

14" Wood Cutting Band Saw

(Model 28-278)



PART NO. 426-02-651-0039 - 08-31-01
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For Parts, Service, Warranty or other Assistance,

please call 1-800-223-7278 (In Canada call 1-800-463-3582).

GENERAL SAFETY RULES

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, featherboards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer. **REMEMBER:** Your personal safety is your responsibility.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, **DO NOT** use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

Technical Service Manager
Delta Machinery
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Jackson, TN 38305
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 **WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY!**

1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL.** Learn the tool's application and limitations as well as the specific hazards peculiar to it.

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

3. **ALWAYS WEAR EYE PROTECTION.** Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty. These safety glasses must conform to ANSI Z87.1 requirements. Note: Approved glasses have Z87 printed or stamped on them.

4. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on".

5. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.

6. **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.

7. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

8. **MAKE WORKSHOP CHILDPROOF** – with padlocks, master switches, or by removing starter keys.

9. **DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.

10. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.

11. **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.

12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

13. **DON'T OVERREACH.** Keep proper footing and balance at all times.

14. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. **DISCONNECT TOOLS** before servicing and when changing accessories such as blades, bits, cutters, etc.

16. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.

17. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in "OFF" position before plugging in power cord. In the event of a power failure, move switch to the "OFF" position.

18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure 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.


20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

22. **STAY ALERT, WATCH WHAT YOU ARE DOING,** and use common sense when operating a power tool. **DO NOT USE TOOL WHILE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in serious personal injury.

23. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or reconnected.

24. **THE DUST GENERATED** by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

25.  **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.
- 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.

SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.

ADDITIONAL SAFETY RULES FOR BAND SAWS

1. **IF you are not thoroughly familiar** with the operation of band saws, obtain advice from your supervisor, instructor, or some other qualified person.
 2. **Make sure wiring codes** and recommended electrical connections are followed and that tool is properly grounded..
 3. **Make sure** that the saw blade teeth point downward toward the table.
 4. **Adjust** the upper guide about 1/8" above the work.
 5. **Make sure** that the blade tension and blade tracking are properly adjusted.
 6. **Stop the machine** before removing scrap pieces from the table.
 7. **Always** keep hands and fingers away from the blade..
 8. **Check** for proper blade size and type.
 9. **Hold workpiece** firmly against the table. **DO NOT** attempt to saw stock that does not have a flat surface, unless a suitable support is used.
 10. **Hold** material firmly and feed into blade at a moderate speed.
 11. **Turn off the tool** if the material is to be backed out of an uncompleted or jammed cut.
 12. Make "release cuts before cutting long curves.
 13. **Shut off power** and clean the band saw and work area before leaving the tool.
- IMPORTANT: When the tool is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use.**
14. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this product is available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201 in the Accident Prevention Manual for Industrial Operations and also in the Safety Data Sheets provided by the NSC. Please also refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machinery and the U.S. Department of Labor OSHA 1910.213 Regulations.†

POWER CONNECTIONS

A separate electrical circuit should be used for your tools. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the tool's plug. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the tool. All line connections should make good contact. Running on low voltage will damage the motor.



WARNING: DO NOT EXPOSE THE TOOL TO RAIN OR OPERATE THE TOOL IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

Your tool is wired for 120 volt, 60 HZ alternating current. Before connecting the tool to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS



WARNING: THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having 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.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green 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.

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

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the tool's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts:

If the tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A, the tool will have a grounding plug that looks like the plug illustrated in Fig. A. A temporary adapter, which looks like the adapter illustrated in Fig. B, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.



WARNING: IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

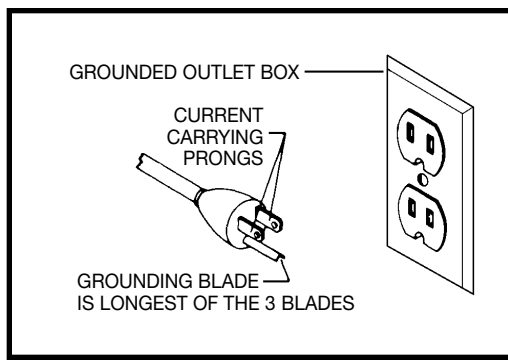


Fig. A

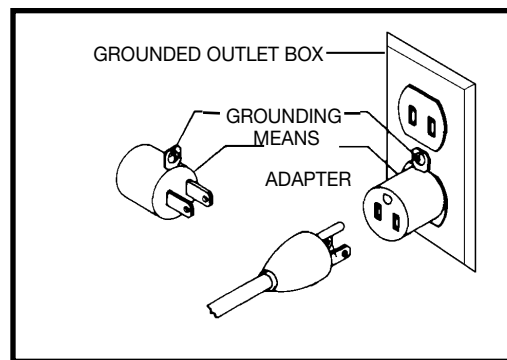


Fig. B

EXTENSION CORDS

Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the tool's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the tool. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. C shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC TOOLS			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. C

OPERATING INSTRUCTIONS

FOREWORD

Delta Model 28-278 is a 14" Band Saw with a 3/4 HP motor. The unit comes with an open stand and has the capacity to cut stock up to 6-1/4" thick and 14" wide.

UNPACKING AND CLEANING

Carefully unpack the tool and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

NOTICE

THE MANUAL COVER PHOTO ILLUSTRATES THE CURRENT PRODUCTION MODEL. ALL OTHER ILLUSTRATIONS ARE REPRESENTATIVE ONLY AND MAY NOT DEPICT THE ACTUAL COLOR, LABELING, OR ACCESSORIES.

CARTON CONTENTS

The Delta Model 28-278 comes packaged with the saw, stand, motor, belt and belt guard, pulleys, and hardware.

ASSEMBLY

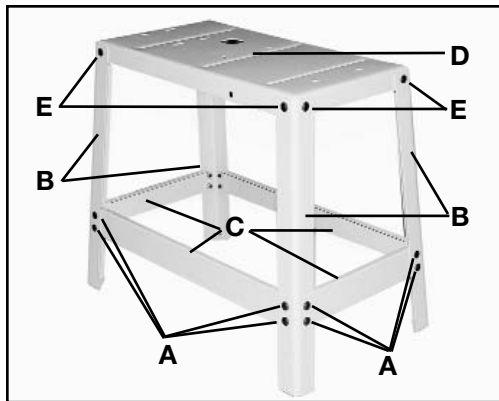


Fig. 1

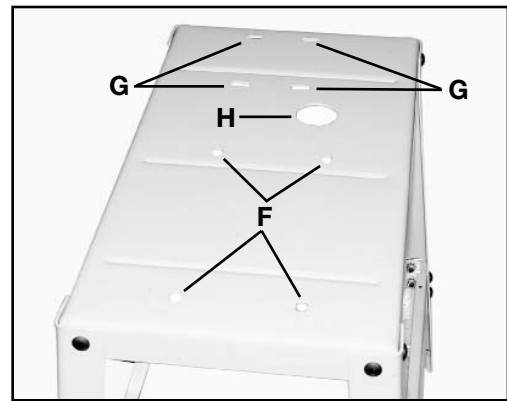


Fig. 2

ASSEMBLING STAND

Begin the assembly of the stand (Fig. 1) by inserting sixteen 5/16-18 x 5/8" carriage bolts (A) (eight of which are shown) through the holes in the legs (B) and the holes in the short and long tie bars (C). Secure this part of the assembly by attaching 5/16" hex nuts from the inside. Place the shelf (D) on the inside of the legs, and insert eight 5/16x18 carriage bolts (E) through the legs (B) and shelf (D). Secure the shelf with flat washers, lock washers and 5/16" hex nuts from the inside. Partially tighten the hardware at this point.

The top view of the shelf (Fig. 2) illustrates the 4 holes (F) that are used to mount the saw to the stand, and the 4 holes (G) that are used to mount the motor to the stand. The power cord and the motor-to-switch cord pass through the large hole (H) so that they are down and out of the way.

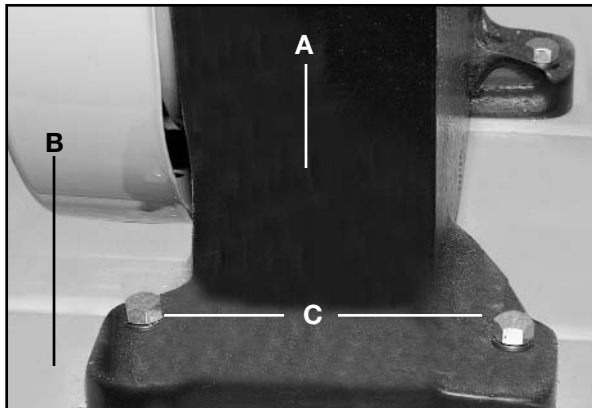


Fig. 3

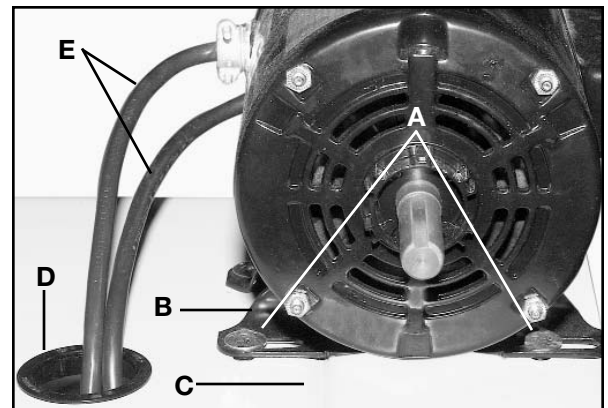


Fig. 4

ATTACHING BAND SAW TO STAND

Attach the band saw (A) Fig. 3 to the stand (B) Fig. 3, using the four 5/16-18 x 1-3/4" hex head screws (two of which are shown at (C)), flat washers, lockwashers and 5/16"-18 hex nuts. Place the hex head screws and lockwashers through the tool base and the stand. Secure with lock washers and hex nuts from underneath. Push down on top of the stand so that the legs of the stand adjust to the surface of the floor. Tighten all of the hardware.

ATTACHING MOTOR TO STAND

Attach the motor to the stand using four 5/16" x 3/4" carriage bolts (A) Fig. 4 (two of which are shown inserted) through the motor plate (B) and stand (C). Secure the motor to the stand (Fig. 4) from underneath, using external tooth washers (which should be placed against the underside of the shelf), flat washers and 5/16" hex nuts (F). **NOTE:** Partially tighten the motor to the stand until after belt tension has been adjusted and the pulley has been aligned. Place grommet (D) in large hole in top shelf (Fig. 4). Insert switch cord and power cord (E) through the hole.

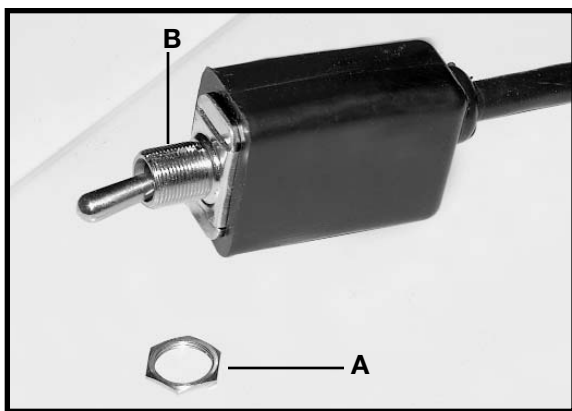


Fig. 5

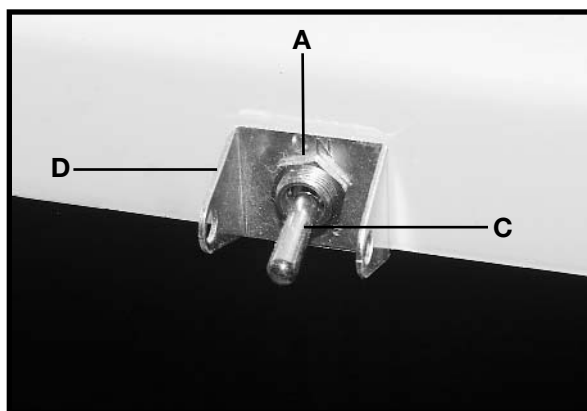


Fig. 6

ATTACHING SWITCH

1. **CAUTION: DISCONNECT TOOL FROM POWER SOURCE.**
2. **CAUTION: Follow this procedure to ensure proper grounding of the switch to prevent an electric shock hazard.**
3. Remove the outer hex nut (A) Fig. 5 from the switch (B).
4. Insert the switch through the hole in the side of the top shelf of the stand. Place the switch (C) Fig. 6 in the down or "off" position.
5. Place the switch bracket (D) Fig. 6 on the switch with the key of switch bracket engaged with the keyway. Fasten switch with hex nut (A) (removed in **STEP 2**). **NOTE:** Tie the excess wire from the motor to the switch and position it out of the way.

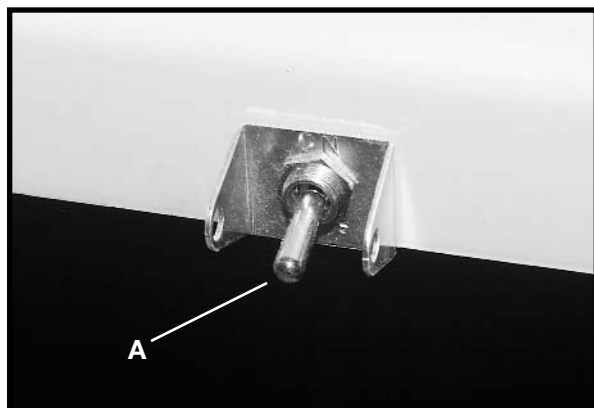


Fig. 7

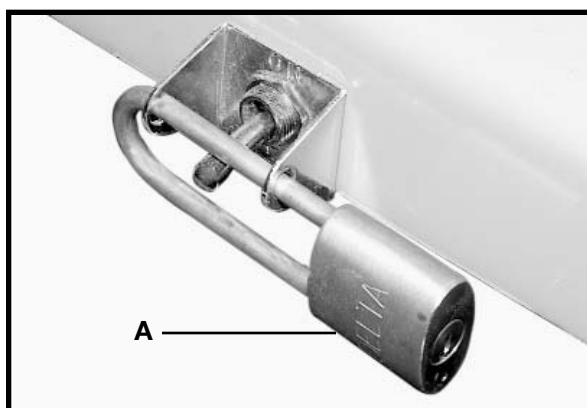


Fig. 8

STARTING AND STOPPING THE TOOL

1. To start the motor, lift the switch (A) Fig. 7 to the "up" position.
2. To stop the motor, push the switch (A) Fig. 7 to the "down" position.
3. **IMPORTANT: When the tool is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use, using a padlock (A) Fig. 8 with a 3/16" diameter shackle.**

ATTACHING BELT GUARD, MOTOR AND ARBOR PULLEYS, AND DRIVE BELT

1. Thread the six #10-32 x 5/8" self-tapping screws (A) Fig. 9 about halfway into the six holes provided in the ledge of the inside belt and pulley guard (B).
2. Place the inside belt and pulley guard (B) Fig. 10 over the arbor shaft (C) and motor shaft (D), and fasten the guard (B) to the tool using the two 1/2" hex head cap screws and flat washers (A). **NOTE:** Partially tighten the screws at this point.
3. Place the spacer (E) Fig. 11 against the countersunk hole (F) located behind the belt and pulley guard (B). Insert the 5/16-18 x 2 3/4" hex head cap screw with a flat washer (G) into the center hole (H), through the spacer (E). Attach a lock washer and thread it into the countersunk hole (F).
4. **NOTE:** Center the arbor shaft (C) Fig. 12 and the motor shaft (D) in the holes of the belt and pulley guard (B). Tighten the screws (J) and (K).
5. Attach the arbor pulley (L) Fig. 13 to the arbor shaft (C) with the hub of the pulley in the "out" position. Insert key (M) in keyway of arbor shaft. Tighten the set screw (N).
6. Attach the motor pulley (O) Fig. 14 to the motor shaft (B) with the hub of the pulley in the "in" position. Insert the key (P) in the keyway of the motor shaft. Tighten the set screw (R) in motor pulley.
7. Attach the drive belt (S) Fig. 15 to the arbor pulley (L) and motor pulley (O). Use a straight edge to see if the arbor pulley (L) and the motor pulley (O) are aligned. Either pulley can be moved to create proper alignment by loosening the set screw. To adjust belt tension, loosen the four mounting bolts (T) (two of which are shown). Move the motor in or out until belt deflection is approximately 1/2" using light finger pressure. **NOTE:** After getting the correct tension on the belt and after aligning the pulleys, **tighten all mounting hardware.**
8. Attach the outer belt and pulley guard (V) Fig. 16 to the inside belt and pulley guard (B) Fig. 12. Tighten the six screws, three of which are shown at (W) Fig. 16.

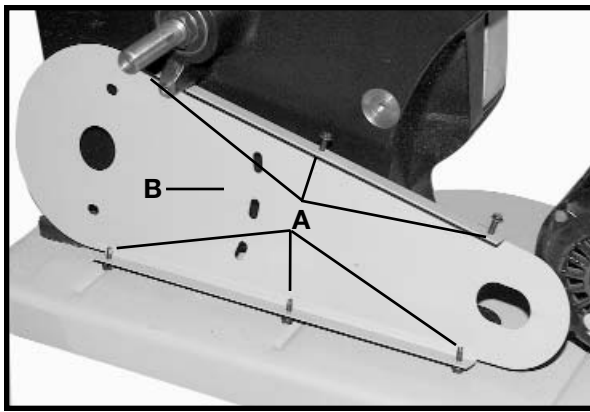


Fig. 9

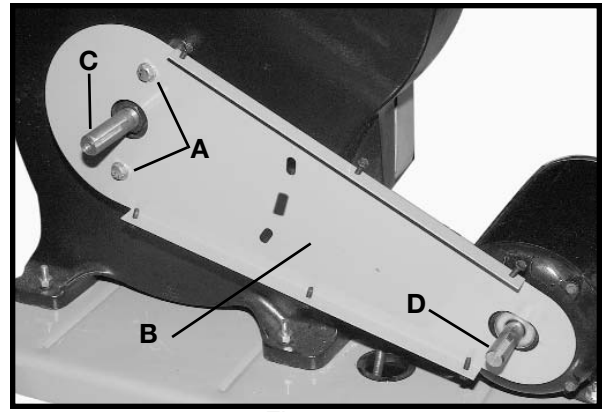


Fig. 10

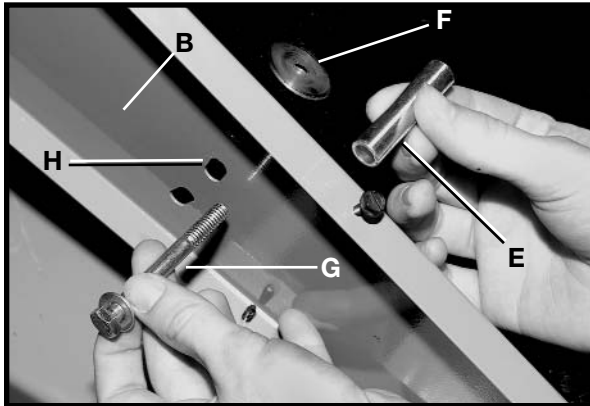


Fig. 11

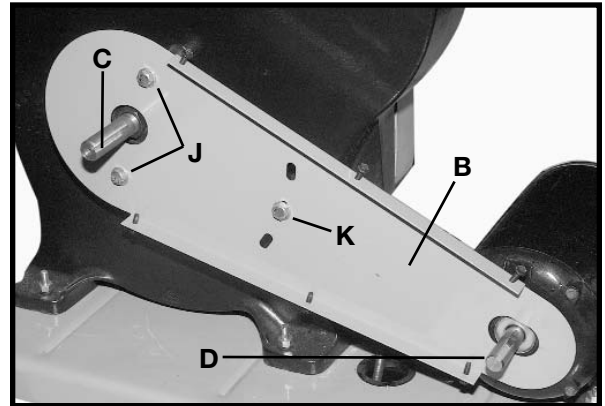


Fig. 12

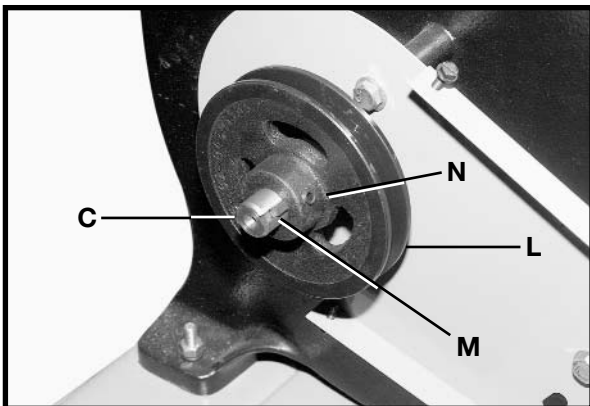


Fig. 13

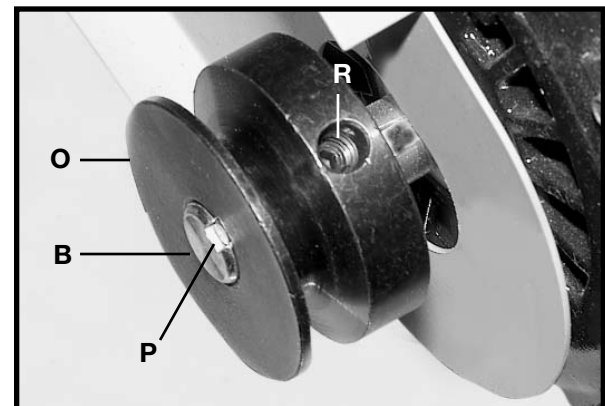


Fig. 14

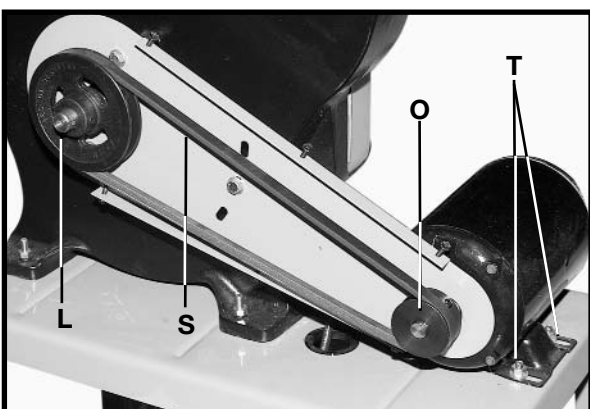


Fig. 15

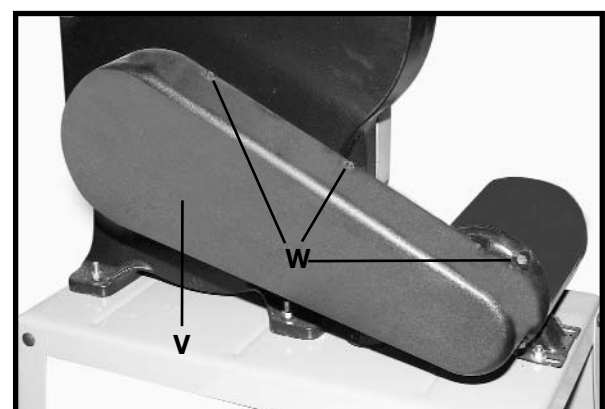


Fig. 16

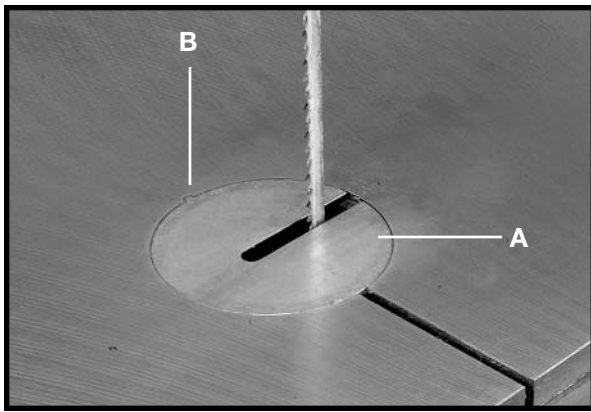


Fig.17

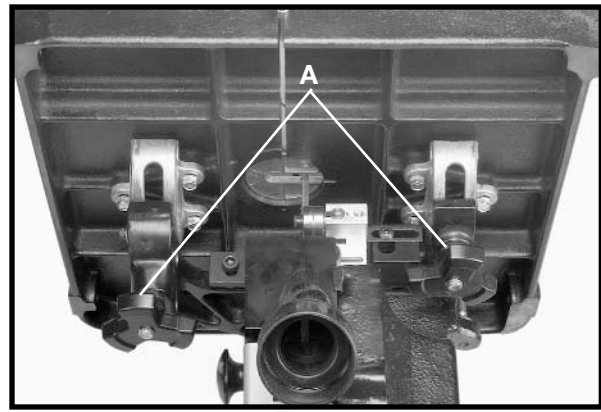


Fig.18

TABLE INSERT

Place the table insert (A) Fig. 17 in the hole provided in the table. Engage the protrusion of the insert in the indent (B) in the table.

TILTING THE TABLE

1. The table on the band saw can be tilted 45 degrees to the right and 10 degrees to the left. To tilt the table to the right, loosen the two locking knobs (A) Fig. 18, tilt the table to the desired angle, and tighten the two locking knobs (A).
2. To tilt the table to the left, loosen the two locking knobs (A) Fig. 18, and tilt the table to the right until the table stop (A) Fig. 19 is accessible. Remove the table stop (A) Fig. 19, and tilt the table to the left 10 degrees. Tighten the two locking knobs (A) Fig. 18.

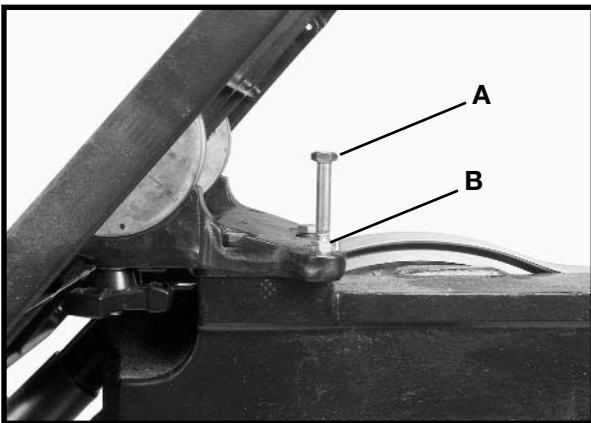


Fig. 19

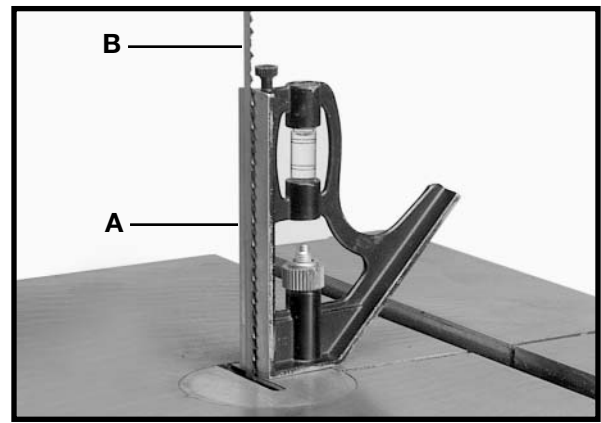


Fig. 20

ADJUSTING TABLE STOP

The tool is equipped with an adjustable table stop (A) Fig. 19, that allows the table to be set at 90 degrees to the blade. Tilt the table to the left until the table stop (A) Fig. 19 contacts the bottom of the table. Place a square (A) Fig. 20 on the table and against the blade (B) Fig. 20, and see if the blade is 90 degrees to the table surface. To adjust:

1. Tilt the table slightly to the right and tighten table lock knobs.
2. Loosen the adjustment nut (B) Fig. 19, then tighten or loosen the stop screw (A) as necessary to raise or lower table stop (A).
3. Lower the table. See if the table is 90 degrees to the blade (Fig. 20).
4. If no further adjustment is necessary, tighten the lock nut (B).

ADJUSTING BLADE TENSION

CAUTION: DISCONNECT TOOL FROM POWER SOURCE.

A series of graduations is located on the back of the upper wheel slide bracket. These graduations indicate the proper tension for various widths of blades. With the blade on the wheels, turn the knob (A) Fig. 21 to raise or lower the wheel, until the red fiber washer (B) Figs. 21 and 23 is in line with the proper graduation for the size of the blade.

These graduations are correct for average work, and will not be affected by rebrazing of the saw blade. Use these graduations until you become familiar enough with the operation of the band saw to vary the tension for different kinds of blades or work.

IMPORTANT: OVER-STRAINING IS A COMMON CAUSE OF BLADE BREAKAGE AND OTHER UNSATISFACTORY BLADE PERFORMANCE. RELEASE BLADE TENSION WHEN THE TOOL IS NOT IN USE.

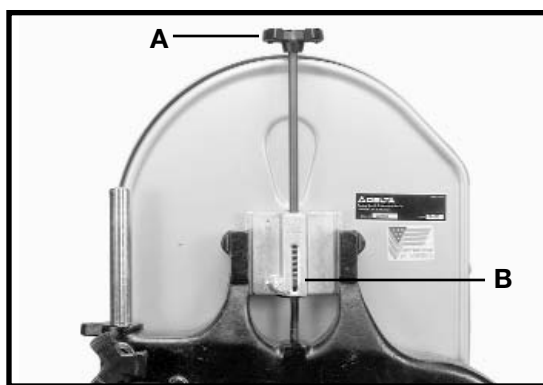


Fig. 21

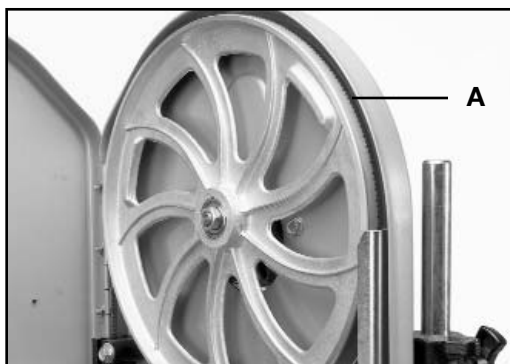


Fig. 22

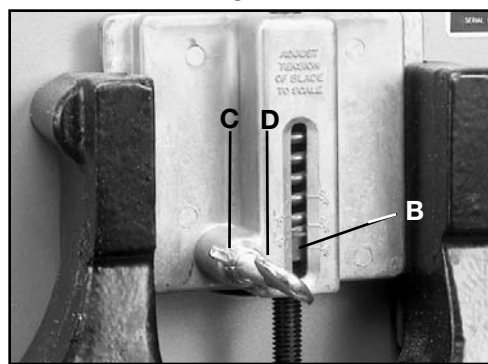


Fig. 23

TRACKING THE BLADE

CAUTION: DISCONNECT TOOL FROM POWER SOURCE.

IMPORTANT: Before tracking the blade, check to see that the blade guides and blade support bearings do not touch the blade.

After applying tension to the blade, rotate the wheels slowly forward by hand and observe the blade's movement. The blade (A) Fig. 22 should travel in the center of the upper tire. If the blade creeps toward the front edge, loosen the wing nut (C) Fig. 23, and tighten the thumb screw (D). This will draw the blade toward the center of the tire. If the blade creeps toward the back edge, turn the thumb screw in the opposite direction. Adjust the thumb screw (D) Fig. 23 only a fraction of a turn each time. **NEVER TRACK THE BLADE WHILE THE TOOL IS RUNNING.** After the blade is tracking to the center of both tires, tighten the wing nut (C) Fig. 23. Adjust the Blade Guides and Bearings.

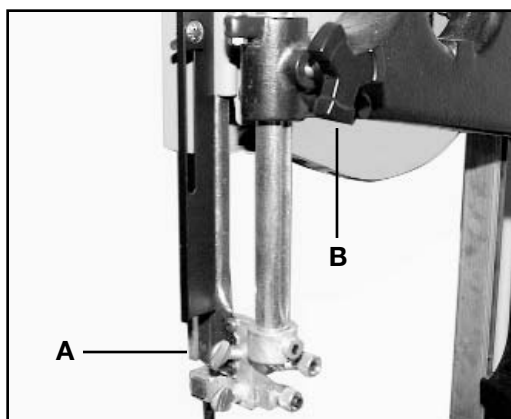


Fig. 24

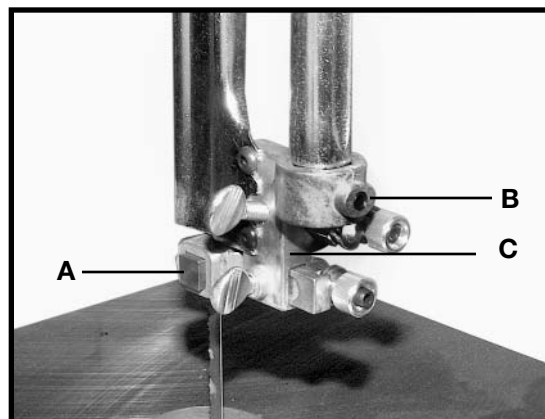


Fig. 25

VERTICAL ADJUSTMENT OF THE UPPER BLADE GUIDE ASSEMBLY

1. **CAUTION: DISCONNECT TOOL FROM POWER SOURCE.**

2. Set the upper blade guide assembly (A) Fig. 24 as close as possible to the top surface of the workpiece. Loosen the lock knob (B) and move the guide assembly (A) to the desired position.

3. Adjust the upper blade guide assembly so that the blade guides (A) Fig. 25 are parallel to the blade. To adjust, loosen screw (B) and rotate the complete guide assembly (C) until the blade guides are parallel to the blade.

ADJUSTING UPPER BLADE GUIDES AND BLADE SUPPORT BEARING

Adjust the upper blade guides and blade support bearings **ONLY AFTER** the blade has the correct tension and is tracking properly. To adjust, do the following:

1. DISCONNECT TOOL FROM POWER SOURCE

2. Make sure that the bottom blade guides and support bearings are clear of the blade.

3. Adjust the guides (A) Fig. 26, so that the front edge of the guides are just behind the "gullets" of the saw teeth. The complete guide block bracket can be moved in or out by loosening the thumb screw (C) and turning the knurled knob (D) Fig. 26. When the guides (A) are set properly, tighten thumb screw (C).

5. Two set screws (B) Fig. 26 hold the upper blade guides (A) in place. Loosen the set screws (B) to move the guides (A). Place them as close as possible to the side of the blade. (Be careful not to pinch the blade). Tighten the screws (B).

6. The upper blade support bearing (E) Fig. 26 prevents damage to the set in the saw teeth by keeping the blade from being pushed too far toward the back. The support bearing (E) should be set $1/64$ " behind the blade by loosening the thumb screw (F) and turning the knurled knob (G) to move the support bearing (E) in or out.

7. Adjust the blade support bearing (E) so that the back edge of the blade overlaps the outside diameter of the ball bearing by about $1/16$ ". The bearing (E) is set on an eccentric. To change the position, remove the screw (H) and bearing (E) Fig. 26. Loosen the thumb screw (F), back out the knurled knob from the set screw. Remove the hex shaft from the hole, and rotate it to move the eccentric for the bearing.

8. When the blade guide wears to a point that it cannot be adjusted close to the blade, loosen screw (B) Fig. 26 and reverse the blade guides (A) Fig. 26.

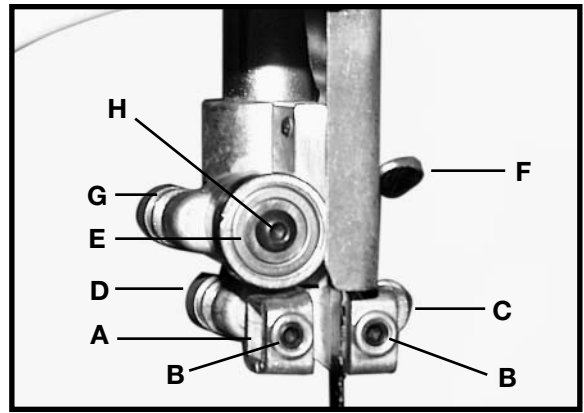


Fig. 26

ADJUSTING LOWER BLADE GUIDES AND BLADE SUPPORT BEARING

Adjust the lower blade guides and blade support bearing after the the upper guides and bearing have been adjusted.

1. DISCONNECT TOOL FROM POWER SOURCE.

2. Adjust the front edge of the guide blocks (B) so that they are just behind the "gullets" of the saw teeth. Turn the knurled knob (C) Fig. 27 to make this adjustment. Check the support bearing. It should not be touching the back of the blade.

3. Loosen the two screws (A) Fig. 27. Move the guides (B) as close as possible to the side of the blade, being careful not to pinch the blade. Tighten screws (A).

4. Turn the other knurled knob (E) to adjust the lower blade support bearing (D) Fig. 27, so that it is about $1/64$ " behind the back of the blade.

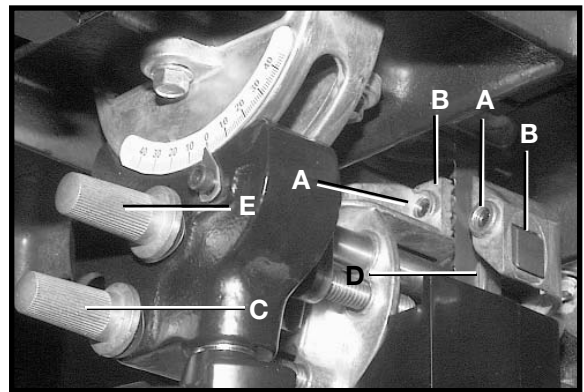


Fig. 27

OPERATING THE BAND SAW

CAUTION: DISCONNECT TOOL FROM POWER SOURCE.

Before engaging the tool, make all adjustments and put all guards in place. Turn the upper wheel clockwise by hand to be sure that everything is correct **prior** to connecting tool to power source.

Keep the top guide close to the work. Do not force the material against the blade. Light contact with the blade will permit easier following of the line and will prevent excess friction, heating, and work-hardening of the blade at its back edge. Keep the saw blade sharp and very little pressure will be required for average cutting. Avoid twisting the blade by turning abrupt corners.

BAND SAW BLADES

A bandsaw blade is a delicate piece of steel that is subjected to a great deal of strain. Proper blade care results in optimal performance. Always use blades of the proper thickness, width, and temper to correspond to the workpiece. Use the widest blade possible. Narrow blades should be reserved for small, abrupt curves and delicate work.

When pressure is required to push a workpiece through the blade, either file and set the blade, or replace it. A broken blade can be welded or brazed, but if the blade has been work-hardened, it will soon break again. A good rule of thumb is to sharpen the blade after 4 hours of operation.

Band saw blades will break because of the peculiar stresses to which they are subjected. However, many blades break because the operator (1) does not check the alignment and adjust the guides; (2) forces or twists the blade around a short-radius curve; (3) feeds the workpiece too fast; (4) allows the blade to become dull; (5) tightens the blade tension excessively; (6) sets the top blade guide too high; (7) uses a blade that has been improperly brazed or welded; and/or (8) runs the blade continuously when not cutting. Blades for the standard 14" Band Saw are 93- $1/2$ " long. The saw can adjust to a maximum length of 94" and a minimum of 91- $1/2$ ".

CHANGING THE BLADES

1. **DISCONNECT TOOL FROM POWER SOURCE.**
2. Open the upper and lower wheel guards.
3. Release tension on the saw blade.
4. Loosen the table alignment pin (A) Fig. 28 with a wrench and pull it out. Remove table insert.
5. Take the blade off the wheel, and guide it through the slot in the table.
6. Install the new blade by reversing the procedure. (Table alignment pin should be seated by gently tapping it with a hammer).

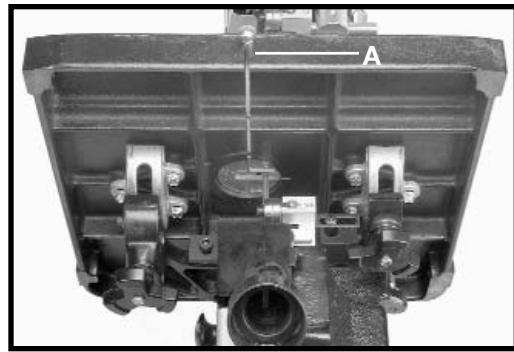


Fig. 28

CUTTING CURVES

When cutting curves, turn the stock carefully so that the blade will follow without being twisted. If a curve is so abrupt that repeated new kerfs are needed, use either a narrower blade or one that has more set. The more set a blade has, the easier the stock is to turn. However, the cut is usually rougher than when using a medium set.

When withdrawing the blade, be careful not to draw the blade off of the wheels. In most cases, it is easier and safer to turn the workpiece and saw out through waste material. Do not back the blade out while the saw is running.

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