



TM

Instruction Manual

3660 12" Miter Saw

Getting the most out of your tool.

Please take time to read this manual and pay particular attention to the safety rules we've provided for your protection. Don't forget to send in your owner's registration card. If you have any questions about your tool please call:

1-800-9-BD TOOL
(1-800-923-8665)

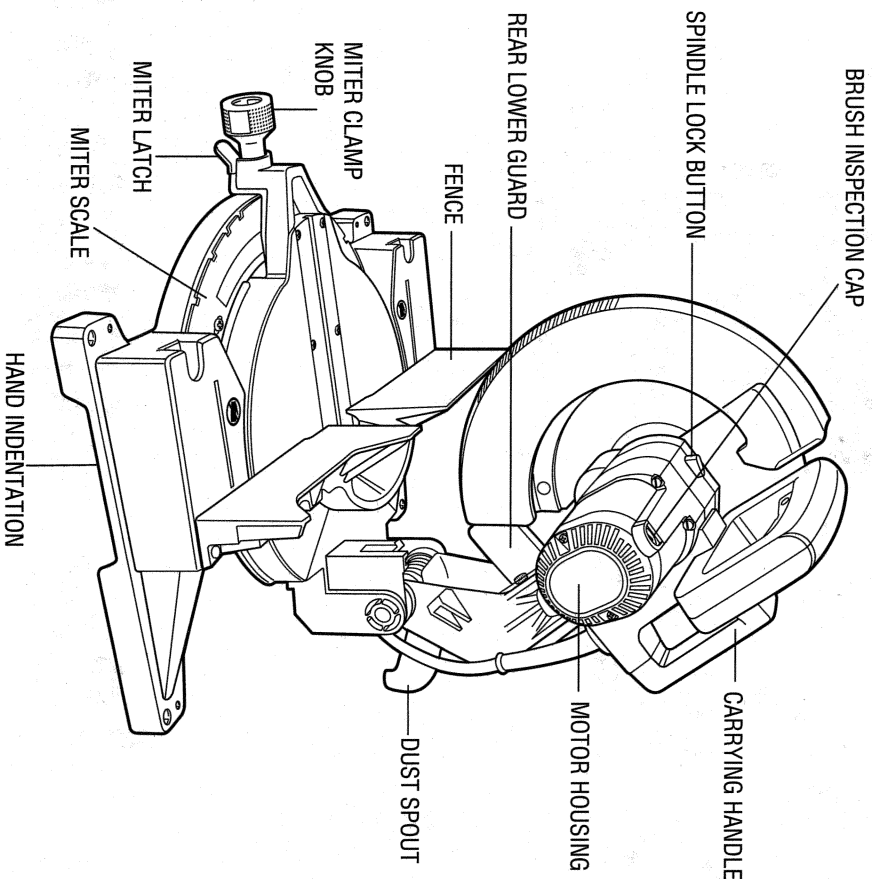
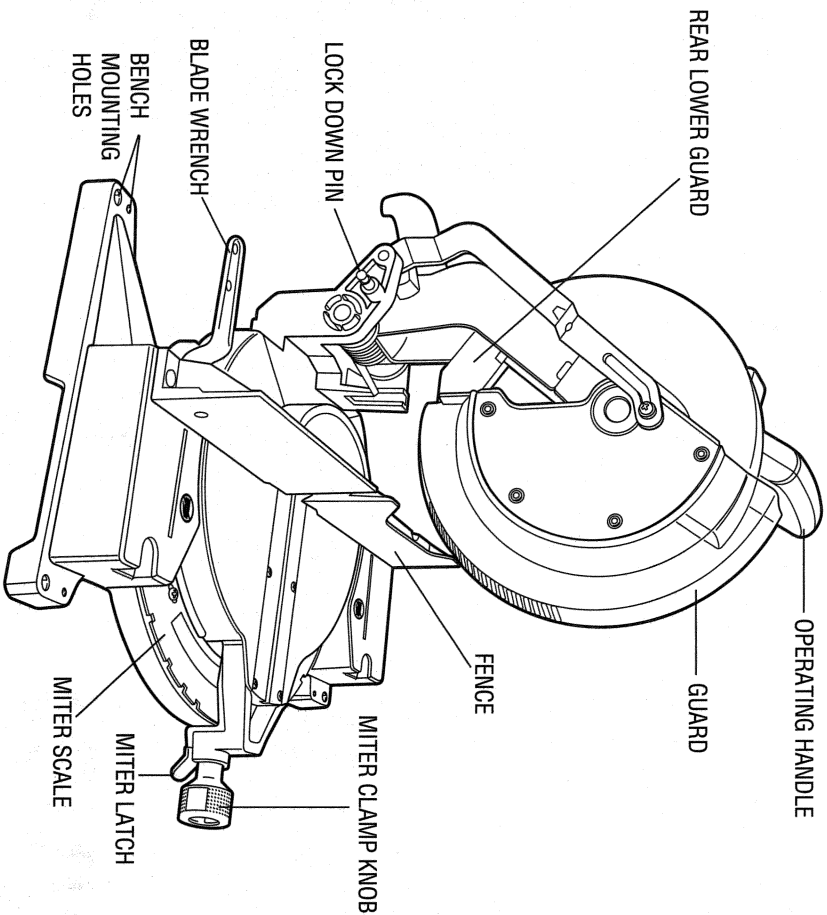


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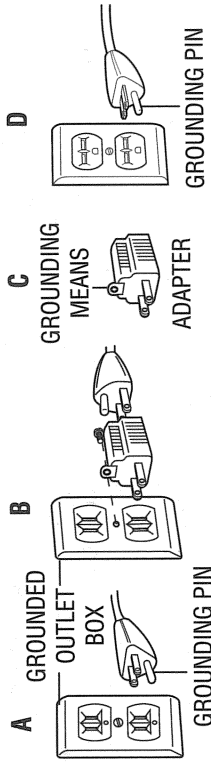
Important Safety Instructions

WARNING: When using electric tools, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS

Grounding Instructions

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with a 3-conductor cord and 3-prong grounding type plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal. If your unit is intended for use on less than 150 V, it has a plug that looks like that shown in sketch A. If it is for use on 150 to 250 V, it has a plug that looks like that shown in sketch D. An adapter, sketches B and C, is available for connecting sketch A type plugs to 2-prong receptacles. The green-colored rigid ear, lug, or the like, extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box. No adapter is available for a plug as shown in sketch D. ADAPTER SHOWN IN FIGURES B and C IS NOT FOR USE IN CANADA.



Safety Instructions For All Tools

- **KEEP GUARD IN PLACE** and in working order.
- **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from spindle before turning tool on.
- **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
- **KEEP CHILDREN AWAY.** All visitors should be kept at a safe distance from work area.
- **MAKE WORKSHOP KID PROOF** with padlocks, master switches, or by removing starter keys.
- **DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.
- **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.
- **WEAR PROPER APPAREL.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
- **ALWAYS WEAR SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses have only impact resistant lenses, they are NOT safety glasses.
- **SECURE WORK.** Use clamps or vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
- **DON'T OVERREACH.** Keep proper footing and balance at all times.

SAFETY INSTRUCTIONS - MITER SAWS

- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- **DISCONNECT TOOLS** before servicing; when changing accessories such as blades, bits, cutters, etc.
- **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in OFF position before plugging in.
- **USE RECOMMENDED ACCESSORIES.** Consult the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
- **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 should be properly repaired or replaced. Do not use tool if switch does not turn it on and off.
- **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.
- **DO NOT OPERATE ELECTRIC TOOLS NEAR FLAMMABLE LIQUIDS OR IN GASEOUS OR EXPLOSIVE ATMOSPHERES.** Motors in these tools may spark and ignite fumes.
- **EXTENSION CORDS.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one 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. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Volts	Minimum Gage for Cord Sets		
	Total Length of Cord in Feet		
120V	0-25	26-50	51-100
240V	0-50	51-100	101-200
			201-300
Ampere Rating	American Wire Gage		
	More Than	Not more Than	Not Recommended
0	6	18	16
6	10	18	16
10	12	16	14
12	16	14	12
			12
			14
			Not Recommended

SAVE THESE INSTRUCTIONS

1. **CAUTION: FAILURE TO HEED THESE WARNINGS MAY RESULT IN PERSONAL INJURY AND SERIOUS DAMAGE TO THE SAW.**
2. **DO** - Protect electric supply line with at least a 15 ampere time - delay fuse or a circuit breaker.
3. **DO** - Make certain the blade rotates in the correct direction and that the teeth at the bottom of the blade are pointing to the rear of the miter saw.
4. **DO** - Be sure all clamp handles are tight before starting any operation.
5. **DO** - Be sure all blade and clamp washers are clean and recessed sides of collars are against blade. Tighten arbor screw securely.
6. **DO** - Keep saw blade sharp and properly set.
7. **DO** - Keep motor air slots free of chips and dirt.
8. **DO** - Use blade guards at all times.
9. **DO** - Keep hands out of path of saw blade.
10. **DO** - Shut off power, disconnect cord from power source and wait for saw blade to stop before servicing or adjusting tool.
11. **DO** - Support long work with an outboard tool rest.
12. **DON'T** - Attempt to operate on anything but designated voltage.
13. **DON'T** - Operate unless all clamp handles are tight.
14. **DON'T** - Use blades larger or smaller than those which are recommended.
15. **DON'T** - Wedge anything against fan to hold motor shaft.
16. **DON'T** - Force cutting action. (Stalling or partial stalling of motor can cause major damage. Allow motor to reach full speed before cutting.)
17. **DON'T** - Cut ferrous metals (Those with any iron or steel content) or any masonry.
18. **DON'T** - Use abrasive wheels. The excessive heat and abrasive particles generated by them will damage the saw.
19. **DON'T** - Allow anyone to stand behind saw.
20. **DON'T** - Apply lubricants to the blade when it's running.
21. **DON'T** - Place either hand in the blade area when the saw is connected to the power source.
22. **DON'T** - Use blades rated less than 4800 R.P.M.
23. **DON'T** - Attempt to cut small pieces (6") without clamping.
24. **DON'T** - Operate saw without guards in place.
25. **DON'T** - Perform any operation freehand.
26. **DON'T** - Reach around or behind saw blade.
27. **DON'T** - Place hands closer than 6 inches from the saw blade.
28. **DON'T** - Reach underneath the saw unless it is turned off and unplugged. The saw blade is exposed on the underside of the saw.
29. **DON'T** - Move either hand from saw or workpiece or raise arm until blade has stopped.
30. **DON'T** - Use without kerf plate or when kerf slot is wider than 3/8".
31. **CAUTION:** Do not connect unit to electrical power source until complete instructions are read and understood.
32. **CAUTION:** Some wood contains preservatives such as copper chromium arsenate (CCA) which can be toxic. When cutting these materials extra care should be taken to avoid inhalation and minimize skin contact.

For your convenience and safety, the following warning labels are on your miter saw.

ON MOTOR HOUSING:

WARNING: FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING SAW. WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS. ALWAYS WEAR EYE PROTECTION.



ON GUARD:

DANGER – KEEP AWAY FROM BLADE.



ON TABLE: (2 PLACES)

ALWAYS TIGHTEN ADJUSTMENT KNOBS BEFORE USE. KEEP HANDS 6" FROM PATH OF SAW BLADE. NEVER PERFORM ANY OPERATION FREEHAND. NEVER CROSS ARMS IN FRONT OF SAW BLADE. THINK! YOU CAN PREVENT ACCIDENTS.

DO NOT OPERATE SAW WITHOUT GUARDS IN PLACE. NEVER REACH IN BACK OF SAW BLADE. ALWAYS WEAR EYE PROTECTION. SHUT OFF POWER AND WAIT FOR BLADE TO STOP BEFORE SERVICING, ADJUSTING TOOL, OR MOVING HANDS.

SAVE THESE INSTRUCTIONS FOR FUTURE USE

Electrical Connection

Be sure your power supply agrees with the nameplate marking. 120 volts, AC/DC means that your saw will operate on alternating or direct current. A voltage decrease of 10 percent or more will cause a loss of power and overheating. All B&D tools are factory tested. If this tool does not operate, check the power supply.

Unpacking Your Saw

Check the contents of your miter saw carton to make sure that you have received all parts. In addition to this instruction manual, the carton should contain: one 3660 miter saw, one carbide saw blade, and one blade wrench in wrench pocket.

Familiarization

Your miter saw is fully assembled in the carton. Open the box and lift the saw out by the convenient carrying handle, as shown in Figure 1. Place the saw on a smooth, flat surface such as a workbench or strong table.

Examine Figures on inside front cover of this manual to become familiar with the saw and its various parts. The following section on adjustments will refer to these terms and you must know what the parts are.

Press down lightly on the operating handle and pull out the lock down pin, as shown in Figure 2. Gently release the downward pressure and allow the arm to rise to its full height. Use the lock down pin when carrying the saw from one place to another. Always use the carrying handle or the hand indentations to transport the saw.

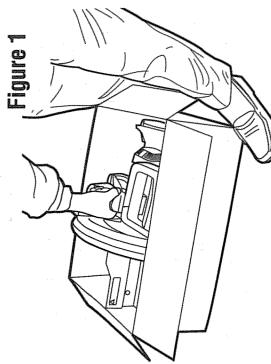


Figure 1

Specifications

Capacity of cut

48° miter left and right			
0° miter	45° miter		
Max. Height 3.9"	Result Width 5.9"	Max. Height 3.9"	Result Width 4.1"
Max. Width 7.9"	Result Height 2.5"	Max. Width 5.5"	Result Height 2.5"

Drive

- 2000 Watts out 13 Amp Motor
- Cut Helical Gears with Ball Bearings
- Carbide Blade, 4000 RPM
- Automatic Electric Brake

Bench Mounting

Holes are provided in all four feet to facilitate bench mounting. (Two different sized holes are provided to accommodate different sizes of screws. Use either hole, it is not necessary to use both.) Always mount your saw firmly to prevent movement. To enhance the tool's portability, it can be mounted to a piece of 1/2" or thicker plywood which can then be clamped to your work support or moved to other job sites and reclamped.

NOTE: If you elect to mount your saw to a piece of plywood, make sure the mounting screws don't protrude from the bottom of the wood. The plywood must sit flush on the work support. When clamping the saw to any work surface, clamp only on the clamping bosses where the mounting screw holes are located. Clamping at any other point will surely interfere with the proper operation of the saw.

CAUTION: To prevent binding inaccurately, be sure the mounting surface is not warped or otherwise uneven. If the saw rocks on the surface, place a thin piece of material under one saw foot until the saw sits firmly on the mounting surface.

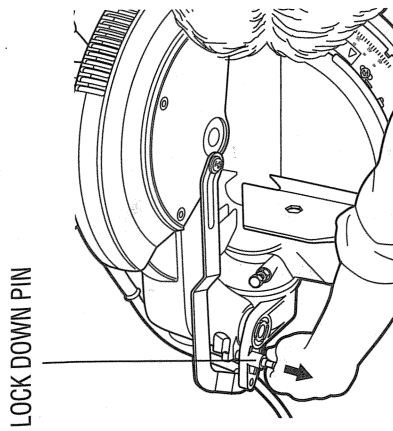


Figure 2

LOCK DOWN PIN

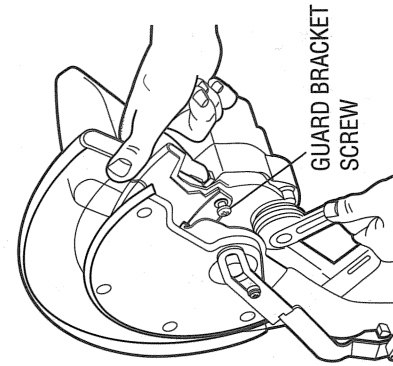


Figure 3

GUARD BRACKET SCREW

Installing the Blade

TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.

DO NOT CUT FERROUS METAL (THAT WITH AN IRON OR STEEL CONTENT) OR MASONRY WITH THIS MITER SAW.

1. With the saw arm in the upper position, raise the lower guard as far as possible.
2. Loosen (but do not remove) the guard bracket screw, shown in Figure 3 until the guard bracket can be raised enough to permit access to the blade screw.
3. Hold the lower guard up and depress the spindle lock button with one hand and use the supplied blade wrench in the other hand to loosen (clockwise) the left hand threaded blade screw.

NOTE: To use the spindle lock, depress the button as shown and rotate the spindle by hand until you feel the lock engage. Continue to hold the lock button in to keep the spindle from turning.

As shown in Figure 4 the inner clamp washer is installed first, then the blade adapter. The blade adapter is designed to permit the use of saw blades with 1" arbor holes as well as those with 5/8" arbor holes.

When using blades with 1" arbor holes, install the blade adapter over the spindle shaft and against the inner clamp washer, as shown in the figure. Next, install the saw blade making sure that the arbor hole in the blade fits on the blade adapter. Make sure that the teeth at the bottom of the blade are pointing toward the back of the saw (away from the operator). Install the outer clamp washer and install the blade screw. Tighten firmly using the spindle lock and the provided wrench (left hand threads). When using saw blades with 5/8" arbor holes, remove the blade adapter! Save it in a safe place for future use. The rest of the blade assembly is exactly the same.

NEVER DEPRESS THE SPINDLE LOCK BUTTON WHILE THE BLADE IS ROTATING.

AFTER INSTALLING THE SAW BLADE, REPOSITION GUARD BRACKET MAKING SURE IT IS FULLY SEATED ON GUARD SCREW. FIRMLY TIGHTEN SCREW. FAILURE TO DO SO WILL CAUSE SERIOUS DAMAGE TO THE SAW.

Rear Lower Guard Adjustment

Check the rear lower guard to ensure that it is located such that the saw blade is in the center and equidistant from each side, as shown in Figures 4 & 5. Adjust as necessary by loosening the two screws and moving the guard. Firmly tighten both screws. Never remove this guard.

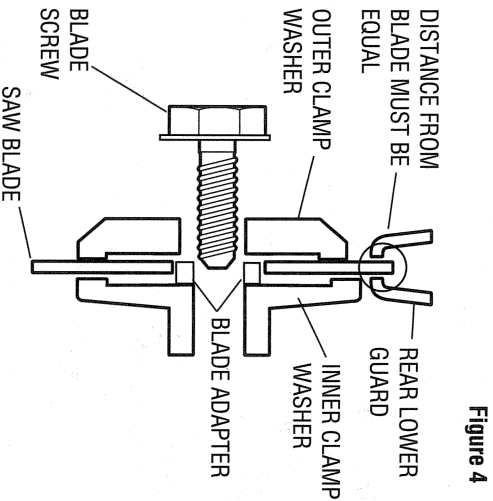


Figure 4

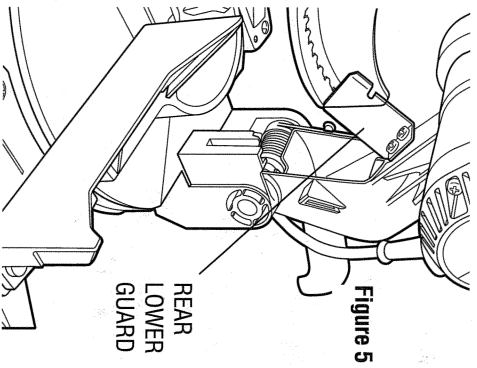


Figure 5

Figure 6

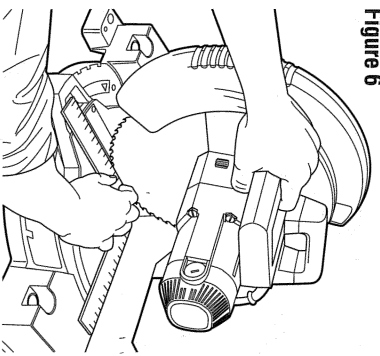
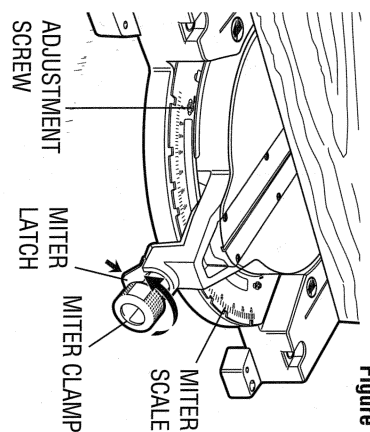


Figure 7



Cutting the Kerf

In order to adjust and use your miter saw, you must cut a slot through the kerf plate to allow for blade clearance. To cut the kerf plate, set the saw at 0° miter. Place a piece of scrap wood on the kerf plate at least 1"x6"x12". Turn the saw on and allow the blade to reach full speed. Pull the saw arm down as far as it will go and CUT SLOWLY THROUGH THE SCRAP WOOD AND THE PLASTIC KERF PLATE. Turn the saw off and allow the blade to stop before raising the saw arm. Don't use without kerf plate or when kerf slot is wider than 3/8".

Transporting the Saw

TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.

In order to conveniently carry the miter saw from place to place, a carrying handle has been included on the top of the saw arm. To transport the saw, lower the arm and depress the lock down pin shown in Figure 2.

NOTE: The saw arm cannot be fully lowered if the tool has a blade installed unless the kerf plate has been cut. If you wish to transport the saw before cutting the kerf plate, remove the saw blade.

Adjustments

PERFORM ALL ADJUSTMENTS WITH THE MITER SAW UNPLUGGED!

NOTE: Your miter saw is fully and accurately adjusted at the factory at the time of manufacture. If readjustment due to shipping and handling or any other reason is required, follow the steps below to adjust your saw. Once made, these adjustments should remain accurate. Take a little time now to follow these directions carefully to attain the accuracy of which your saw is capable.

Miter Scale Adjustment

TURN OFF TOOL DISCONNECT FROM POWER SUPPLY.

1. Place a square against the saw's fence and blade, as shown in Figure 6. (Do not touch the tips of the blade teeth with the square. To do so will cause an inaccurate measurement.)
2. Loosen the miter clamp knob (Figure 7) and swing the miter arm until the miter latch locks it at the 0 miter position. Do not tighten the clamp knob.
3. If the saw blade is not exactly perpendicular to the fence, loosen the three screws that hold the

miter scale to the base (Figure 7) and move the scale/miter arm assembly left or right until the blade is perpendicular to the fence, as measured with the square.

4. Retighten the three screws. Pay no attention to the reading of the miter pointer at this time.

Miter Pointer Adjustment

TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.

1. Loosen the miter clamp knob and squeeze the miter latch to move the miter arm to the 0 position, as shown in Figure 7.
2. With the miter clamp knob loose, allow the miter latch to snap into place as you rotate the miter arm past 0.
3. Observe the pointer and miter scale through the viewing opening shown in Figure 8. If the pointer does not indicate exactly 0, use a flat bladed screwdriver to gently pry it left or right as required.

Guard Actuation and Visibility

The blade guard on your saw has been designed to automatically raise when the arm is brought down and to lower over the blade when the arm is raised. The guard can be raised by hand when installing or removing saw blades or for inspection of the saw. NEVER RAISE THE BLADE GUARD MANUALLY UNLESS THE SAW IS TURNED OFF.

NOTE: Certain special cuts will require that you manually raise the guard. (See page 7- Cutting Base Molding up to 3 7/8" High Vertically Against the Fence.)

The front section of the guard is lowered for visibility while cutting. Although the louvers dramatically reduce flying debris, they are openings in the guard and safety glasses should be worn at all times when viewing through the louvers.

Automatic Electric Brake

Your saw is equipped with an electric blade brake which stops the saw blade within 5 seconds of trigger release. This is automatic and requires no adjustment.

Occasionally, under certain conditions, the brake will not function properly and won't stop the saw in the 5 seconds discussed above. If this condition persists, turn the saw on and off four or five times. If the brake still does not stop the blade in about 5 seconds, the problem may be worn brushes. Replace the brushes as described on page 9 and try the saw again. If this condition occurs, have the tool serviced at a B&D authorized service center.

Plug the saw into any 120 volt 60 Hz power source. Be sure the cord will not interfere with your work.

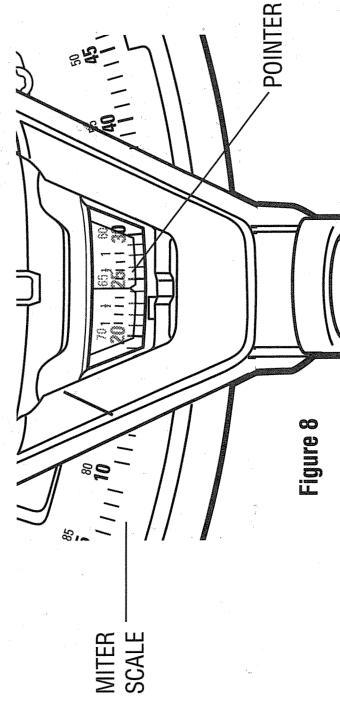


Figure 8

HOLE FOR PAD LOCK

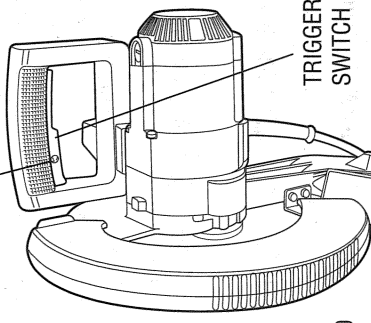


Figure 9

Switch

To turn the saw on, depress the trigger switch- Figure 9. To turn the tool off, release the switch. There is no provision for locking the switch on, but a hole is provided in the trigger for insertion of a padlock to lock the saw off.

If your saw will not start, check the following:

- Make sure tool is plugged in.
- Replace blown fuses or reset circuit breakers if needed.
- Have damaged cords replaced.
- Have worn out brushes replaced.

Cutting with Your Saw

NOTE: Although this saw will cut wood and many nonferrous materials, we will limit our discussion to the cutting of wood only. The same guidelines apply to the other materials. **DO NOT CUT FERROUS (IRON AND STEEL) MATERIALS OR MASONRY WITH THIS SAW.** Do not use any abrasive blades.

Crosscuts

A crosscut is made by cutting wood across the grain at any angle. A straight crosscut is made with the miter arm at the 0° position. Set the miter arm at 0, hold the wood on the table and firmly against the fence. Turn on the saw by squeezing the trigger switch shown in Figure 9.

When the saw comes up to speed (about 1 second) lower the arm smoothly and slowly cut through the wood. Let the blade come to a full stop before raising arm.

Miter crosscuts are made with the miter arm at some angle other than 0. This angle is often 45° for making corners, but can be set anywhere from 0° to 48° left or right. After selecting the desired miter angle, be sure to tighten the miter clamp knob. Make the cut as described above.

Quality of Cut

The smoothness of any cut depends on a number of variables. Things like material being cut, blade type, blade sharpness and rate of cut all contribute to the quality of the cut.

When smoothest cuts are desired for molding and other precision work, a sharp (60 tooth or greater carbide) blade and a slower, even cutting rate will produce the desired results.

Ensure that material does not creep while cutting, clamp it securely in place. Always let the blade come to a full stop before raising the arm.

If small fibers of wood still split out at the rear of the workpiece, stick a piece of masking tape on the wood where the cut will be made. Saw through the tape and carefully remove tape when finished.

For varied cutting applications, refer to the list of recommended accessories for your saw and select the blade that best fits your needs.

Body and Hand Position (Figure 10)

Proper positioning of your body and hands when operating the miter saw will make cutting easier, more accurate and safer. Never place hands near cutting area. Place hands no closer than 6" from the blade. Hold the workpiece tightly to the table and the fence when cutting. Keep hands in position until the trigger has been released and the blade has completely stopped. ALWAYS MAKE DRY RUNS (UNPOWERED) BEFORE FINISH CUTS SO THAT YOU CAN CHECK THE PATH OF THE BLADE. DO NOT CROSS HANDS AS SHOWN BELOW.

Keep both feet firmly on the floor and maintain proper balance. As you move the miter arm left and right, follow it and stand slightly to the side of the saw blade. Slight through the guard louvers when following a pencil line.

Clamping the Workpiece

TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.

ALWAYS CLAMP WOOD TO THE SAW IF POSSIBLE AND ALWAYS CLAMP IF SIZE OF WORKPIECE REQUIRES YOUR HAND TO BE WITHIN 6" OF BLADE. You can clamp to either side of the saw blade and remember to position your clamp against a solid, flat surface of the fence. For best results use the 36802 clamp made for use with your saw. Available from your dealer at extra cost. When clamping small pieces requiring your hand to be dangerously close (within 6") to the saw blade, a clamp **MUST** be used to prevent loss of control.

Support for Long Pieces

TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.

For best results, use the 36800 Extension Work Support to extend the table width of your saw. Available from your dealer at extra cost. Support long workpieces using any convenient means such as sawhorses or similar devices to keep the ends from dropping.

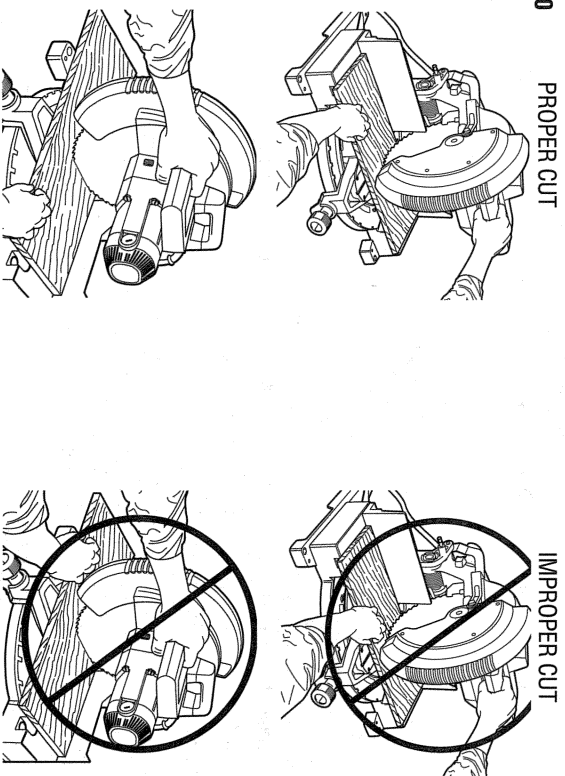


Figure 10 PROPER CUT

IMPROPER CUT

Cutting Picture Frames, Shadow Boxes, and Other Four Sided Projects

To best understand how to make the items listed here, we suggest that you try a few simple projects using scrap wood until you develop a "FEEL" for your saw.

Figure 11 shows a joint made by setting the miter arm at 45° to miter the two boards to form a 90° corner. To make this type of joint, set the miter arm to 45°. Position the wood with the broad flat side on the table and the narrow edge against the fence.

As the number of sides changes, so do the miter angles. The chart under Figure 11 gives the proper angles for a variety of shapes.

(The chart assumes that all sides are of equal length.) For a shape that is not shown in the chart, use the following formula. 180° divided by the number of sides equals the miter angle.


Dual Range Miter Scale

The miter scale has two ranges of numbers for convenience, as shown in Figure 12. One scale indicates 0° when the blade is square to the fence. At this position the other scale reads 90°.

The 0° scale (larger numbers closer to the front edge) is used when calculating angles. To calculate the proper miter angle, divide 180° by the number of sides of the box or frame. Refer to the chart on this page for some examples.

The 90° scale (smaller numbers behind the 0° scale) is used when a corner of your box or frame is measured with a protractor. **For example:** if you measure the corner of an 8 sided box, the protractor will read 135°. To determine the proper miter setting, divide the measured angle by two. The proper miter setting in this example is 67-1/2°. Set this angle on the 90° scale. This is most useful when a corner is at an odd angle.

Figure 11



NO. SIDES	MITER ANGLE
4	45°
5	36°
6	30°
7	25.7°
8	22.5°
9	20°
10	18°

- EXAMPLES -

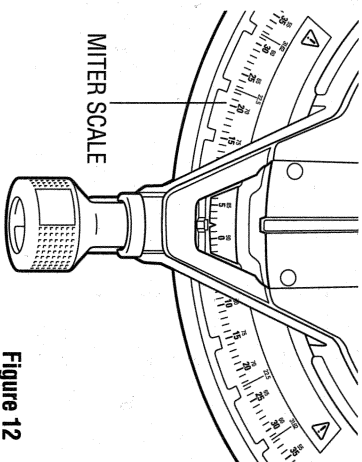
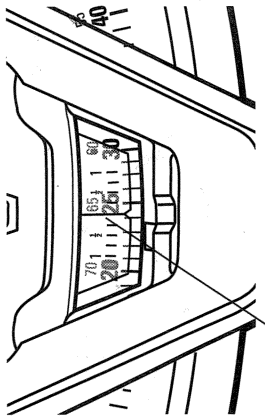


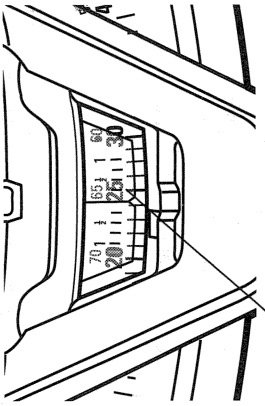
Figure 12

Figure 13



CENTER MARK ON VERNIER SCALE ALIGNS WITH DESIRED WHOLE ANGLE ON MITER SCALE (24° RIGHT MITER)

Figure 14



1/4° VERNIER MARK ALIGNS WITH CLOSEST WHOLE DEGREE MARK ON MITER SCALE (24-1/4° RIGHT MITER)

Vernier Scale

Your saw is equipped with a vernier scale for added precision. The vernier scale allows you to accurately set miter angles to the nearest 1/4° (15 minutes). To use the vernier scale follow the steps listed below.

(As an example, let's assume that the angle you want to miter is 24-1/4° right).

1. Turn off miter saw.
2. Set the miter angle to the nearest whole degree desired by aligning the center mark in the vernier scale, shown in Figure 13, with the whole degree number etched in the miter scale. Examine Figure 13 closely; the setting shown is 24° right miter.
3. To set the additional 1/4°, squeeze the miter arm lock and carefully move the arm to the RIGHT until the 1/4° vernier mark aligns with the CLOSEST degree mark on the miter scale. In our example, the closest degree mark on the miter scale happens to be 25°. Figure 14 shows a setting of 24-1/4° right miter.

For settings that require partial degrees (1/4°, 1/2°, 3/4°) align the desired vernier mark with the CLOSEST degree mark on the miter scale, as described below (The plastic vernier plate is inscribed with marks for 1/4°, 1/2°, 3/4° and 1°. Only the 1/2° and the 1° are numerically labeled.)

When Mitering to the Right

To increase the miter angle when mitering to the right, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the right. To decrease the miter angle when mitering to the right, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the left.

When Mitering to the Left

To increase the miter angle when mitering to the left, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the left. To decrease the miter angle when mitering to the left, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the right.

Cutting Base Molding

ALWAYS MAKE A DRY RUN WITHOUT POWER BEFORE MAKING ANY CUTS.

Straight 90° cuts -Position the wood against the fence and clamp it in place as shown in Figure 15. Turn on the saw, allow the blade to reach full speed and lower the arm smoothly through the cut.

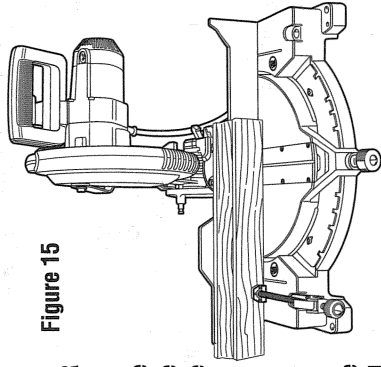


Figure 15

Cutting base molding up to 3-7/8" high vertically against the fence

Position molding as shown in Figure 16. All cuts made with the back of the molding against the fence and bottom of the molding against the table.

INSIDE CORNER.

- Left side:
1. Miter left 45°
 2. Save left side of cut
- Right side:
1. Miter Right 45°
 2. Save right side of cut

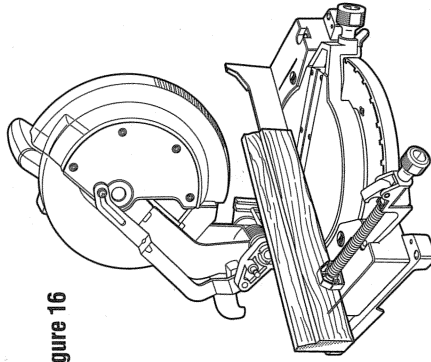


Figure 16

OUTSIDE CORNER.

- Left side:
1. Miter right at 45°
 2. Save left side of cut
- Right side:
1. Miter left at 45°
 2. Save right side of cut

Material up to 3.9" (3-7/8") can be cut as described above. For wider boards [up to 5.5" (5-1/2")] several minor concessions must be made.

When cutting a board between 3.9" (3-7/8") and 5.5" (5-1/2") in width the guard will hang up on the workpiece. If this occurs, simply place your right thumb on the upper side of the guard and roll the guard up just enough to clear the workpiece, as shown in Figure 17.

Once you have cleared the workpiece, you can release the guard and it will continue to open as the cut progresses.

When mitering to the right side of a base molding wider than 3.9" (3-7/8") standing vertically against the fence as in Figure 16, the saw can only cut through the board up to 1 inch from the end of the board. Trying to cut more than an inch will cause the saw's gear case to interfere with the workpiece. If you want to cut base molding between 3-7/8" and 5-1/2" wide vertically see the following the directions.

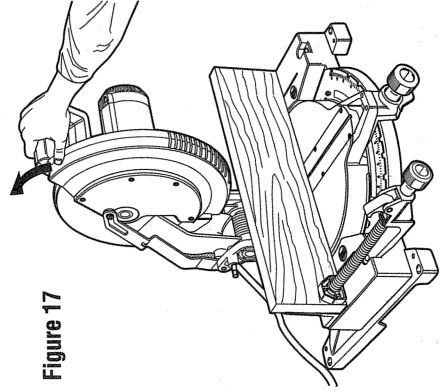


Figure 17

Cutting 3-7/8" - 5-1/2" base molding vertically against the fence

Position molding as shown in Figure 18. All cuts made with the back of the molding against the fence

INSIDE CORNER:

Left side:

1. Position molding with bottom of molding against the table of the saw
2. Miter left 45°
3. Save left side of cut

Right side:

1. Position molding with top of the molding resting on the table of the saw
2. Miter left 45°
3. Save left side of cut

OUTSIDE CORNER:

Left side:

1. Position molding with bottom of molding against the table of the saw
2. Miter right 45°
3. Save left side of cut

NOTE: If the cut must be made somewhere other than 1" from the end of the molding: cut off the molding at 90° approx. 1" longer than your final length then make the miter cut as described above.

Right side:

1. Position molding with bottom of the molding against the table of the saw
2. Miter left 45°
3. Save the right side of cut

Cutting Crown Molding

Your miter saw is better suited to the task of cutting crown molding than any tool made. In order to fit properly, crown molding must be mitered with extreme accuracy. The two flat surfaces on a given piece of crown molding are at angles that, when added together, equal exactly 90°. Most, but not all, crown molding has a top rear angle (the section that fits flat against the ceiling) of 52° and a bottom rear angle (the part that fits flat against the wall) of 38°.

Use of the crown molding fence accessory is highly recommended because of its degree of accuracy and convenience. The crown molding fence accessory is available at extra cost from your local dealer or B&D service center.

PRETESTING WITH SCRAP MATERIAL IS EXTREMELY IMPORTANT!

Use the 36807 crown molding fence accessory to maintain the angle at which the molding will be on the wall. Place the bottom side (the side that will be against the wall) against the miter saw fence. Place the top (that part that will be against the ceiling) against the saw table and the crown molding fence, as shown in Figure 18.

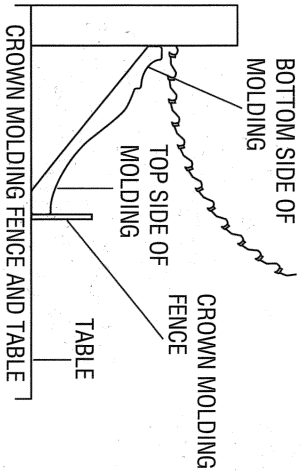


Figure 18

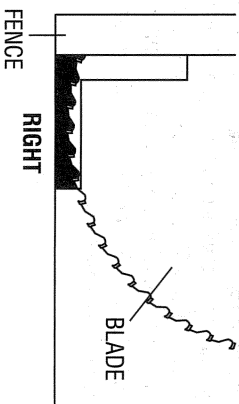


Figure 19

Instructions for cutting crown molding angled between the fence and the table of the saw for all cuts:

1. Angle the molding so the bottom of the molding (part which goes against the wall when installed) is against the fence and the top of the molding is resting on the table of the saw, as shown in Figure 18.
2. The angled "flats" on the back of the molding must rest squarely on the fence and table of the saw.

INSIDE CORNER:

Left side:

1. Miter right at 45°
2. Save the right side of cut

Right side:

1. Miter left at 45°
2. Save left side of cut

OUTSIDE CORNER:

Left side:

1. Miter left at 45°
2. Save the right side of cut

Right side:

1. Miter right at 45°
2. Save left side of cut

ALWAYS MAKE DRY RUNS TO CHECK FOR CLEARANCE AND CORRECTNESS OF CUTS.

Special Cuts

NEVER MAKE ANY CUT WITHOUT FIRMLY CLAMPING THE MATERIAL.

Aluminum Cutting:

Aluminum extrusions such as those used when making aluminum screens and storm windows can easily be cut with your saw. Position the material so that you will be cutting the thinnest cross section, as shown in Figure 19. Figure 20 illustrates the wrong way to cut these extrusions.

Use a wax lubricant when cutting aluminum such as Johnson's Stick Wax No. 140. Apply the stick wax directly to the saw blade before cutting. Never apply stick wax to a moving blade.

The wax, available at most hardware stores and industrial mill supply houses, provides proper lubrication and keeps chips from adhering to the blade.

Bowed Material:

When cutting bowed material always position it as shown in Figure 21 and never like that shown in Figure 22. Positioning the material incorrectly will cause it to pinch the blade near the completion of the cut.

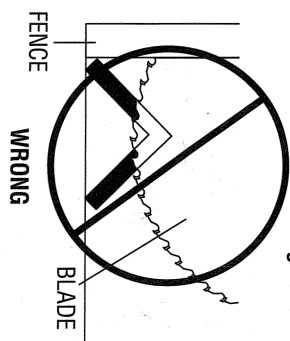


Figure 20

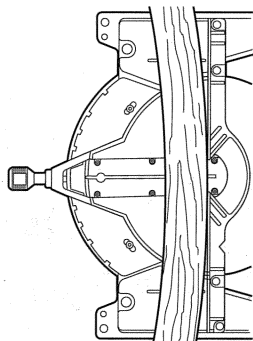


Figure 21

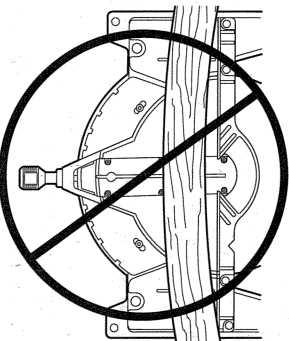


Figure 22

Cutting Plastic Pipe

Plastic pipe can be easily cut with your saw. It should be cut just like wood and **CLAMPED OR HELD FIRMLY TO THE FENCE TO KEEP IT FROM ROLLING.**

Cutting Large Material

Occasionally you will encounter a piece of wood a little too large to fit beneath the blade guard. A little extra height can be gained by rolling the guard up out of the way, as shown in Figure 17. Avoid doing this as much as possible, but if need be, the saw will operate properly and make the bigger cut. **NEVER TIE, TAPE, OR OTHERWISE HOLD THE GUARD OPEN WHEN OPERATING THIS SAW.**

Troubleshooting Tips

If your saw makes unsatisfactory cuts:

Replace dull blades

Check to see if blade is mounted backwards.

Remove blade and clean with turpentine and coarse steel wool or household oven cleaner.

Check to make sure the blade you are using is appropriate for work being done.

If blade does not come up to speed:

Extension cord may be too light or too long.

You may have low house current.

If your machine vibrates excessively:

Saw may not be mounted securely to stand on work bench.

Stand may be on uneven floor.

Blade may be damaged.

1. All bearings are sealed ball bearings. They are lubricated for life and need no further maintenance.
2. Periodically clean all dust and wood chips from around AND UNDER the base and the rotary table. Even though slots are provided to allow debris to pass through, some dust will accumulate.

3. The brushes are designed to give you several years of use. If they ever need replacement follow the instructions below or return the tool to the nearest service center for repair. Service center locations are packed with your tool.

Brushes

Inspect carbon brushes regularly:

1. **TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.**
2. Remove the brush inspection cap.
3. Withdraw the brush assembly.
4. Keep brushes clean and sliding freely in their guides. Always replace a used brush in the same orientation in the holder as it was prior to its removal. Carbon brushes have varying symbols stamped into their sides, and if the brush is worn down to the line closest to the spring, they must be replaced. (If either brush is worn out, replace both.) Use only identical B&D brushes. Use of the correct grade of brush is essential for proper operation of electric brake. New brush assemblies are available at B&D service centers.
5. The tool should be allowed to "run in" (run at no load) for 10 minutes before use to seat new brushes. The electric brake may be erratic in operation until the brushes are properly seated (worn in).

NOTE: While "running in" DO NOT TIE, TAPE, OR OTHERWISE LOCK THE TRIGGER SWITCH ON. HOLD BY HAND ONLY.

ACCESSORIES

Recommended accessories for use with your tool are available at extra cost from your distributor or local service center.

CAUTION: The use of any non-recommended accessory may be hazardous.

If you need any assistance in locating any accessory call 1-800-9-BD TOOL (1-800-923-8665) or contact Black & Decker (U.S.) Inc., Consumer Service Department, P.O. Box 618, 626 Hanover Pike, Hampstead, MD 21074.

Extension, Work Support: 36800

Used to support long overhanging workpieces, the work support is user assembled and stores conveniently under the saw table. Your saw table is designed to accept two work supports; one on each side.

Adjustable Length Stop: 36801

Requires the use of one work support (see page 10). It is used to make repetitive cuts of the same length from 0 to 42".

Clamp: 36802

Used for firmly clamping workpiece to the saw fence for precision cutting.

Dust Bag: 36803

Equipped with a zipper for easy emptying, the dust bag will capture the majority of the sawdust produced.

Note: Deflector on dust spout channels debris to ground. Spout has a provision to attach a vacuum hose to collect sawdust. Lift deflector to connect hose.

Crown Molding Fence: 36807

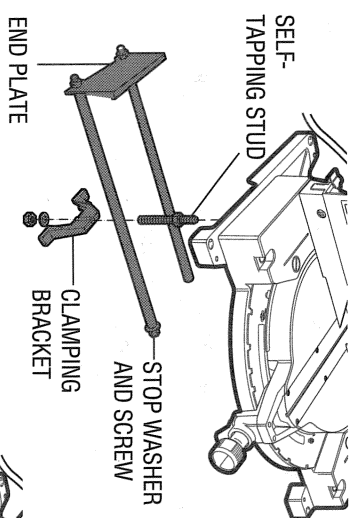
Used for precision cutting of crown molding. Position crown molding consistently at the proper angle from cut to cut.

Kit Box: 36806

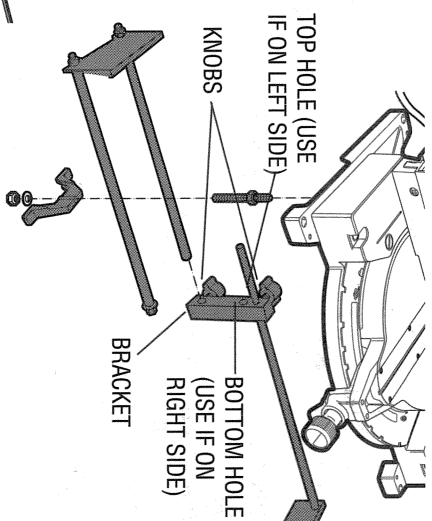
Used to store and transport accessories.

APPLICATION	BLADE	NO. OF TEETH	TYPE OF CUT
Fine Trim Molding	Precision Ground Carbide	60-100	Very smooth splinter free
Trim, Framing, Pressure-Treated Decking	Combination Multi-Purpose	32-60	Smooth fast cut
Aluminum	Nonferrous Metal Cutting	60-80	—

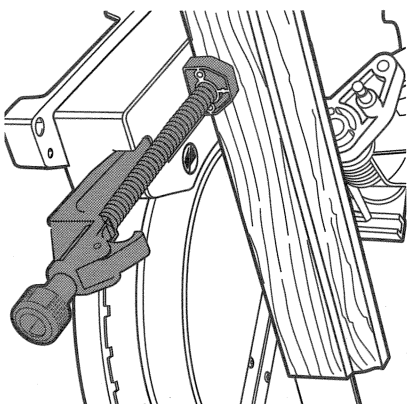
36800 - EXTENSION, WORK SUPPORT



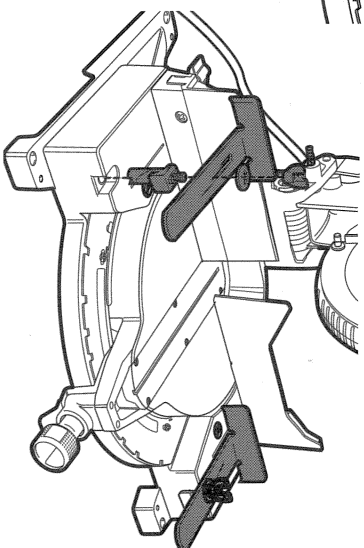
36801 - ADJUSTABLE LENGTH STOP



36802 - CLAMP



36807 - CROWN MOLDING FENCE



Every B&D tool is of the highest quality.

If you wish to contact us regarding this product, please call toll free between 8:00am and 8:00pm ET, seven days a week:

1-800-9-BD TOOL
(1-800-923-8665)

IMPORTANT!

To assure product safety and reliability, particularly for double insulated tools, repairs, maintenance and adjustment (excluding maintenance described in this manual) should be performed by B&D service centers or authorized service centers, using identical B&D replacement parts.

One Year Free Maintenance

All B&D tools for Industry and Construction are covered under a one year free maintenance program where B&D will inspect your tool for safety and provide necessary maintenance or repairs, including normal wear and tear parts, for one year, free of charge.

Full Warranty

All B&D tools for Industry and Construction are warranted to be free of any defects in materials or workmanship. Upon thorough examination of tool, B&D will repair or replace, at our option, any product that is determined to be defective.

Conditions

The service/safety check and the warranty do not apply to: repairs made or attempted by anyone other than an authorized B&D service location; misuse, abuse, neglect, improper application of the tool; missing parts; or normal wear and tear (after first year of ownership). Please return the complete unit, transportation prepaid, to any B&D factory owned or B&D authorized service center location (list provided with tool or see yellow pages under "Tools Electric").

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