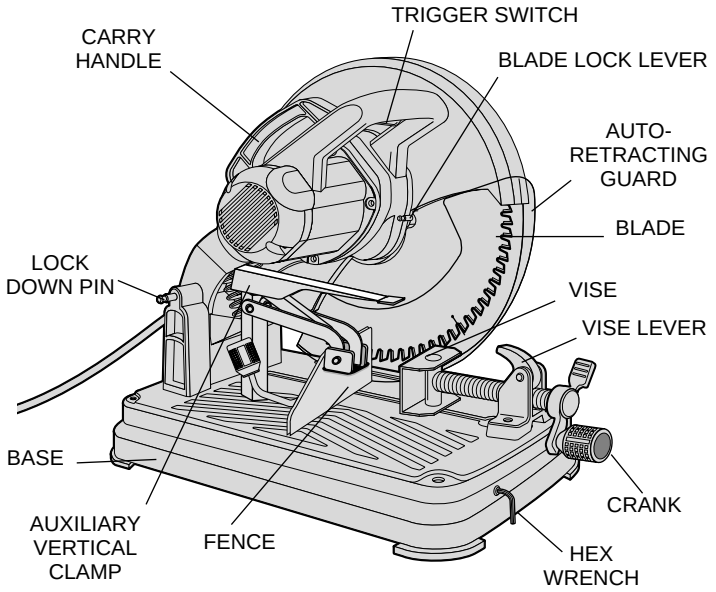
INSTRUCTION MANUAL

DEWALT®

DW872

14" (355 mm) Multi-Cutter™ Saw



⚠WARNING: FOR YOUR OWN SAFETY READ INSTRUCTION MANUAL BEFORE OPERATING MULTI-CUTTER.

Important Safety Instructions

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

Polarized Plugs

To reduce the risk of electric shock, this equipment has 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 into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way. Units rated for 220 volts will have a different style plug that will not fit the outlet and is not polarized.

SAVE THESE INSTRUCTIONS

- ***KEEP GUARDS 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 tool before turning it on.*
- ***KEEP WORK AREA CLEAN.*** *Cluttered areas and benches invite injuries.*
- ***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 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.*
- ***USE PROPER EXTENSION CORD.*** *Make sure your extension cord is in good condition. When using and 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.

Minimum Gage for Cord Sets

Volts	**Total Length of Cord in Feet**			
120V	0-25	26-50	51-100	101-150
240V	0-50	51-100	101-200	201-300
Ampere Rating				
More Than	Not more Than		**AWG**	
0 - 6	18	16	16	14
6 - 10	18	16	14	12
10- 12	16	16	14	12
12- 16	14	12	Not Recommended	

- ***WEAR PROPER APPAREL.*** *Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.*
- ***ALWAYS USE SAFETY GLASSES.*** *Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.*
- ***SECURE WORK.*** *Use clamps, including supplied auxiliary vertical clamp and/or a vise to hold work. It's safer than using your hand.*
- ***DON'T OVERREACH.*** *Keep proper footing and balance at all times.*
- ***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, and the like.*
- ***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 over 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.*
- ***NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.*** *Don't leave tool until it comes to a complete stop.*
- *REPLACEMENT PARTS. When servicing use only identical replacement parts.*
- ***TO REDUCE THE RISK OF ELECTRIC SHOCK,*** *this equipment has 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, contact a qualified electrician to install the proper outlet. DO NOT CHANGE THE PLUG IN ANY WAY.*

Additional Specific Safety Rules

- ***BE SURE THE BLADE BOLT IS TIGHTENED SECURELY BEFORE CUTTING.***
- *Wear eye protection.*
- *Keep hands out of path of saw blade. Never cut a piece where hand would be 6" (152 mm) or less from blade.*
- *Do not operate saw without guards in place.*
- *Do not perform any operation freehand.*
- *Never reach in back of saw blade.*
- *Turn off tool and wait for saw blade to stop before moving workpiece or changing settings.*
- *Disconnect power before changing blade or servicing.*
- *No Load speed of this tool is 1300 rpm.*
- *Always position tool on a flat, stable surface before use.*

- *Do not use cutting fluids with this electric tool. The fluids could ignite, cause electrical shock, or chemically attack the plastic lower guard.*
- *Be aware of cutting chips and the material being cut. They may be sharp and hot. Allow cut off parts to cool before handling*
- *Before using, inspect the blade for cracks or flaws. If a crack or flaw is evident—discard the blade! The blade should also be inspected whenever you think the tool or blade may have been dropped.*
- *Never start the tool with a person in line with the blade. This includes the operator.*
- *In operation, avoid bouncing the blade or giving it rough treatment. If this occurs, stop the tool and inspect the blade.*
- *Clean your tool periodically following the procedure in this manual.*
- *Do not remove blade guards.*
- ***ALWAYS USE THE VISE OR SPECIAL FIXTURE TO CLAMP WORK SECURELY.*** *Other aids such as the supplied auxiliary vertical clamp, spring, bar, or C-clamps may be appropriate for certain sizes and shapes of workpiece. Use care in selecting and placing these clamps and make a dry run before making a cut. The auxiliary vertical clamp must be used when cutting on the upstroke of the blade See Auxiliary Vertical Clamp section of this manual.*
- ***NEVER CUT MAGNESIUM WITH THIS TOOL.***
- *Use tool in a well-ventilated area.*
- *Turn tool off before removing any pieces from the base.*
- ***DO NOT CUT ELECTRICALLY LIVE MATERIAL.***
- *Use only genuine DEWALT14" (355mm) carbide tipped metal cutting blades. Never use abrasive cut off wheels or other type of saw blade.*
- *Do not cut concrete, stone, brick, tile or ceramic.*
- *Make sure the blade lock (Fig. 4) is released before switch is turned on.*
- *Keep hands and body away from rotating blade.*
- *Make sure blade is not contacting the work piece before the switch is turned on.*
- *DO NOT CUT material LESS than 18 gauge (.0478", 1.2 mm) in thickness.*
- ***DO NOT OPERATE THIS TOOL NEAR FLAMMABLE LIQUIDS, GASES OR DUST.*** *Sparks or hot chips from cutting or arcing motor brushes may ignite combustible materials.*

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

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

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

Power Supply

Be sure your power supply agrees with the nameplate marking. 120 volts, "60 Hz" means alternating current (normal 120 volt, 60 Hz house current).

A voltage decrease of more than 10% will cause a loss of power and overheating.

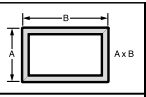
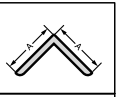
Cutting Capacity

The wide vise opening and high pivot point provide cutting capacity for many large pieces. Use the cutting capacity chart to determine total maximum size of cuts that can be made.

⚠**CAUTION: CERTAIN LARGE, CIRCULAR OR IRREGULARLY SHAPED OBJECTS MAY REQUIRE ADDITIONAL HOLDING MEANS IF THEY CANNOT BE HELD SECURELY IN THE VISE.**

Maximum Cutting Capacity

NOTE: CAPACITY SHOWN ON CHART ASSUMES OPTIMUM FENCE POSITION.

Work Piece Shape / Cutting Angle				
90°	5-3/16”	4-3/4”	4-1/4 x 7”	5-9/16”

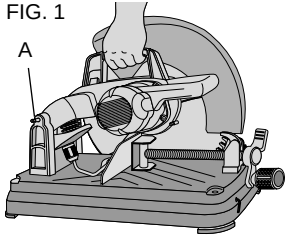
Standard Equipment

1 14” (355mm) genuine DEWALT Metal Cutting Blade.
1 Blade Wrench in base holder.
1 Vise Attachment
1 Auxiliary vertical clamp

To Carry (Fig. 1)

Fold down unit to position where you can carry the saw. Push in lock pin (A) to lock arm down.

FIG. 1



Unlocking (Fig. 2)

To unlock tool, depress carry handle slightly and pull lock pin (A) out. Motor arm will then pivot upward.

Installation of Blade (Fig. 3 & 4)

1. UNPLUG UNIT FROM POWER SUPPLY.
2. With motor arm in the up position, rotate the lower guard (A) out of the way and hold with one hand. (Shown in dotted lines to show the rest of the detail)
3. With the same hand, depress the blade lock lever (I) until it engages one of the holes in the inner clamp washer (H). With

FIG. 2

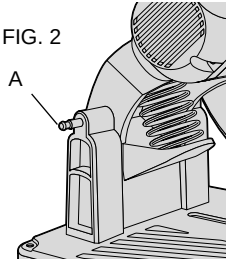


FIG. 3

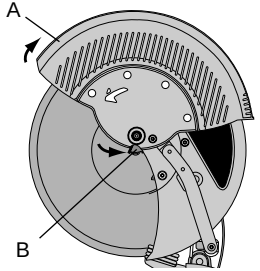


FIG. 5

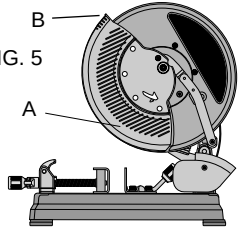


FIG. 4

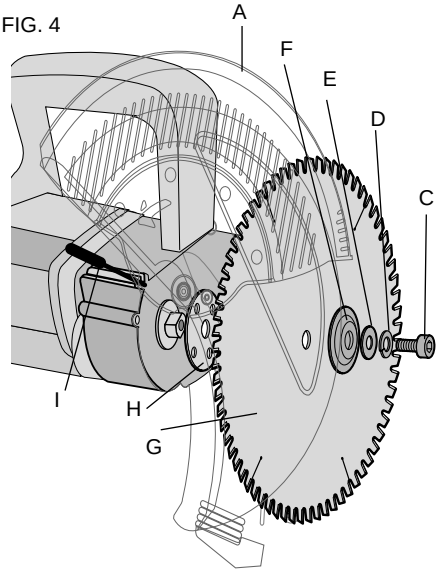


FIG. 6

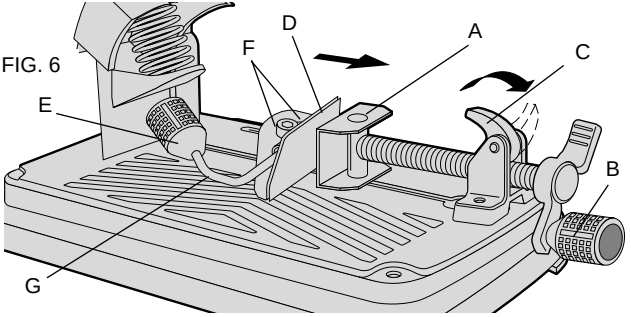


FIG. 7

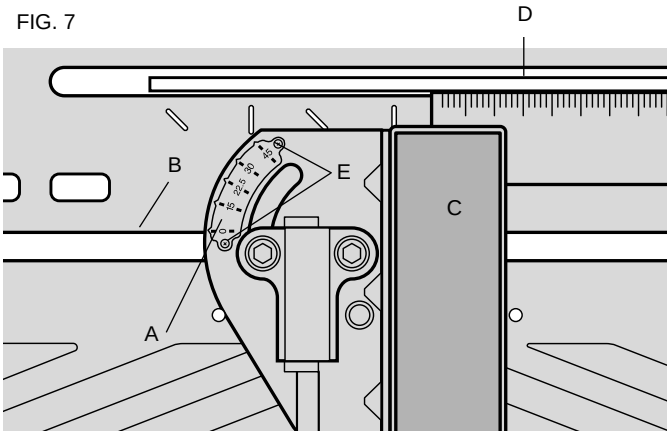


FIG. 8

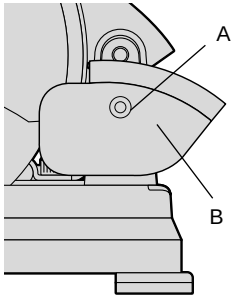
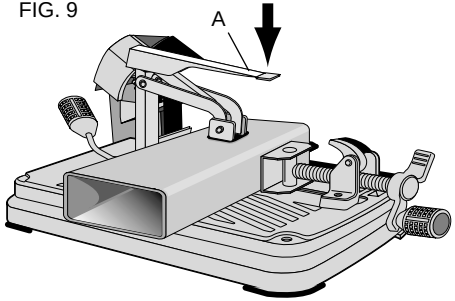


FIG. 9



the hex wrench rotate the bolt cover (B) out of the way and loosen the bolt (C) counterclockwise. Then remove the bolt (C), lock washer (D), the flat washer (E) and the outer clamp washer (F).

4. Install blade (G) oriented as shown against the inner clamp washer (H). Reassemble the outer clamp washer, flat washer, lock washer and bolt hand tight.
5. With blade lock engaged, tighten the bolt securely with the hex wrench.
6. Remove hex wrench then release lower guard and blade lock lever.
7. Use same steps to remove the blade.

DO NOT MAKE ANY ADJUSTMENT WHILE TOOL IS PLUGGED INTO POWER SUPPLY.

⚠WARNING: VISUALLY CHECK BLADE FOR CRACKS OR OTHER DAMAGE. VERIFY PROPER BLADE INSTALLATION BEFORE USE. IF BLADE IS DAMAGED IN ANY WAY, HAVE IT RECONDITIONED AT A QUALIFIED SAW BLADE SERVICE SHOP.

⚠WARNING: BE SURE THE BLADE BOLT IS TIGHTENED SECURELY AND THE BOLT COVER IS COVERING THE BOLT HEAD BEFORE CUTTING.

Auto Retracting Guard (Fig. 5)

This tool has an automatic retracting lower guard system. The blade is exposed as it approaches the material and is covered in the up position.

- *When cutting very large pieces, it may be necessary to manually assist the guard in retracting. To accomplish this, rotate the guard (A) slightly by the lip (B), just enough to clear the workpiece and release.*
- *Keep hands and other body parts away from rotating blade.*
- *Do not remove blade guard system.*
- *Keep guard system in good operating condition.*

Vise Operation (Fig. 6)

The vise (A) has a quick travel feature. To release the vise when it is clamped tightly, turn the crank (B) counterclockwise one or two times to remove clamping pressure. Lift vise lever (C). Pull crank assembly out as far as desired. Vise may be shoved into work without cranking. Lower vise lever then tighten vise on work by using crank.

Fence Operation (Fig. 6)

The fence (D) requires no wrenches to operate. The quick release clamp lever (E) unlocks and locks the fence. When the lever is rotated fully forward, toward the vise, the fence is unlocked. The fence can then be freely moved forward, backward or rotated to allow for the best cutting position.

Pushing the lever fully to the rear locks the fence in position selected. If the leg (G) of the lever is not horizontal (parallel to the base), the fence is not locked. Lever will only lock fence when there is strong resistance to rotate it backwards, which engages the cam action. If resistance is light, adjust clamping force by slightly tightening the two bolts (F) holding the fence to the base. Test by clamping the workpiece with the vise. Adjust as needed to assure that the fence does not move and the workpiece is securely clamped.

Fence Angle Adjustment (Fig. 7)

To make angle cuts, unlock and rotate the fence until the desired angle on the angle plate (A) lines up with the edge of the slot (B) in the base, then re-lock the fence.

The angle plate (A) is attached to the fence by screws (E) and is preset at the factory. If it becomes necessary to readjust the angle plate for accuracy, perform the following steps.

1. DISCONNECT THE POWER SUPPLY.
2. Unlock the fence and lock the arm in the down position so the

FIG. 10

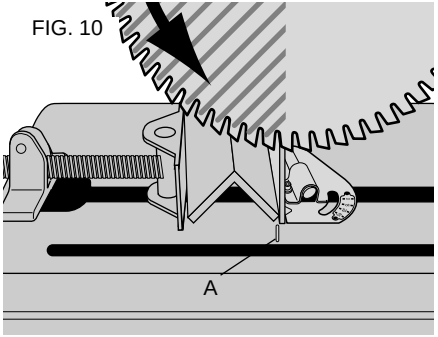


FIG. 12

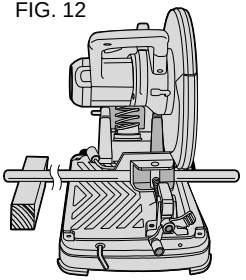


FIG. 11

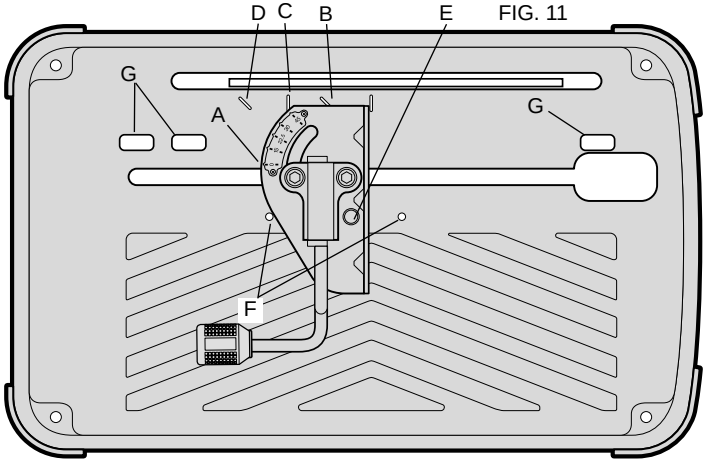


FIG. 13

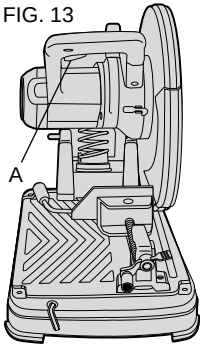


FIG. 14

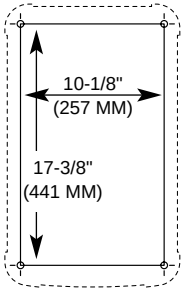
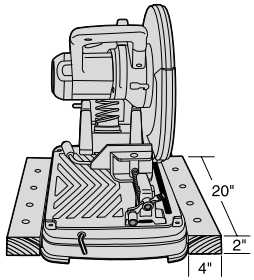


FIG. 15



blade extends into the base.

3. Place a square (C) against the blade (D), adjust the fence against the square and then re-lock the fence.
4. Unlock and raise the arm.
5. Loosen the two angle plate screws (E). Align the 0˚ pointer with the edge of the slot (B) and retighten the screws.

Chip Deflector Adjustment (Fig. 8)

To aim chips away from surrounding area or into a collection bin, loosen the screw (A), adjust the chip deflector (B) angle and retighten the screw.

Auxiliary Vertical Clamp (Fig. 9)

The auxiliary vertical clamp (A) ***MUST*** be used with the vise when cutting wide or irregular shaped materials, when making angle cuts, and when the fence is in the rear positions where the upstroke of the blade tends to pull the workpiece up from the vise.

To use the clamp, insert it in one of the holes (Fig. 11,G) in the base until the clamp rests on the workpiece. Press the lever down as shown in Fig. 9 to lock the workpiece in place. Lift the lever to release the clamp.

NOTE: When clamping thin stock, a shim of suitable thickness may be required under the clamp pad.

⚠**WARNING:** Failure to use vertical clamping when cutting on the upstroke of the blade may result in serious damage to the tool and possible personal injury.

Material Positioning and Clamping Tips (Fig. 10, 11, 12)

- ***TURN OFF AND UNPLUG TOOL BEFORE MAKING ANY ADJUSTMENT TO THE SAW OR REPOSITIONING A WORK-PIECE.***
- *In general, position the workpiece so it will be cut on the down-stroke of the blade. (Shaded area) Slot (A) indicates the best fence position for general cutting at 90˚.*
- *Slots (A) and (B) indicate the best fence positions for general cutting at 90˚ and 45˚. Slots (C) and (D) indicate the same for larger pieces. (Fig. 11)*
- *When the fence is lined up with a slot in the base, the spring loaded pin (E) will drop into the corresponding hole (F) in the base to further secure the fence position. To move fence to another position, pull up the pin.*
- *The fence can also be used in other angles and positions, as needed.*
- *Long workpieces must be supported by a block so it will be level with the saw table The cut off piece should be free to fall downward to avoid blade binding.(Fig. 12)*
- *ALWAYS CLAMP THE WORKPIECE SECURELY, NO EXCEP-TIONS.*
- *Always clamp the workpiece with the vise and auxiliary vertical clamp as described.*
- *The auxiliary vertical clamp or other clamping aids such as spring, bar or C-clamps will compliment the vise for holding certain sizes and shapes of work pieces. Use care in selecting and placing these*

FIG. 16

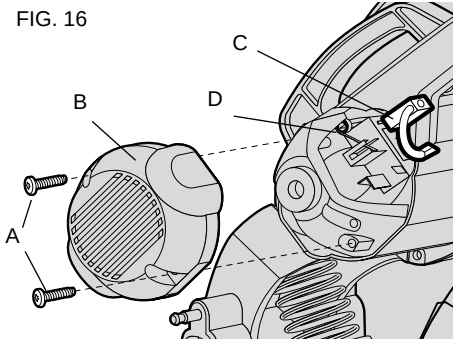
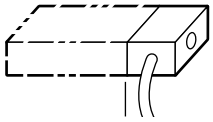


FIG. 17



clamps. Make a dry run before making the cut.

Switch (Fig. 13)

To start the tool, depress the trigger switch (A). To turn the tool off, release the trigger switch. Keep hands and material from blade until it has coasted to a stop.

⚠ **CAUTION: MAKE SURE THE BLADE IS NOT TOUCHING THE WORKPIECE WHEN THE TOOL IS STARTED.**

Cutting Process Checklist

1. BEFORE STARTING THE TOOL, MAKE SURE:
   - Tool is securely mounted on a stable surface.
   - Blade is mounted correctly and blade bolt is tight.
   - Fence is set properly and locked in place.
   - Workpiece is held firmly in the vise and vertically clamped as described.
   - Chip deflector is properly adjusted.
2. Start the motor and allow the blade to come up to full speed.
3. Pull the handle down slowly to make initial contact with the workpiece. Once contact is made, increase feed rate, allowing the blade to do the work. Slow down just before the cut is complete.
4. After the cut is complete, turn the tool off and keep hands away until blade has stopped spinning.

⚠ **CAUTION:** When cutting small pieces, (less than one inch) the scrap may be thrown toward the rear of the unit.

Good Care/Cutting Practices

1. The blade teeth are made of carbide material which is very hard, yet brittle. Vibration increases side loads that could cause chipping of teeth or cracking of the blade. Here are some important tips that will help prolong the life of the blade and the tool:
   - Position the workpiece as much as possible under the down-stroke of the blade (Figure 10). Material must be firmly clamped and supported to reduce vibration. ***NO EXCEPTIONS.***
   - Never perform cuts on small workpieces bundled together.
   - Position the workpiece so that the blade is cutting through the smallest cross section.
   - Avoid cutting large, flat, horizontal surfaces where possible. The lowest number of blade teeth contacting the workpiece during the cut will produce the least amount of heat and increase blade life.
2. The following signs indicate that the blade is worn and should be resharpened or replaced:
   - *Poor cutting performance.*
   - *More sparks than chips created during a cut.*
   - *The ringing sound of the blade increases.*

Procedure For Permanent Mounting (Fig. 14)

(Recommended when multiple cuts will be made at the same location)

1. Drill four holes 5/16" through the work surface. (Figure 14)

2. Insert 1/4-20 screws down through the holes in the base and through holes in mounting surface. The approximate length of the screws should be the thickness of the mounting surface plus 4 inches.

CRADLE MOUNTING

1. Cut two boards approximately 20" long x 2" high x 4" wide.
2. Place tool at desired work location.
3. Place boards tightly along side, and attach to work surface, (Figure 15).

Maintenance

Motor Brush Inspection and Replacement (Fig. 16)

BE SURE TOOL IS UNPLUGGED BEFORE INSPECTING BRUSHES. Brushes should be regularly inspected for wear. To inspect brushes, unscrew the two end cap screws (A) and remove end cap (B). To remove each brush, (C) first unplug the shunt wire terminal connection. Then carefully back the brush spring (D) out of the brush box and remove brush. Brushes should slide freely in brush box. If brushes are worn down to .3” (8mm) (see Figure 17) they should be replaced. To reinstall each brush carefully back the spring out of the brush box, insert the brush and return the spring making sure it is pressing on the brush and not touching the brush box. Reconnect shunt wire terminal, then replace the end cap and two screws.

Cleaning

Blowing dust and grit out of the main housing and chip deflector by means of an air hose is recommended and should be done as often as dirt is seen collecting in and around the air vents.

TROUBLE! *TOOL WILL NOT START*

WHAT'S WRONG?
1. Tool not plugged in.
2. Fuse blown or circuit breaker tripped.
3. Cord damaged.
4. Brushes worn out.

WHAT TO DO…
1. Plug in saw.
2. Replace fuse or reset circuit breaker.
3. Have cord replaced by authorized service center.
4. Have brushes replaced by authorized service center.

TROUBLE! *TOOL MAKES UNSATISFACTORY CUTS*

WHAT'S WRONG?
1. Dull blade.
2. Workpiece incorrectly placed or clamped.

WHAT TO DO…
1. Replace or sharpen blade. See *Good Care/Cutting Practices* pages 7 and 8.
2. Firmly clamp and support workpiece. See *Material Positioning and Clamping* page 7.

TROUBLE! *BLADE DOES NOT COME UP TO SPEED*

WHAT'S WRONG?
1. Extension cord too light or too long.
2. Low voltage.
3. Low generator voltage.

WHAT TO DO…
1. Replace with adequate size cord. See chart on page 2.
2. Contact your electric company.
3. Check generator output voltage. Reduce number of tools powered by the generator.

TROUBLE! *TOOL VIBRATES EXCESSIVELY DURING CUT*

WHAT'S WRONG?
1. Tool not mounted securely to stand or work bench.
2. Damaged saw blade.
3. Workpiece not clamped properly.

WHAT TO DO…
1. Tighten all mounting hardware. See page 8, *Procedures for Permanent Mounting*.
2. Replace blade.
3. Refer to *Material Positioning and Clamping* page 7, and *Good Care and Cutting Practices,* pages 7 and 8.

TROUBLE! *DOES NOT MAKE ACCURATE CUTS*

WHAT'S WRONG?
1. Fence not adjusted correctly.
2. Blade is not square to fence.
3. Excessive force used to make cut.
4. Work piece moving.

WHAT TO DO…
1. Check and adjust. See *Fence Operation* on page 5.
2. Check and adjust. See *Fence Angle Adjustment* on page 6.
3. Reduce cutting force, let the blade do the work.
4. Clamp workpiece securely. See *Material Positioning and Clamping* page 7. Make sure material is laying flat against the base.

TROUBLE! *CANNOT MOVE ARM*

WHAT'S WRONG?
1. Auto-retracting blade guard will not move.
2. Lock down pin is engaged.

WHAT TO DO…
1. Check for damaged parts. Check for excessive chips in guard. Replace or repair as needed.
2. Push down slightly on the arm, pull lock down pin out. Raise arm. See page 3.

TROUBLE! *MATERIAL MOVES DURING CUT*

WHAT'S WRONG?
1. Fence slipping or workpiece incorrectly placed or clamped.
2. Vise too loose
3. Excessive cutting force.

WHAT TO DO…
1. See *Material Positioning and Clamping,* page 7.
2. Tighten vise clamping. Use auxiliary vertical clamp. See *Auxiliary Vertical Clam*p, page 7.
3. Reduce cutting force.