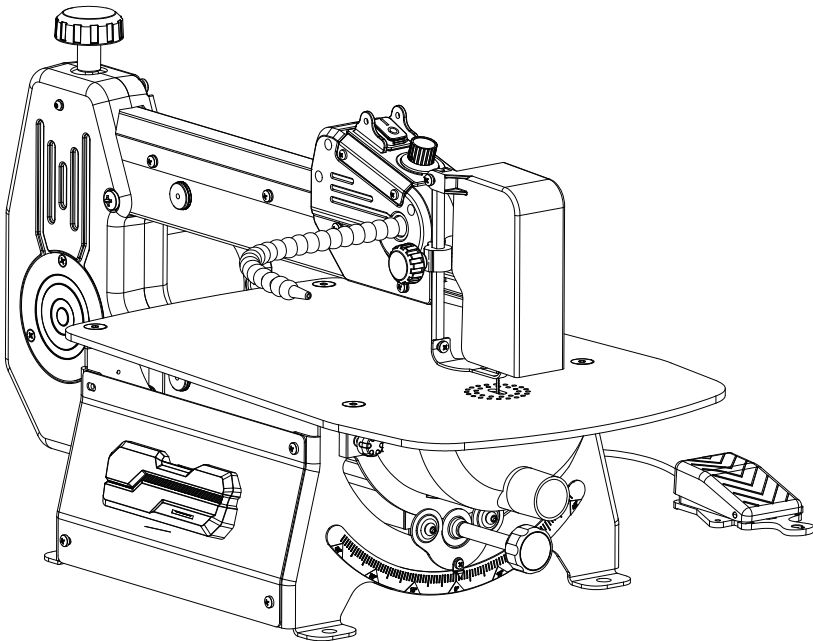




INSTRUCTION MANUAL

18" VARIABLE SPEED SCROLL SAW



IMPORTANT:

For your own safety, read and follow all of the Safety Guidelines and Operating Instructions before operating this product.

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SPECIFICATIONS

Model No.	CSS18A
Motor	110V/60Hz, 1PH
Power	S1 90W, S2 120W

WARNING

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

WORK AREA SAFETY

1. **Keep work area clean and well lit.** Cluttered or 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 children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
5. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
6. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

1. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
2. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a respiratory mask, non-skid safety shoes and hearing protection used for appropriate conditions will reduce the risk of personal injury.
3. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
4. **Remove any adjusting key or wrench before turning the power tool on.** A

wrench or a key left attached to a rotating part of the power tool may result in personal injury.

5. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

6. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.

7. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

POWER TOOL USE AND CARE

1. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

2. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

3. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

4. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

5. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

6. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

7. **Use the power tool, accessories and tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

8. **Use clamps to secure your workpiece to a stable surface.** Holding a workpiece by hand or using your body to support it may lead to loss of control.

9. **KEEP GUARDS IN PLACE** and in working order.

SERVICE

1. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

CALIFORNIA PROPOSITION 65 WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- 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 with approved safety equipment such as dust masks specially designed to filter out microscopic particles.

BEFORE OPERATION

1. Check for both proper assembly and proper alignment of moving parts.
2. Understand the proper use of the ON / OFF switch.
3. Know the condition of the scroll saw. If any part is missing, bent, or does not operate properly, replace the component before attempting to operate the scroll saw.
4. Determine the type of work you are going to be doing. Properly protect your body including your eyes, hands, face, and ears.
5. To avoid injury caused by pieces thrown from accessories, use only recommended accessories designed for this saw. Follow the instructions supplied with the accessory. The use of improper accessories may cause risk of injury.

6. To avoid contact with rotating equipment:

- Do not put your fingers in a position where they risk contacting the blade if the workpiece unexpectedly shifts or your hand unexpectedly slips.
- Do not cut a workpiece too small to be held safely.
- Do not reach under the scroll saw table when the motor is running.
- Do not wear loose clothing or jewelry. Roll long sleeves above the elbow. Tie back long hair.

7. To avoid injury from accidental startups of the scroll saw:

- Make sure to turn OFF the switch and unplug the power cord from the electric outlet before changing the blade, performing maintenance or making adjustments.
- Make sure the switch is OFF before plugging in the power cord to an electric outlet.

8. To avoid injury from a fire hazard, do not operate the scroll saw near flammable liquids, vapors or gases.

9. To avoid back injury:

- Obtain help when raising the scroll saw more than 10 inches (25.4 cm). Bend your knees when lifting the scroll saw.
- Carry the scroll saw by its base. Do not move the scroll saw by pulling on the power cord. Pulling on the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.

SCROLL SAW SAFETY

1. To avoid injury from unexpected saw movement:

- Use the scroll saw on a firm level surface with adequate space for handling and supporting the workpiece.
- Be sure the scroll saw cannot move when operated. Secure the scroll saw to a workbench or table with wood screws or bolts, washers and nuts.

2. Before moving the scroll saw, unplug the power cord from the electrical outlet.

3. To avoid injury from kickback:

- Hold the workpiece firmly against the tabletop.
- Do not feed the workpiece too fast while cutting. Only feed the workpiece at the rate the saw will cut.
- Install the blade with the teeth pointing downward.
- Do not start the saw with the workpiece pressing against the blade. Slowly feed the workpiece into the moving blade.
- Use caution when cutting round or irregularly shaped workpieces. Round items will roll and irregularly shaped workpieces can pinch the blade.

4. To avoid injury when operating the scroll saw:

- Obtain advice from a qualified person if you're not thoroughly familiar with the operation of scroll saws.
- Before starting the saw, make sure the blade tension is correct. Recheck and adjust tension as needed.
- Make sure the table is locked into position before starting the saw.
- Do not use dull or bent blades.
- When cutting a large workpiece, make sure the material is supported at the table height.
- Turn the saw OFF and unplug the power cord if the blade jams in the workpiece. This condition is usually caused by sawdust clogging the line you are cutting. Wedge open the workpiece and back out the blade after turning off and unplugging the machine.

GROUNDING INSTRUCTIONS

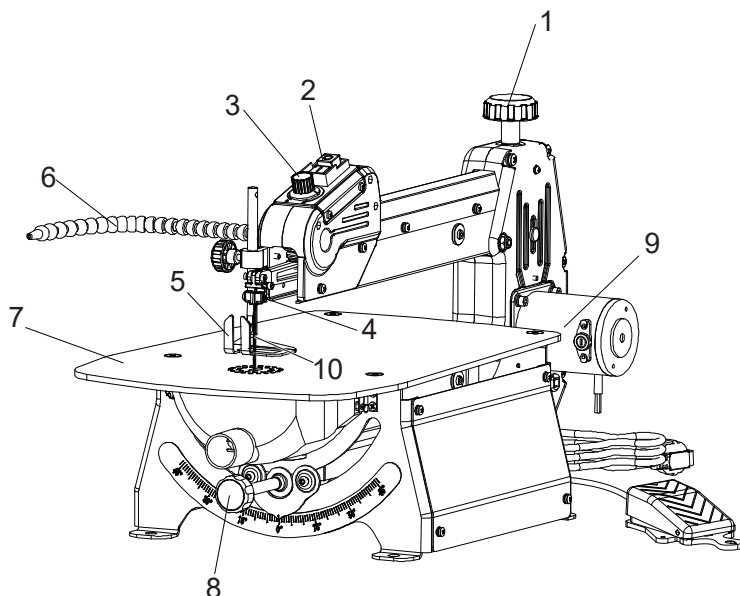
In the event of a malfunction or breakdown, grounding provides the path of least resistance for an electric current and reduces the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching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

1. **Do not modify the plug provided.** If it will not fit the outlet, have the proper outlet installed by a licensed electrician.
2. **Improper connection** of the equipment grounding conductor can result in electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, **DO NOT** connect the equipment grounding conductor to a live terminal.
3. **Check** with a licensed electrician or service personnel if you do not completely understand the grounding instructions or whether the tool is properly grounded.
4. **Use only three-wire extension cords** that have three-pronged plugs and outlets that accept the tool's plug. Repair or replace a damaged or worn cord immediately.

CAUTION! In all cases, make certain the outlet in question is properly grounded. If you are not sure, have a licensed electrician check the outlet.

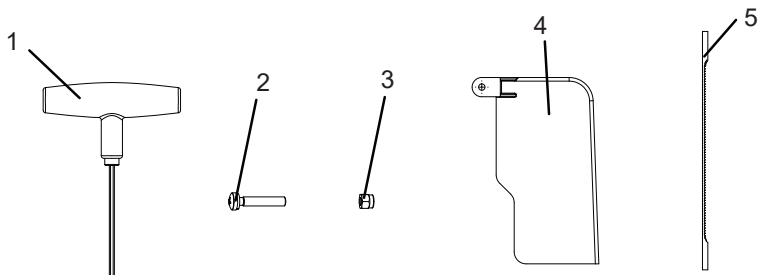
KEY PARTS DIAGRAM

No.	Description	Qty.
1	Blade tension knob	1
2	Power switch	1
3	Variable speed control knob	1
4	Hexagon socket fixing bolt	2
5	Fender bracket	1
6	Sawdust blower	1
7	Work table	1
8	Indexing plate locks handle	1
9	Motor	1
10	Wide saw blade	1



ATTACHMENT PARTS DIAGRAM

No.	Description	Qty.
1	T special spanner	1
2	Cross recessed pan head screw + spring washer	1
3	Hexagon lock nuts	2
4	Saw blade shield	1
5	Narrow saw blade	1



ASSEMBLY/OPERATING

The machine is designed to operate in closed rooms and must be placed stable on firm and levelled surface. The machine can be bolted down if required.

⚠ WARNING

If you notice any transport damage while unpacking, notify your supplier immediately. Do not operate the machine!

Dispose of the packing in an environmentally friendly manner. Clean all rust protected surfaces with a mild solvent.

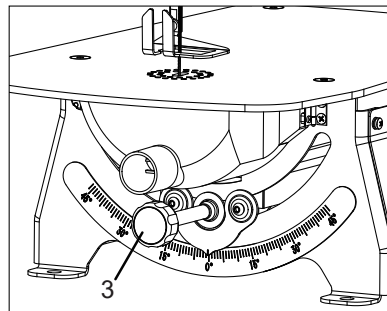
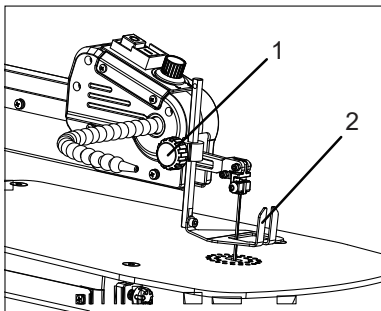
TO REDUCE RISK OF INJURY:

- When carrying the saw, hold it close to your body to avoid injury to your back. Bend your knees when lifting the saw.
- Carry the saw by the base, table, housing, or motor. Do not carry the saw by the power cord or upper arm.
- Secure the saw in a position where people cannot stand, sit, or walk behind it. Debris thrown from the saw could injure people standing, sitting, or walking behind it. Secure the saw on a firm, level surface where the saw cannot rock. Make sure there is adequate room for handling and properly supporting the workpiece

ALIGN THE BEVEL INDICATOR

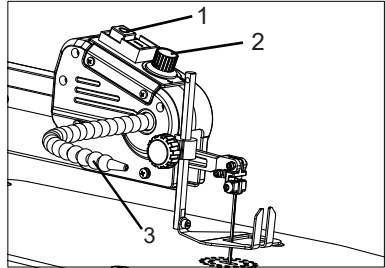
The bevel indicator has been adjusted at the factory, but should be rechecked prior to use for best operation.

1. Loosen the blade guard knob (1) and move the blade guard (2) all the way up.
2. Check if the pointer is on the 0 scale. If not, turn the level lock handle (3) bevel the upper arm until it is approximately at a right angle to the blade.



ADJUSTING THE DUST BLOWER

For best results, the dust blower tube (3) should be adjusted to direct air at both the blade and the workpiece.



POWER SWITCH & SPEED CONTROL KNOB

1. To turn the saw on, flip the I/O switch (1) to I. When first starting the saw, it is best to move the speed control knob (2) to the middle speed position.
2. Turning the control knob. Turning it towards H increases speed; turning it towards L reduces speed.
3. To turn the saw off, flip the I/O switch back to O.

⚠ WARNING

To avoid injury from accidental start-ups, always turn the switch OFF and unplug the scroll saw before moving the saw, replacing the blade, or making adjustments.

FREEHAND CUTTING

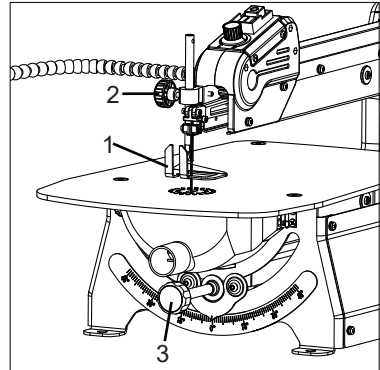
1. Lay out desired design, or secure design to the workpiece.
2. Raise the blade guard foot by loosening the height adjustment knob.
3. Position the workpiece against the blade and place the blade guard foot just above the top surface of the workpiece.
4. Secure the blade guard foot by tightening the height adjustment knob.
5. Remove the workpiece from the blade prior to turning the scroll saw ON.
6. Slowly feed the workpiece into the blade while holding the workpiece securely against the table.
7. When cutting is complete, move trailing edge of the workpiece beyond the blade guard foot. Turn the switch OFF.

ANGLE CUTTING (BEVELING)

1. Layout or secure design to workpiece.
2. Loosen the height adjustment knob (2), move the blade guard foot (1) to the highest position, and retighten the knob.
3. Tilt the table to the desired angle by turning the level lock handle (3).

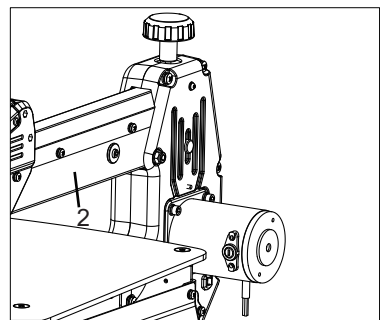
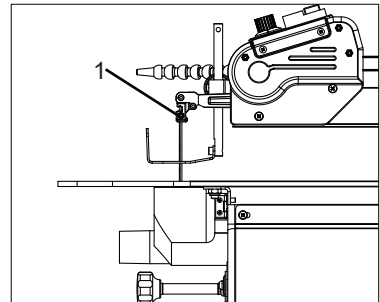
TIP: The table has positive stops at 0, 22.5, 30, and 45 degrees.

4. Tighten the level lock handle (3).
5. Loosen the blade guard screw, and tilt the blade guard (1) to the same angle as the table. Retighten the blade guard screw.
6. Position the workpiece on the right side of the blade. Lower the blade guard foot against the surface by loosening the height adjustment knob. Retighten.
7. Follow steps 5 to 7 under Freehand cutting.



INTERIOR CUTTING & FRETWORK

1. Lay out the design on the workpiece. Drill a 1/4" pilot hole in the workpiece.
2. Loosen the top hexagon socket fixing bolt (1).
3. Gently lift the upper arm (2) of the saw.
4. Place the workpiece on the saw table, threading the blade through the hole in the workpiece.
5. Lower the upper arm.
6. Secure the blade in the upper blade clamp, as directed in "Replace the saw blade" (see page 13)
7. Follow steps 4 - 7 under "Freehand cutting" .
8. When finished making the interior cuts, turn the scroll saw OFF and unplug it. Relieve blade tension and remove the blade from the upper blade clamp. Raise the upper arm and remove the workpiece. Lower the upper arm and lock it in place.



MAINTENANCE

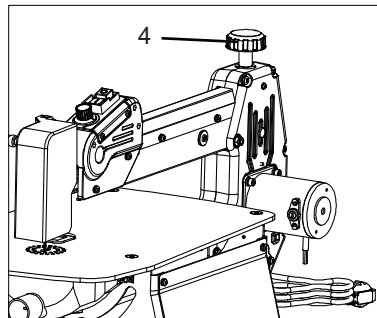
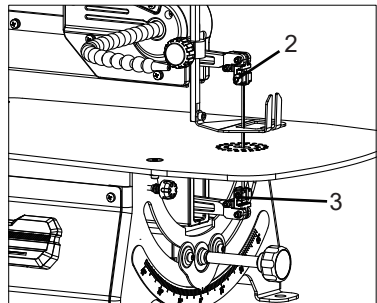
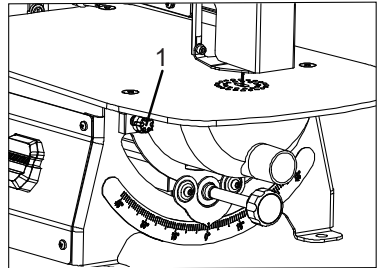
⚠ WARNING

Make sure the saw is turned OFF and unplugged before making any adjustments to the blade.

REPLACE THE SAW BLADE

1. Loosen the locking knob(1) first and open the dust hood.
2. Release the hexagon socket fixing bolt (2)
3. then loosen the bottom hexagon socket fixing bolt (3).
Remove the blade.
4. With the blade's teeth facing toward you and pointing down, thread the new blade through the table slot so that its bottom rests in the bottom clamp.
5. Tighten the bottom hexagon socket fixing bolt (3).
This locks the blade in place.
6. Insert the top of the blade into the top clamp.
7. Tighten the hexagon socket fixing bolt (2) to Lock up.
8. Fine-tune the Blade tension knob(4).

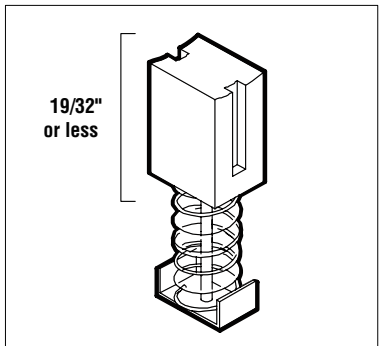
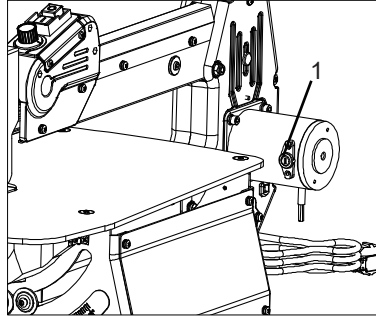
TIP: A properly-tensioned blade will make a high-C sound (C6, 1047 Hz) when plucked with a finger.



CARBON BRUSH REPLACEMENT

The wear on the carbon brushes depends on how frequently and how heavily the tool is used. To maintain maximum efficiency of the motor, we recommend inspecting the two carbon brushes every 60 hours of operation or when the tool stops working.

1. Unplug the saw. To access the carbon brushes, remove the carbon brush cover (1) with a flat-head screwdriver (not included).
2. Carefully remove the old carbon brushes. Keep track of which orientation the old carbon brushes were in to prevent unnecessary wear if they will be reinstalled.
3. Measure the length of the brushes. Install the new set of carbon brushes if either carbon brush length is worn down to 19/32" or less. Reinstall the old carbon brushes (in their original orientation) if your brushes are not worn down to 19/32" or less. Both carbon brushes should be replaced at the same time.
4. Replace the carbon brush cover.



GENERAL MAINTENANCE

1. Clean your saw after each use. Wipe it down with a soft cloth. Clean any accumulated sawdust out of the base. Use low-pressure compressed air (not to exceed 25 PSI) to blow any sawdust out of the blade holders, blade bevel rails, etc.
2. If desired, apply a light coat of dry lubricant (such as PTFE) to the inside of the blade bevel rails. This will help the table bevel smoothly.
3. The motor bearings, interior bearings, and table bevel rail bearings are all sealed and require no additional lubrication.

TROUBLESHOOTING GUIDE

TROUBLE SHOOTING

WARNING

In the interests of operational safety, always switch off the saw and remove the mains plug before carrying out maintenance work.

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Saw blades break	Tension incorrectly set	Set the correct tension
	Load too great	Feed the work piece more slowly
	Incorrect saw blade variety	Use the correct saw blades
	Work piece not fed straight	Avoid exerting side pressure
Motor does not function	Power extension cable faulty	Change faulty cable
	Motor faulty	Call customer service. Do not attempt to repair the motor yourself as this should be carried out by trained personnel.
Vibration NOTE: The saw vibrates slightly when the motor is running in normal operation	Saw incorrectly installed	Refer to the instructions in this manual
	Unsuitable underlay	The heavier the work bench is the less the vibration. A bench made from plywood always vibrates more than one made from solid wood. Select the work bench best suited to your working conditions.
	Motor control board failure	Change a new control board
Saw blade swings out Holder not aligned straight	The work bench is not screwed down or is on the motor	Tighten the locking lever
	The motor is not secured	Securely screw the motor in place
	Holders not aligned	Loosen the screws with which the holders are fastened to the arm. Align the holders so that they are perpendicular to each other and retighten the screws.

EXPLODED VIEW

