing toward the edge of the field alignment tool.
- Clamp the field alignment tool to the roller assembly and pull the saw carriage down slowly so the marked reference tooth just touches the vertical edge of the field alignment tool. Continue to pull the saw carriage down. If the blade does not contact the square, or if the blade binds on the square, the guide tubes are not aligned.
- To align the guide tubes, determine which direction the top of the guide should move. If the blade runs into the square, the top guide goes to the square. If the blade runs away from the square, the top guide goes away from the square.



- Loosen the guide tube bracket nuts (Fig. 12), but do not remove the tube bracket.

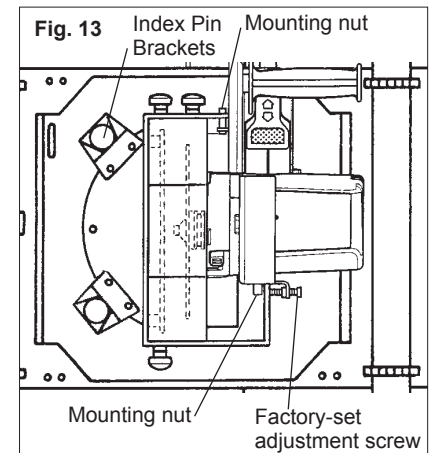
NOTE: Figure 12 shows the counterbalance removed for illustration purposes. It is not necessary to remove the counterbalance to perform this procedure.

- Using a deadblow mallet, strike the bracket on the side and in the direction the tubes need to move.
- Recheck the squareness of the tubes to the rollers repeating the procedure as necessary.
- Tighten the nuts on the upper guide tube bracket nuts.

Step 3 - Adjusting the Blade - Parallelism

The blade should be parallel to the guide tubes, otherwise tail burning may occur and the kerf will be wider than the set of the blade. Make the following adjustments only if the blade appears to be out of alignment. ALWAYS check for alignment of the rollers and the guide tubes before adjusting the blade.

- To check for blade parallelism, position the saw carriage for a cross-cut and make a sample cut. If the blade "heels", burns marks on the cut, etc., check both sides of the cut to determine which side of the blade is causing the problem.
- Unplug the tool.
- Position the square on the rollers and lower the saw carriage so the square overhangs the blade.
- Place the square against the blade. The entire face of the blade should contact the square. If it does not, then the blade is not parallel to the workpiece.



- Loosen (but do not remove) the two hex head nuts holding the index pin brackets (Fig. 13). If burn marks appear on the left side of the workpiece, rotate the saw slightly clockwise until the entire face of the blade contacts the square. If burn marks appear on the right side of the workpiece, rotate the saw slightly counterclockwise until the entire face of the blade contacts the square. ONLY make slight adjustments.
- Securely tighten the two hex head nuts holding the index pin brackets.
- Plug in the tool and make another sample cut. Repeat the procedure if necessary.

Step 4 - Adjusting the Blade - Perpendicularity

If you remove the saw motor without making sure that the factory-set adjustment screw contacts the plate on the saw motor, then the blade will not be perpendicular (90°) to the workpiece, possibly resulting in inaccurate cuts.

1. Unplug the tool.
2. To adjust for perpendicularity, loosen the two mounting nuts on the front of the saw motor. The adjustment screw is located to the right of these nuts (Fig. 13).

3. Loosen the lock nut under the bracket. Tighten or loosen the adjustment screw depending on the angle adjustment required. ONLY make slight adjustments.
4. Tighten the lock nut, making sure the screw is against the upright plate.
5. Tighten the two hex nuts to secure the saw.
6. Plug in the tool and make a sample cut. Repeat the procedure if necessary.

OPERATION



WARNING
To reduce the risk of injury, wear safety goggles or glasses with side shields. Unplug the tool before changing accessories or making adjustments.

Selecting a Blade

A Combination/Rip blade is supplied with the tool.

MILWAUKEE recommends using one of the blades listed in "Accessories". These blades will provide the best tool performance and the best cut. Always keep blades clean and sharp for the best performance. A dull or dirty blade can bind and pinch, resulting in kick back or a poor cut.

Changing Blades

1. Unplug the tool.
2. Remove the blade guard (see "Installing the Blade Guard").
3. To remove the bolt from the spindle, use the wrench provided with the tool to turn the bolt counterclockwise while holding in the spindle lock button.

4. Remove the outer flange, blade, and inner flange. Clean the spindle, flanges, bolt and blade to remove buildup of dust and debris.
5. Replace the inner flange.
6. Install the blade with the arrow pointing counterclockwise.
7. Replace the outer flange. Tighten the bolt clockwise using the wrench provided while holding in the spindle lock button.
8. Install the blade guard (see "Installing the Blade Guard").

NOTE: It may be necessary to readjust the rulers after changing or sharpening blades (see "Adjusting the Rulers").



WARNING
To reduce the risk of injury, make sure the tool is OFF before plugging in the tool.

Starting and Stopping the Motor

1. To **start** the saw motor, lift the switch up. The switch will stay up until it is pushed down.
2. To **stop** the saw motor, push the switch down.



WARNING
Do not cut a workpiece that has a width smaller than that of the saw carriage. Proper support for the workpiece must be maintained to insure safety. When the carriage moves over the workpiece, it would be impossible to safely support the workpiece for the cut. Use a tool better suited for these applications.

Cross-Cutting

A cross-cut is a vertical cut that must always be done from the top to the bottom of a workpiece.

MILWAUKEE recommends using the Hold Down Bar Kit for frequent cutting of workpieces thinner than 1/4" (see "Accessories").

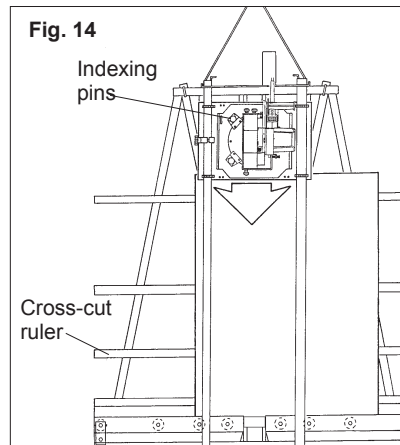
The workpiece must be supported by a minimum of two rollers. When using the Midway Fence Kit, material must extend at least 4" beyond the saw carriage on either side.

For easier cutting and best performance, MILWAUKEE recommends using an Extension Kit when cross-cutting workpieces that extend beyond the blade by 5' or more on one side. Do not cross-cut workpieces that exceed 8'.



WARNING
To reduce the risk of injury, do not place hands on or under saw carriage or in the path of the saw blade.

Fig. 14



Making the Cut:

1. Rotate the saw motor to the cross-cutting position (Fig. 14). To rotate the motor, pull out the indexing pins and rotate the saw motor. Lock the indexing pins into the preset holes on the saw carriage. The pins are spring-loaded and should snap into place.
2. Loosen the carriage lock and allow the saw motor to raise to the top of the tool. The saw motor is attached to the counterbalance cable and should raise to the top of the guide tubes by itself. If it does not, see "Lubricating Guide Tubes" in the Maintenance section.

3. Plug in the tool.
4. Place the workpiece on the rollers. Do not drop the material; this may knock the rollers out of alignment or damage the rollers.

Slide the workpiece to the desired position using the cross-cut ruler as a measure.

5. Start the motor and allow it to reach full speed before beginning the cut.
6. When the motor has reached full speed, slowly pull the saw motor down through the workpiece, keeping your hand on the handle.
7. Once the cut is complete, turn the tool off and wait for the blade to come to a complete stop.
8. Raise the saw motor and allow the saw motor to return to the top of the guide tubes.
9. Tighten the carriage lock.

NOTE: A coasting blade can mar the edge of a freshly cut workpiece.



WARNING
Do not cut a workpiece that has a width smaller than that of the saw carriage. Proper support for the workpiece must be maintained to insure safety. When the carriage moves over the workpiece, it would be impossible to safely support the workpiece for the cut. Use a tool better suited for these applications.

Rip Cutting

A rip cut is a horizontal cut that can be done from the LEFT TO THE RIGHT or from the RIGHT TO THE LEFT, but the work piece must always be moved through the saw in the direction of the arrow on the saw motor.

MILWAUKEE recommends using the Hold Down Bar Kit for frequent cutting of workpieces thinner than 1/4" (see "Accessories").

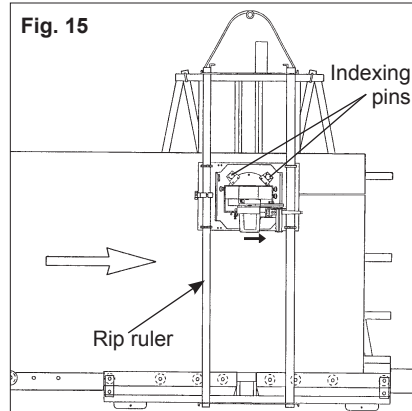
The minimum length recommended for rip cuts is 2-1/2' (work supported by four rollers). The same size applies if you use the Midway Fence Kit.

For easier cutting and best performance, MILWAUKEE recommends using the Extension Kit when rip-cutting workpieces longer than 6' (see "Accessories"). Do not rip-cut workpieces that exceed 8'.

WARNING

To reduce the risk of injury, ripping must always be done by moving the workpiece through the saw in the direction of the arrow on the saw motor.

Fig. 15



1. Select ripping from the left or right, based on preference. Rotate the saw motor to the ripping position (Fig. 15). To rotate the motor, pull out the indexing pins and rotate the saw motor. Lock the indexing pins into the preset holes in the saw carriage. The pins are spring-loaded and should snap into place. Be sure to shield bystanders from the tool.

2. Select the saw height based on your workpiece, following the measure on the rip ruler.
3. Tighten the carriage lock securely.
4. Plug in the tool.
5. Start the motor and allow it to reach full speed before beginning the cut.
6. Place the workpiece on the rollers. Do not to drop the material; this may knock the rollers out of alignment or damage the rollers.

WARNING

To reduce the risk of injury and damage to the tool, do not use push sticks. Push sticks or the workpiece can kick back, cause the blade to pinch, or become caught in the blade and be thrown from the tool.

7. When the motor has reached full speed, slowly move the workpiece through the saw in the direction of the feed arrow on the saw motor. Avoid placing your hands, clothing or body parts under the saw carriage. Do not look directly down the line of cut because dust and debris are generated during operation. Do not use push sticks.

WARNING

To reduce the risk of injury, always shield bystanders from the tool. Never look down the line of cut because dust and debris are generated during operation.

8. After the cut is completed, turn the tool off and wait for the blade to come to a complete stop.
9. Pull the scrap material and the finished workpiece away from the tool.
10. Return the saw carriage to the uppermost position on the guide tubes.
11. Tighten the carriage lock.

NOTE: When done ripping, return the carriage to the cross-cut position.

Making Cuts Less than 1"

When making cuts that are less than 1", the chatter guard (located inside the blade guard) must be on the workpiece and not on the cut-off piece. If the chatter guard is on the cut-off piece, it will jam on the workpiece and prevent the carriage from continuing through the cut. If the saw jams, turn the tool OFF and wait for the blade to stop. Then back the saw out of the cut.

MAINTENANCE

WARNING

To reduce the risk of injury, always unplug your tool before performing any maintenance. Never disassemble the tool or try to do any rewiring on the tool's electrical system. Contact a MILWAUKEE service facility for ALL repairs.

Maintaining Tools

Keep your tool in good repair by adopting a regular maintenance program. Before use, examine the general condition of your tool. Inspect guards, switches, tool cord set and extension cord for damage. Check for loose screws, misalignment, binding of moving parts, improper mounting, broken parts and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired (see "Repairs").

Under normal conditions, relubrication is not necessary until the motor brushes need to be replaced. After six months to one year, depending on use, return your tool to the nearest MILWAUKEE service facility for the following:

- Lubrication
- Brush inspection and replacement
- Mechanical inspection and cleaning (gears, spindles, bearings, housing, etc.)
- Electrical inspection (switch, cord, armature, etc.)
- Testing to assure proper mechanical and electrical operation

Lock-Off Feature

Unplug the tool before installing the padlock. There is a hole in the switch through which a padlock (not supplied with tool) will fit to lock the tool when it is not in use. Use a padlock with a 1-1/2" shackle, 5/16" diameter (such as the Master Lock 1KALJ).

Lubricating Guide Tubes

The saw carriage should raise itself from the bottom to the top of the guide tubes. However, if the tubes become caked with dust or debris, the saw carriage may get stuck or it may not slide smoothly. Periodically clean the guide tubes with a damp cloth, following the directions under "Cleaning". Then, use a dry lubricant such as PTFE or spray silicone. Other lubricants will cause dust and debris to collect on the tubes, contaminating the bearings.

WARNING

To reduce the risk of injury, electric shock and damage to the tool, never immerse your tool in liquid or allow a liquid to flow inside the tool.

Cleaning

Clean dust and debris from vents. Keep the tool handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean your tool since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

Repairs

If your tool is damaged, return the entire tool to the nearest service center.

ACCESSORIES



WARNING

To reduce the risk of injury, always unplug the tool before attaching or removing accessories. Use only specifically recommended accessories. Others may be hazardous.

For a complete listing of accessories refer to your *MILWAUKEE* Electric Tool catalog or go on-line to www.milwaukeetool.com. To obtain a catalog, contact your local distributor or a service center.

Hold Down Bar Kit (49-22-8100)

Holds thin, flexible material in place, providing chatter-free cutting. Spring arms have built-in nylon rollers to prevent material from being marred. Will accept material up to 3/4" thick.

Quick-Stop Gauging Kit (49-22-8102)

Allows you to quickly and accurately position a sliding aluminum stop block to cut different lengths of material.

Dust Collecting Kit (49-22-8105)

Self-contained kit collects dust and debris. Requires a vacuum. *MILWAUKEE* recommends using vacuum model numbers: 8911, 8912, 8925 and 8935. The attachment host supplied with the kit has an inner diameter of 1-1/2".

Wheel Kit (49-22-8106)

Contains two wheels to allow 8" Saw to become more portable.

Extension Kit (49-22-8108)

For easier cutting and best performance, *MILWAUKEE* recommends using the Extension Kit when: cross-cutting workpieces that extend beyond the blade by 5' or more on one side; and when rip-cutting workpieces longer than 6'.

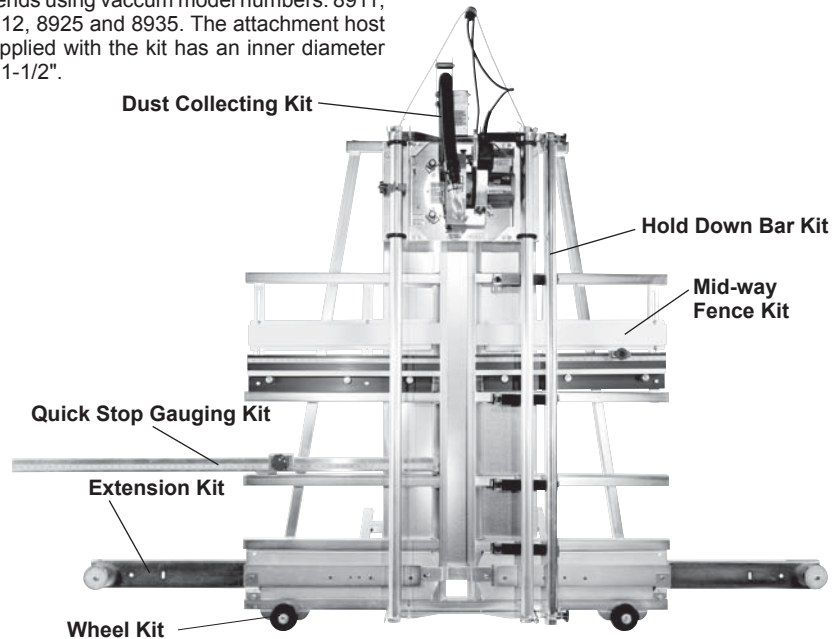
Mid-Way Fence Kit (49-22-8110)

Allows you to cut small panels waist high on the 8" Saw frame. Kit includes both right and left-hand sides, 30" rulers, a manual stop block, and quick-change wood fences.

Saw Blades

For best performance and the most accurate cut, *MILWAUKEE* recommends using the following blades in the chart.

Cat. No.	Description	No. of Teeth	Kerf Thickness	Diameter
48-40-4148	Framing/Ripping	18	.071"	8-1/4"
48-40-4150	Rip/Crosscut	24	.071"	8-1/4"
48-40-4152	Trim/Finish	40	.071"	8-1/4"
48-40-4154	Rip/Crosscut	24	.122"	8-1/4"
48-40-4156	Trim/Finish	40	.122"	8-1/4"
48-40-4158	Trim/Finish	60	.122"	8-1/4"



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Every *MILWAUKEE* electric power tool (including battery charger) is warranted to the original purchaser only to be free from defects in material and workmanship. Subject to certain exceptions, *MILWAUKEE* will repair or replace any part on a electric power tool which, after examination, is determined by *MILWAUKEE* to be defective in material or workmanship for a period of five (5) years* after the date of purchase. Return the electric power tool and a copy of proof of purchase to a *MILWAUKEE* factory Service/Sales Support Branch location or *MILWAUKEE* Authorized Service Station, freight prepaid and insured, are requested for this warranty to be effective. This warranty does not apply to damage that *MILWAUKEE* determines to be from repairs made or attempted by anyone other than *MILWAUKEE* authorized personnel, misuse, alterations, abuse, normal wear and tear, lack of maintenance, or accidents.

* The warranty period for Hoists (lever, hand chain, & electric chain hoists), Ni-Cd battery packs, Work Lights (cordless flashlights), Job Site Radios, and Trade Titans™ Industrial Work Carts is one (1) year from the date of purchase.

*There is a separate warranty for Li-Ion Battery Packs that accompany the power tools:

*Every *MILWAUKEE* Li-Ion Battery Pack is covered by an initial 1000 Charges/2 Years free replacement warranty. This means that for the earlier of the first 1000 charges or two (2) years from the date of purchase/first charge, a replacement battery will be provided to the customer for any defective battery free of charge. Thereafter, customers will also receive an additional warranty on a pro rata basis up to the earlier of the first 2000 charges or five (5) Years from the date of purchase/first charge. This means that every customer gets an additional 1000 charges or three (3) years of pro rata warranty on the Li-Ion Battery Pack depending upon the amount of use. During this additional warranty period, the customer pays for only the useable service received over and above the first 1000 Charges/2 years, based on the date of first charge and number of charges found on the battery pack via *MILWAUKEE*'s Service Reader. After 1000 charges/2 years from the date of purchase/first charge, the customer will be charged a prorated amount for the service rendered.

Warranty Registration is not necessary to obtain the applicable warranty on a *MILWAUKEE* product. However, proof of purchase in the form of a sales receipt or other information deemed sufficient by *MILWAUKEE*, is requested.

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