

14" Metal/Wood Cutting Band Saw (Model 28-348)

INSTRUCTION MANUAL



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 **DELTA[®] INDUSTRIAL**

To learn more about DELTA MACHINERY
visit our website at: www.deltamachinery.com.

For Parts, Service, Warranty or other Assistance,

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

SAFETY GUIDELINES - DEFINITIONS

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols to the right. Please read the manual and pay attention to these sections.

▲ DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

▲ 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, always wear **MSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

GENERAL SAFETY RULES



▲ WARNING **READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.** Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

IMPORTANT SAFETY INSTRUCTIONS

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. For additional information please visit our website www.deltamachinery.com.

▲ WARNING 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
4825 Highway 45 North
Jackson, TN 38305
(IN CANADA: 505 SOUTHGATE DRIVE, GUELPH, ONTARIO N1H 6M7)

▲ WARNING**FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.**

1. **FOR YOUR OWN SAFETY, READ THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
2. **WEAR EYE PROTECTION. ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses are NOT safety glasses. **USE CERTIFIED SAFETY EQUIPMENT.** Eye protection equipment should comply with ANSI Z87.1 standards, hearing equipment should comply with ANSI S3.19 standards, and dust mask protection should comply with MSHA/NIOSH certified respirator standards. Splinters, air-borne debris, and dust can cause irritation, injury, and/or illness.
3. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
4. **DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT.** The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
5. **MAINTAIN ALL TOOLS AND MACHINES IN PEAK CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
6. **CHECK FOR DAMAGED PARTS.** Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged **should be properly repaired or replaced.** Damaged parts can cause further damage to the machine and/or injury.
7. **KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
8. **KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
9. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury.
10. **USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to prevent injury.
11. **REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
12. **USE THE RIGHT MACHINE.** Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
13. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
14. **USE THE PROPER EXTENSION CORD.** 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. See the Extension Cord Chart for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
15. **SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
16. **FEED THE WORKPIECE AGAINST THE DIRECTION OF THE ROTATION OF THE BLADE, CUTTER, OR ABRASIVE SURFACE.** Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
17. **DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
18. **DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
19. **NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
20. **NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
21. **TURN THE MACHINE "OFF", AND DISCONNECT THE MACHINE FROM THE POWER SOURCE** before installing or removing accessories, before adjusting or changing set-ups, or when making repairs. An accidental start-up can cause injury.
22. **MAKE YOUR WORKSHOP CHILDPROOF WITH PADLOCKS, MASTER SWITCHES, OR BY REMOVING STARTER KEYS.** The accidental start-up of a machine by a child or visitor could cause injury.
23. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE. DO NOT USE THE MACHINE WHEN YOU ARE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in injury.
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.

ADDITIONAL SAFETY RULES FOR BAND SAWS

⚠ WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **DO NOT OPERATE THIS MACHINE UNTIL** it is **assembled** and **installed** according to the instructions.
2. **OBTAIN ADVICE** from your **supervisor, instructor, or another qualified person** if you are not familiar with the operation of this tool.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections.
4. **USE THE GUARDS WHENEVER POSSIBLE.** Check to see that they are in place, properly adjusted, secured, and working correctly.
5. **USE PROPER BLADE SIZE** and type.
6. **ADJUST THE UPPER BLADE GUIDE AND GUARD** so that it is about 1/8" above the workpiece.
7. **PROPERLY ADJUST** the blade tension, tracking, blade guides, and blade support bearings.
8. **KEEP ARMS, HANDS, AND FINGERS** away from the blade.
9. **AVOID AWKWARD OPERATIONS** and hand positions where a sudden slip could cause a hand to move into the blade.
10. **NEVER START THE MACHINE** before clearing the table of all objects (tools, scrap pieces, etc.).
11. **NEVER START THE MACHINE** with the workpiece against the blade.
12. **HOLD WORKPIECE FIRMLY** against the table. DO NOT attempt to saw a workpiece that does not have a flat surface against the table.
13. **HOLD WORKPIECE FIRMLY** and feed into blade at a moderate speed.
14. **NEVER REACH UNDER THE TABLE** while the machine is running.
15. **TURN THE MACHINE "OFF"** to back out of an uncompleted or jammed cut.
16. **MAKE "RELIEF" CUTS** prior to cutting long curves.
17. **TURN THE MACHINE "OFF"** and wait for the blade to stop prior to cleaning the blade area, removing debris near the blade, removing or securing workpiece, or changing the angle of the table. A coasting blade can be dangerous.
18. **NEVER PERFORM LAYOUT, ASSEMBLY,** or set-up work on the table/work area when the machine is running.
19. **TURN THE MACHINE "OFF" AND DISCONNECT THE MACHINE** from the power source before installing or removing accessories, before adjusting or changing set-ups, or when making repairs.
20. **TURN THE MACHINE "OFF"**, disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use.
21. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertoolinstitute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

SAVE THESE INSTRUCTIONS.

Refer to them often and use them to instruct others.

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. 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 machine's plug. Before connecting the machine 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 machine. All line connections should make good contact. Running on low voltage will damage the machine.

⚠ DANGER DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

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

GROUNDING INSTRUCTIONS

⚠ DANGER THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected machines:

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 machine 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 machine is properly grounded.

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

Repair or replace damaged or worn cord immediately.

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

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A, the machine 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.

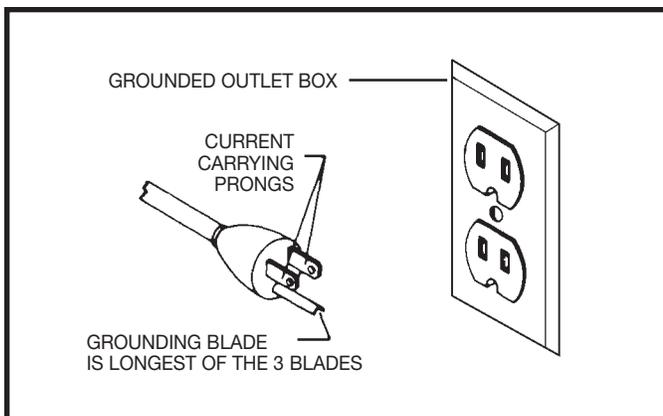


Fig. A

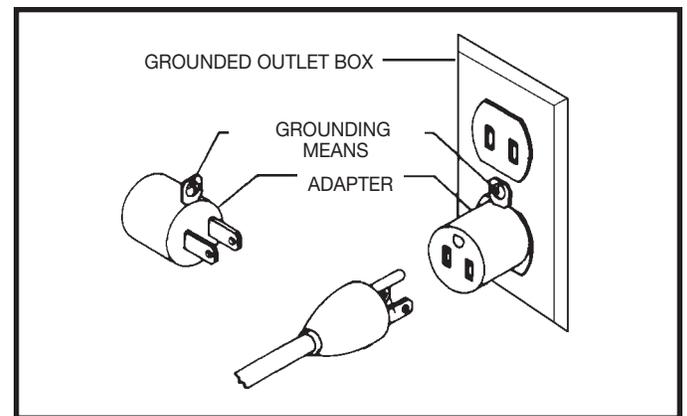


Fig. B

3. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating between 150 - 250 volts, inclusive:

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. C, the machine will have a grounding plug that looks like the plug illustrated in Fig. C. Make sure the machine is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this machine. If the machine must be re-connected for use on a different type of electric circuit, the re-connection should be made by qualified service personnel; and after re-connection, the machine should comply with all local codes and ordinances.

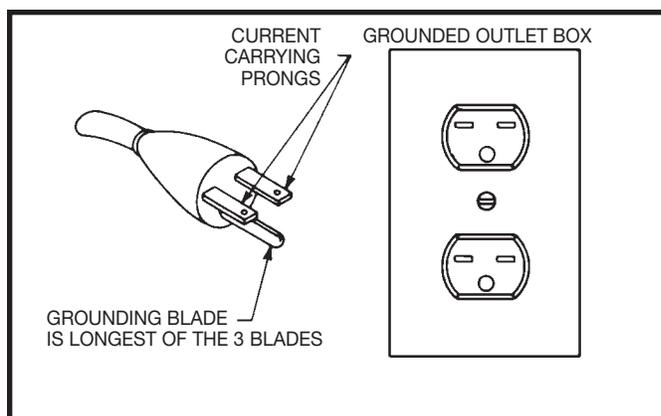


Fig. C

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

EXTENSION CORDS

CAUTION 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 machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D, 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 MACHINES			
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. D

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	240	up to 50	18 AWG
0-6	240	50-100	16 AWG
0-6	240	100-200	16 AWG
0-6	240	200-300	14 AWG
6-10	240	up to 50	18 AWG
6-10	240	50-100	16 AWG
6-10	240	100-200	14 AWG
6-10	240	200-300	12 AWG
10-12	240	up to 50	16 AWG
10-12	240	50-100	16 AWG
10-12	240	100-200	14 AWG
10-12	240	200-300	12 AWG
12-16	240	up to 50	14 AWG
12-16	240	50-100	12 AWG
12-16	240	GREATER THAN 100 FEET NOT RECOMMENDED	

Fig. D

FUNCTIONAL DESCRIPTION

FOREWORD

Delta Model 28-348 is a 14" Metal and Wood Cutting Band Saw. This machine has speeds of 40, 60, 85, 115, 160, 220, 335, and 3000 SFM. Its blade to frame capacity is 13-3/4" and its under-guide and wheel capacity is 6-1/4". The band saw has a quick tensioning blade mechanism for ease of changing blades and applying tension to the blade. The Delta Model 28-348 has a large 16"x16" cast iron table that can be tilted 45 degrees to the right and 8 degrees to the left. The band saw also comes with a 4" O.D. dust port for connecting the band saw to a dust collector.

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 AND MAY BE INTENDED TO ILLUSTRATE TECHNIQUE ONLY.

UNPACKING AND CLEANING

Carefully unpack the machine 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.

1. Remove the cardboard box from around the packing skid (A) Fig. 2.
2. Remove the two bolts (B) Fig. 2, with a 1/2" wrench, that attach the motor to the packing skid (A)

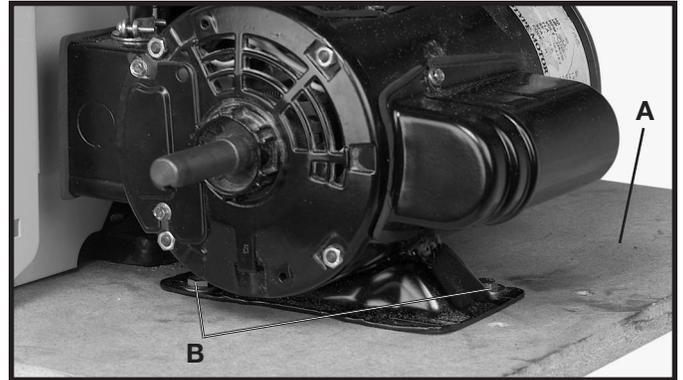


Fig. 2

3. Remove the bolts that attach the stand (C) Fig. 3, and the saw (D) to the the packing skid (A) with a 3/8" wrench.

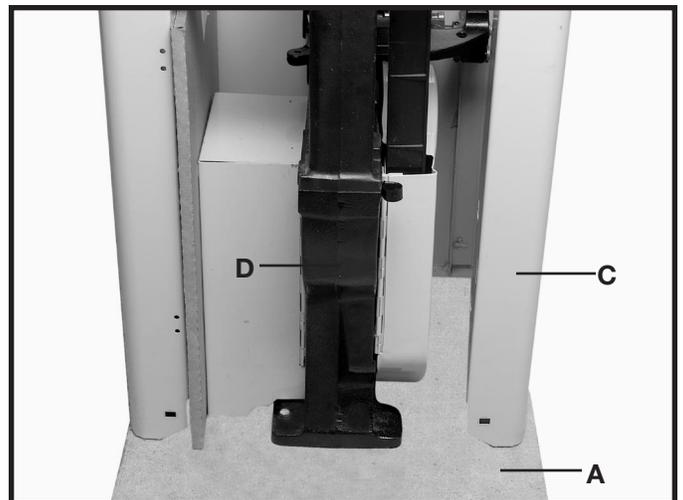


Fig. 3

BAND SAW PARTS

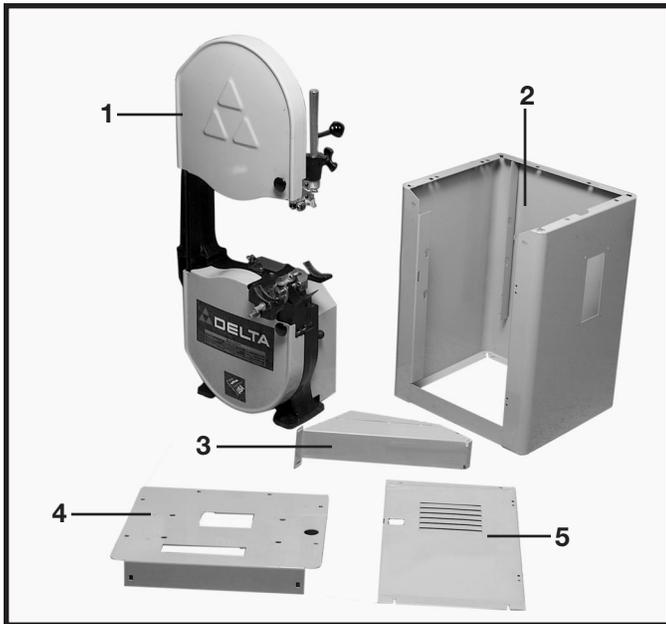


Fig. 4

1. Saw
2. Cabinet
3. Dust Chute
4. Top Plate
5. Stand Door

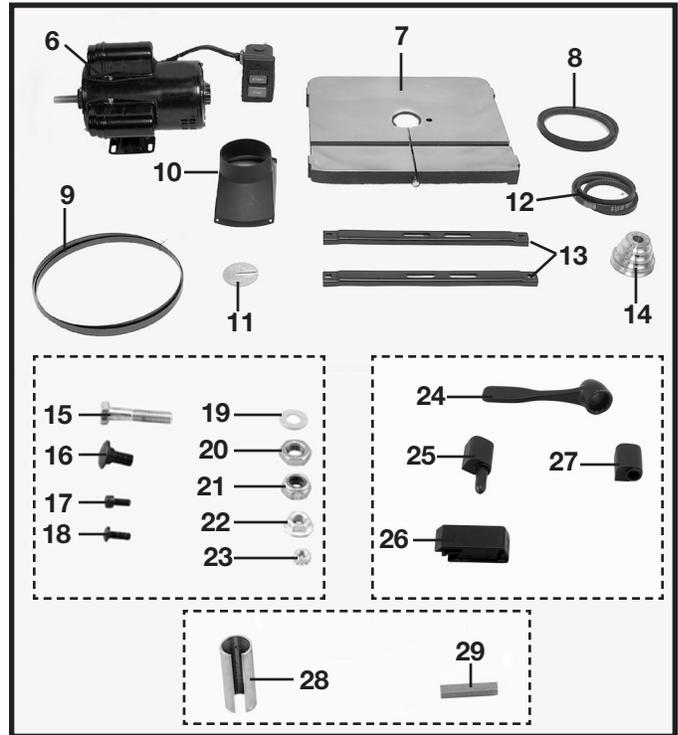


Fig. 5

18. #10-32x1/2" Pan Head Screw (4)
19. 5/16" Flat Washer (4)
20. 7/16-14 Jam Nut (2)
21. 7/16-14 Locknut (2)
22. 5/16-18 Flange Hex Nut (20)
23. #10-32 Hex Nut (4)
24. Table Handle (2)
25. Hinge Pin (2)
26. Door Latch
27. Hinge (2)
28. 3/4" to 5/8" Reducing Bushing
29. Key

ASSEMBLY

⚠ WARNING FOR YOUR OWN SAFETY, DO NOT CONNECT THE MACHINE TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL.

MOTOR BRACKET TO CABINET

1. Place the cabinet on its side as shown in Fig. 6.
2. Align the two holes in the motor bracket (A) Fig. 7, with the two holes in the cabinet. **NOTE: ATTACH MOTOR BRACKETS TO HOLES #2 AND 4 IN FRONT CABINET FLANGE (D) FIG. 6, AND HOLES #4 AND 6 IN REAR CABINET FLANGE (E).**

NOTE: MAKE SURE THE SLOTS (C) FIG. 7, IN THE MOTOR BRACKET (A), ARE POSITIONED CLOSER TO THE OPENING OF THE CABINET (D) THAN THE BACK PANEL (E) OF THE CABINET.

3. Insert 5/16-18x3/4" carriage head bolts through the holes in the motor brackets (A) Fig. 7, and the holes in the cabinet.
4. Thread 5/16-18 flange hex nuts onto the screws and tighten securely.

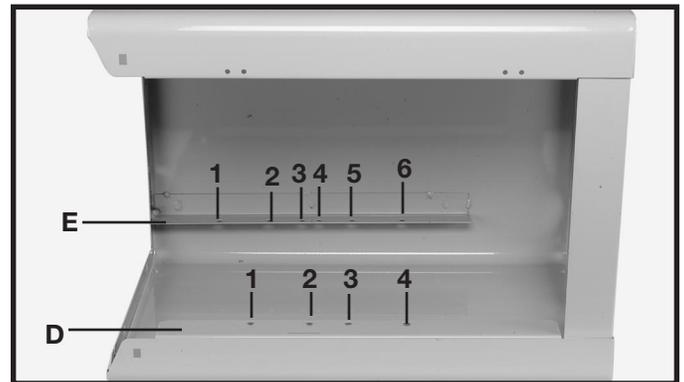


Fig. 6

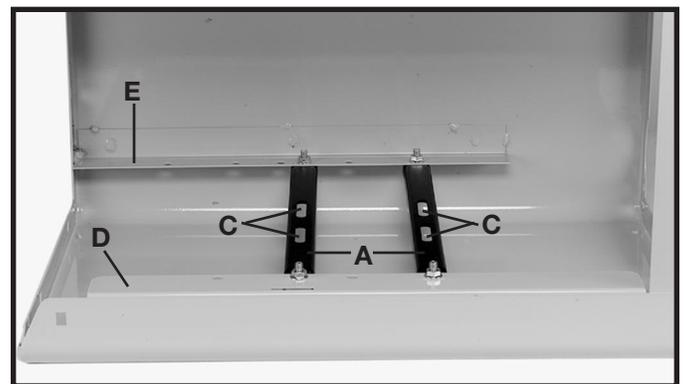


Fig. 7

MOTOR TO MOTOR BRACKET

1. Place the motor (B) Fig. 8, on the motor brackets (A). Align the holes in the motor mounting plate with the holes on the motor brackets.
2. Insert 5/16-18x3/4" carriage head bolts through the holes in the motor brackets and the holes in the motor mounting plate.
3. Thread 5/16-18 flange hex nuts on to screws. **NOTE: DO NOT COMPLETELY TIGHTEN THE HARDWARE AT THIS TIME.**

4. Place cabinet on its base as shown in Fig. 9.

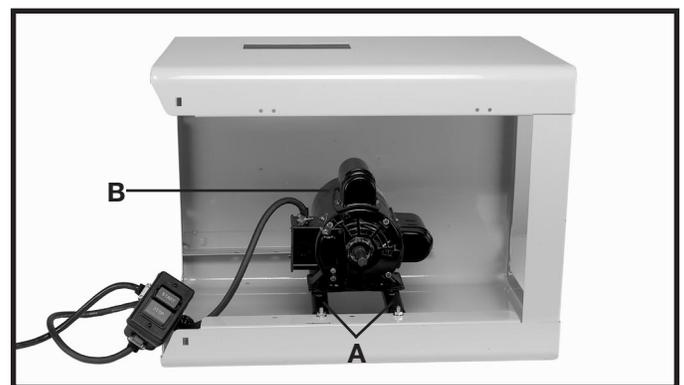


Fig. 8

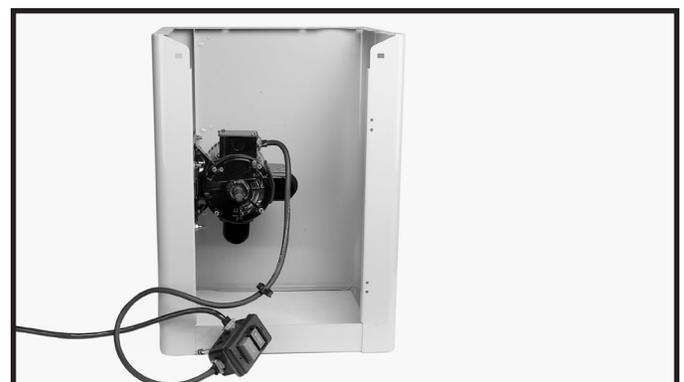


Fig. 9

TOP PLATE TO CABINET

NOTE: IF YOUR MACHINE IS SUPPLIED WITH AN LVC STARTER BOX, PLEASE REFER TO THE SUPPLEMENTAL INSTRUCTION SHEET FOR MOUNTING THE LVC BOX TO THE STAND. THEN PROCEED AS FOLLOWS.

1. Place the top plate (A) Fig. 10, on the top of the cabinet (B). **NOTE: PLACE THE SWITCH CORD (F) FIG. 10, THROUGH THE SLOTTED HOLE (G) IN THE TOP PLATE (A) AND INSERT PLASTIC BUSHING (H) INTO THE SLOTTED HOLE (G).**

2. Align the six square holes on the top plate (A) Fig. 10, with the holes in the cabinet (B).

3. Align the two square holes on the side of the plate (A) Fig. 10, with the two holes on the side of the cabinet (B).

4. Insert 5/16-18x3/4" carriage head bolts through the top plate and the cabinet. Thread 5/16-18 flange hex nuts on to screws.

5. Make sure the door opening is at least 13" wide before tightening the screws. If the door opening is not at least 13" wide, spread the door opening and tighten the hardware when the opening is at least 13" wide.

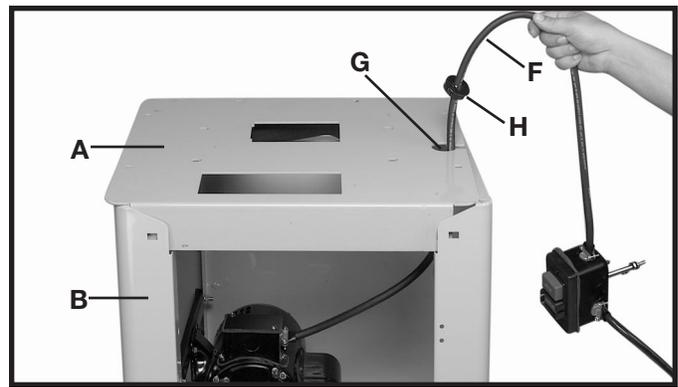


Fig. 10



Fig. 11

DUST CHUTE

1. Insert the dust chute from inside the stand through the opening (A) Fig. 11, in the top of the stand.

NOTE: MAKE SURE THAT THE MOTOR CORD IS BEHIND THE DUST CHUTE.

NOTE: MAKE SURE THE TAB (B) FIG. 12, ON THE DUST CHUTE, ENGAGES THE CUTOUT (C) IN THE TOP OF THE STAND.

2. Align the two slotted holes (D) Fig. 13, in the bottom of the dust chute with the two holes (E) Fig. 14, in the stand.

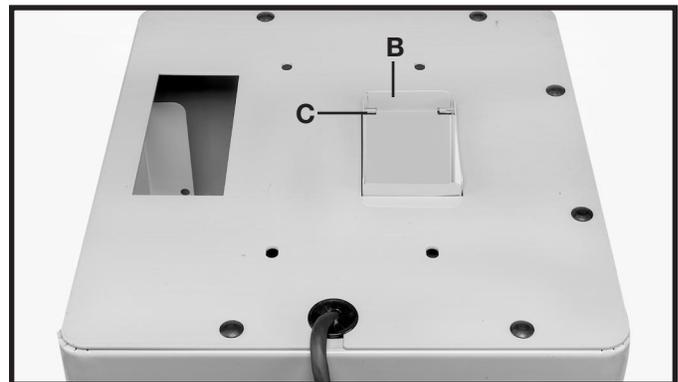


Fig. 12



Fig. 13

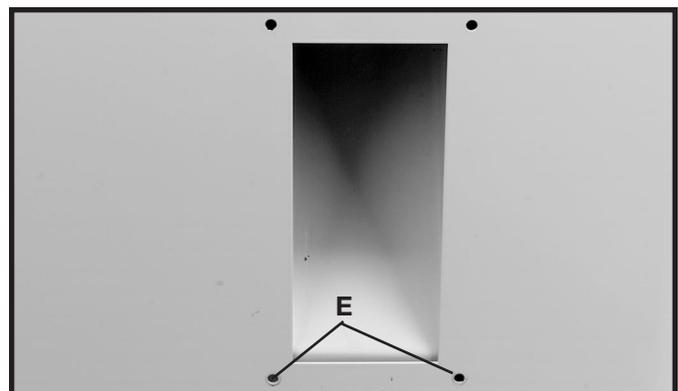


Fig. 14

BAND SAW USED WITH A DUST COLLECTOR

3. If you are going to use your band saw with a dust collector, attach the dust port as follows:

- A. Align the four holes in the dust port (A) Fig. 15, with the four holes in the side of the stand.
- B. **NOTE: THE DUST CHUTE WILL ONLY BE ATTACHED AT THE TWO BOTTOM HOLES (C) IN THE DUST PORT.**
- C. Insert #10-32x1/2" pan head screws through the four holes (B) and (C) Fig. 15, in the dust port, and cabinet. Thread #10-32 hex nuts onto the screws, and tighten securely.

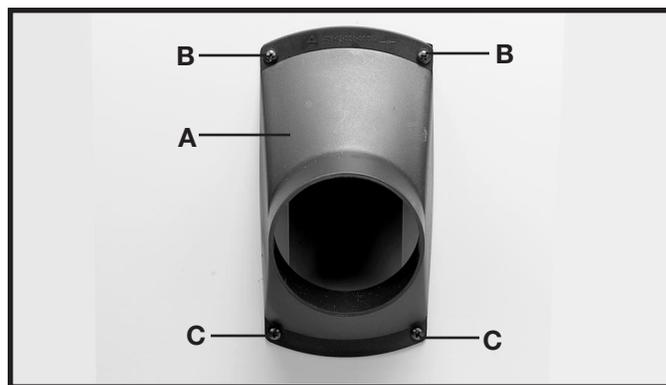


Fig. 15

BAND SAW USED WITHOUT A DUST COLLECTOR

3. If you are not going to use a dust collector with your band saw proceed as follows:

Insert #10-32x1/2" pan head screws through holes (A) Fig. 16, in the cabinet and dust chute. Thread #10-32 hex nuts onto the screws, and tighten securely.

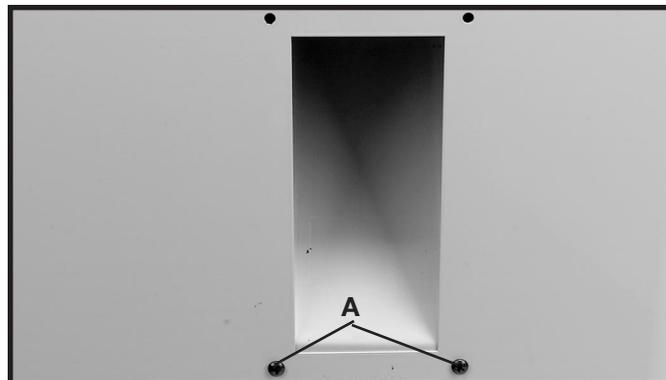


Fig. 16

STAND DOOR TO STAND

1. Align the two holes in the hinge pins (A) Figs. 17 and 18, with the two holes on the cabinet. **NOTE: MAKE SURE THE HINGE PINS (A) ARE POINTED UP AS SHOWN IN FIGS. 17 AND 18.**

2. Insert #10-24x1/2" socket head cap screws through the holes in the cabinet, (from the inside of the stand), and thread the screw into the hinge pins.

NOTE: DO NOT COMPLETELY TIGHTEN THE SCREWS AT THIS TIME.

3. Make sure the two hinge pins (A) are aligned with each other by using a straight edge as shown in Fig18.

4. Tighten the four screws securely.



Fig. 17

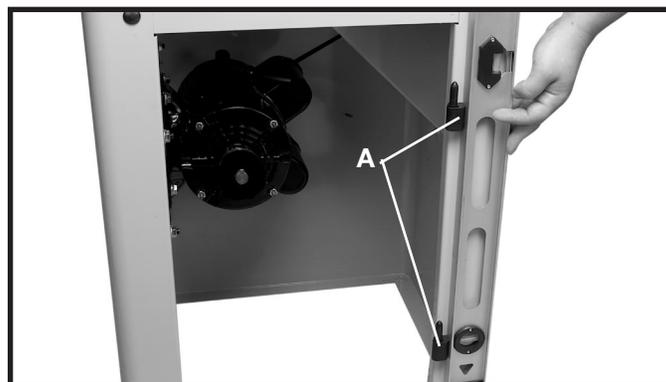


Fig. 18

5. Align the two holes in the hinge (C) Fig. 19, with the two holes in the cabinet door (D). **MAKE SURE THAT THE HINGE OPENING IS POINTING DOWN.**

6. Insert #10-24x1/2" socket head cap screws through the holes in the door, and thread the screws into the holes in the hinge. **NOTE: DO NOT COMPLETELY TIGHTEN THE SCREWS AT THIS TIME.**

7. Make sure the two hinges are aligned with each other by using a straight edge as shown in Fig. 20.

8. Tighten the four screws securely.

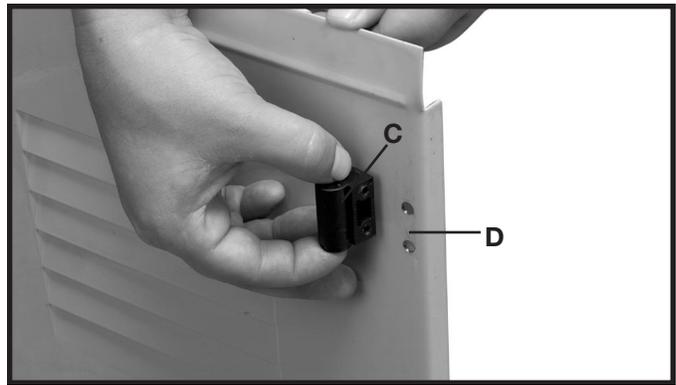


Fig. 19



Fig. 20

9. Insert the door latch (F) Fig. 21, from the outside, through the hole in the door.

10. Push down on the door latch to snap the latch in place.

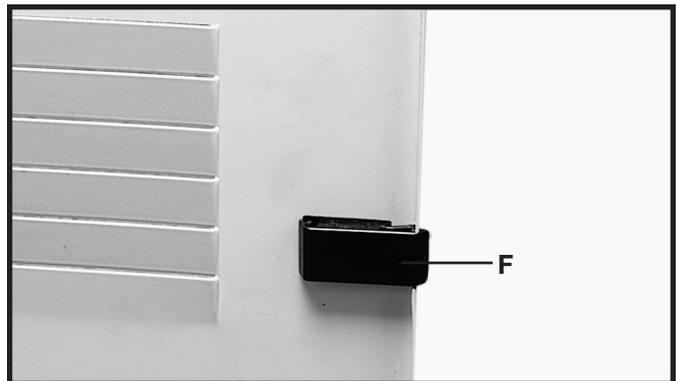


Fig. 21

11. Slide the two hinges (C) Fig. 22, on the door, over the two hinge pins (A) on the cabinet.

12. To open or shut the door, slide the latch away from the cabinet and pull or push the door.

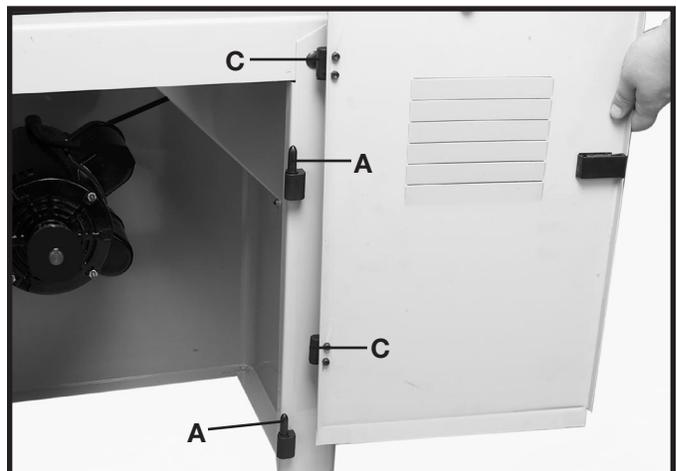


Fig. 22

SAW TO STAND

⚠ CAUTION THE BAND SAW IS VERY HEAVY. USE A HELPER WHEN ATTACHING THE SAW TO THE CABINET.

1. Place the band saw on top of the cabinet as shown in Fig. 23. **NOTE: MAKE SURE THE PULLEY (A) FIG. 23, IS ON THE SIDE OF THE CABINET WITH THE BELT OPENING (B).**
2. Align the four holes in the saw with the four holes in the top of the cabinet.
3. Place 5/16" flat washers on a 5/16-18x1½" hex head screws. Insert the screws through the holes (C) in the saw and the cabinet.
4. Thread 5/16-18 hex nuts on the screws and tighten securely.

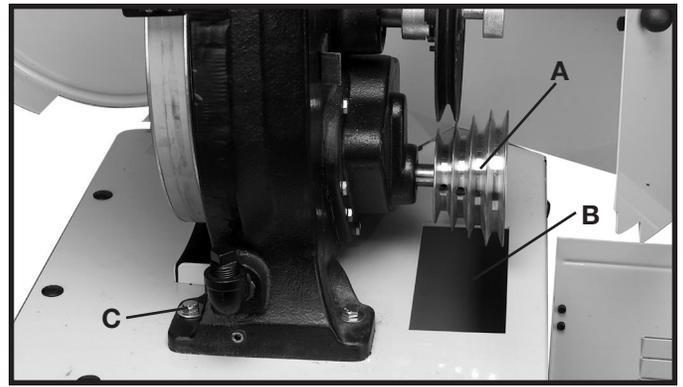


Fig. 23

MOTOR PULLEY

NOTE: Both the motor pulley (A) Fig. 24, and the gearbox pulley (B) are four-step pulleys and should always be attached inverted to each other.

Check to see if the gear box pulley (B) is attached with the largest step of the pulley in the "in" or "out" position. In this case, the largest step of the gear box pulley (B) is in the "out" position. Attach the motor pulley (A) to the motor shaft with the largest step of the motor pulley in the "in" position.

1. Place the 3/4" to 5/8" reducing bushing on the motor shaft. Align the split in the reducer with the key way slot.
2. Place the key in the motor shaft.
3. Position the pulley on the shaft. Line it up with the key. Secure with two 5/16-18x5/16" set screws.

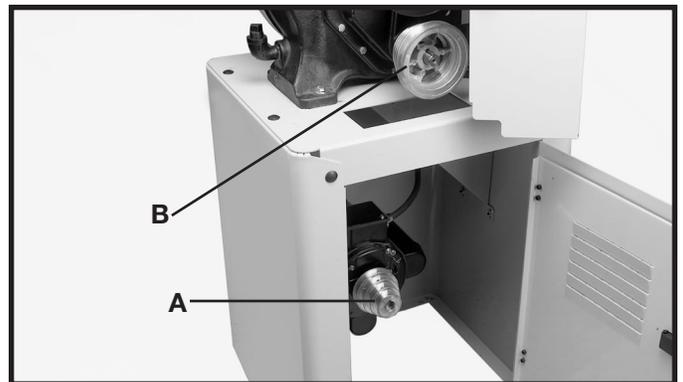


Fig. 24

BELT TO SAW AND MOTOR PULLEY

1. **⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE.
2. Use a straight edge to align the inside grooves of the pulleys (A) and (B) Fig. 24 to the inside edge of the drive pulley (C). The pulleys can be moved in or out on the shafts and the motor can also be moved.
3. Place the longer V-Belt on the inside groove of the motor (A) and the drive pulley (C) Fig. 25. Place the shorter V-Belt on any one of the remaining three grooves on the motor pulley (A) and the corresponding groove on the gear box pulley (B). (Fig. 25 shows belts in place.)
4. Adjust the belt tension by raising or lowering the motor on the motor mounting brackets (A) Fig. 7. Keep the pulleys in alignment when performing this operation. Proper tension is 1/4" deflection at the center of the belt with light finger pressure.

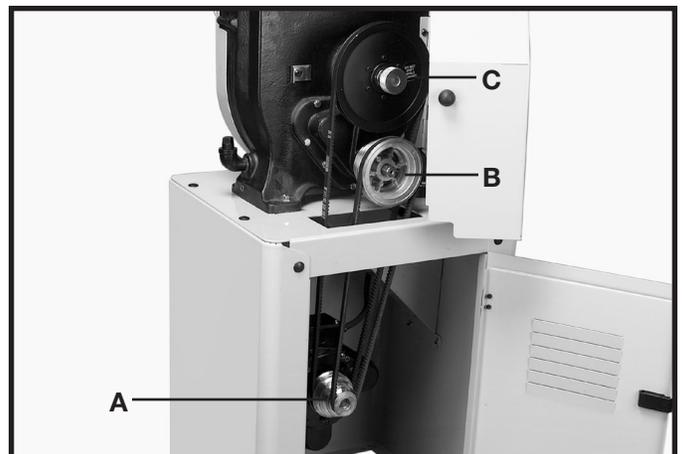


Fig. 25

TABLE TO SAW

1. Align the two table studs (A) Fig. 27, on the bottom of the table, with the two holes in the trunnion assemblies (B). Place table on trunnion assemblies. **NOTE: MAKE SURE THE SLOT (C) FIG. 27, IN THE TABLE IS FACING AWAY FROM THE ARM (D).**

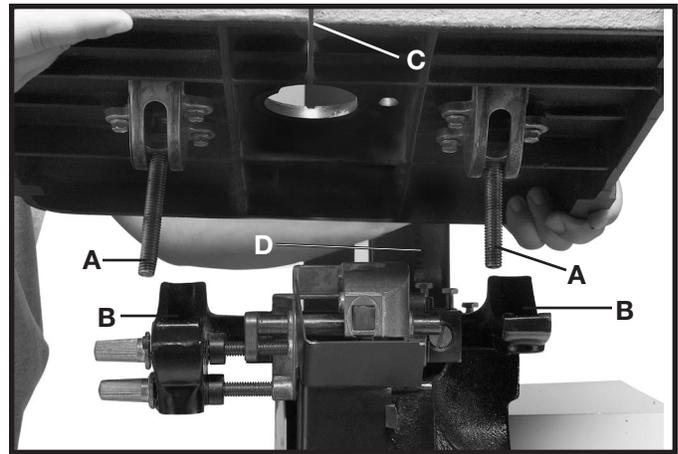


Fig. 27

2. Thread a 7/16" jam nut (C) Fig. 28 onto each table stud and tighten securely.

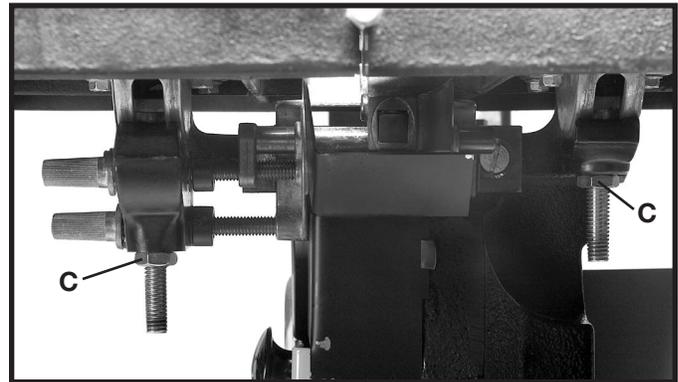


Fig. 28

3. Place table handles (H) on each stud as shown in Fig. 29. **NOTE: MAKE SURE THE TABLE HANDLES ARE POSITIONED AS SHOWN IN FIG. 29.**

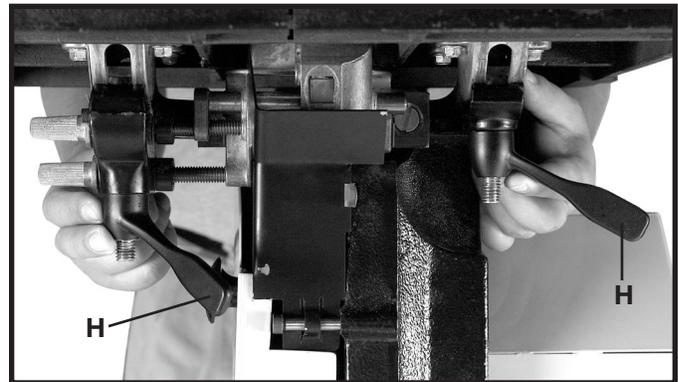


Fig. 29

4. Thread a 7/16" locknut (D) Fig. 30, onto each stud, up to the table handle and then loosen a 1/2 turn.

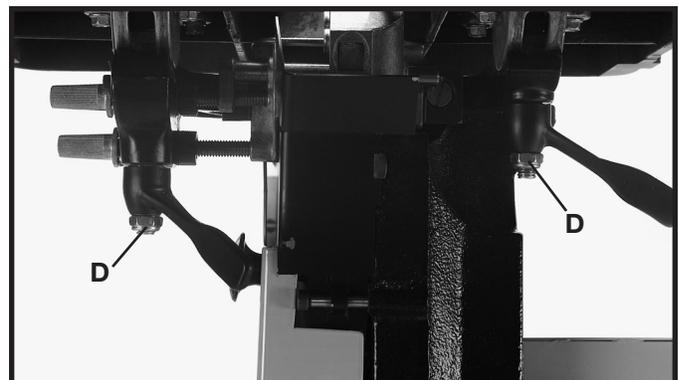


Fig. 30

BLADE TO SAW

CAUTION THE 14" BAND SAW USES 93½" LENGTH BLADES.

1. Remove the table pin (A) Fig. 31 from the table.
2. Open the two wheel guard doors (B) Fig. 31, and the blade guard door (C).
3. Make sure the quick tension lever (D) Fig. 31, is positioned to the right of the machine as shown.
4. **MAKE SURE THAT THE TEETH ON THE BLADE ARE POINTING DOWN TOWARD THE TABLE WHEN INSTALLED AS SHOWN IN FIG. 33. IF NOT, TURN BLADE INSIDE OUT.** Slide the band saw blade, (teeth facing out), through the slot (E) Fig. 31, in the band saw table.
5. Place the blade around the two wheel assemblies (A) Fig. 32.
6. Replace the table pin (A) Fig. 31. Table alignment pin should be re-seated by gently tapping it with a hammer.
7. Close the two wheel guard doors (B) Fig. 31, and the blade guard door (C).
8. Move the quick tension lever (D) Fig. 32, to the left position (when facing the rear of the saw) to put tension on the blade as shown.
9. See the section “**OPERATING CONTROLS AND ADJUSTMENTS**” to adjust blade tension and tracking.

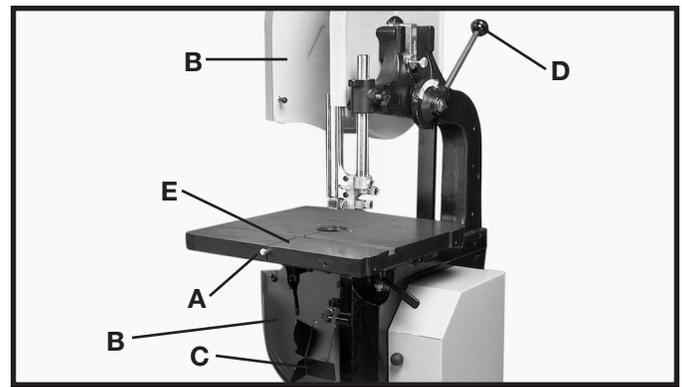


Fig. 31

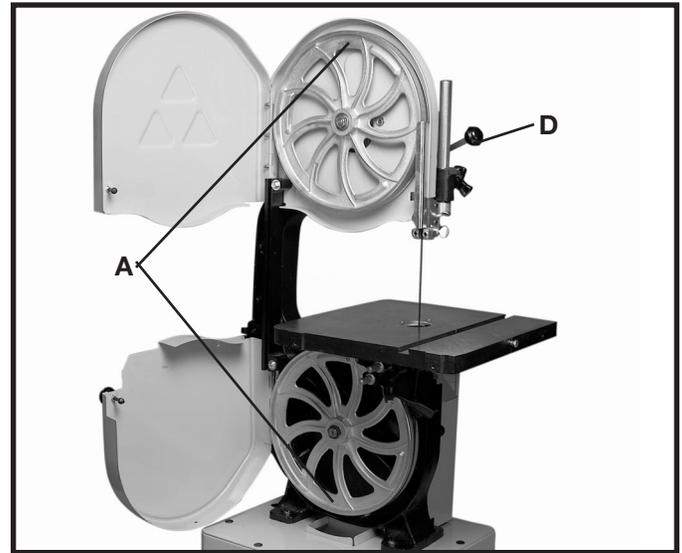


Fig. 32

TABLE INSERT

Place table insert (A) Fig. 33, in opening of table. **NOTE:** A tab (B) is provided on insert that engages with notch (C) in table opening.

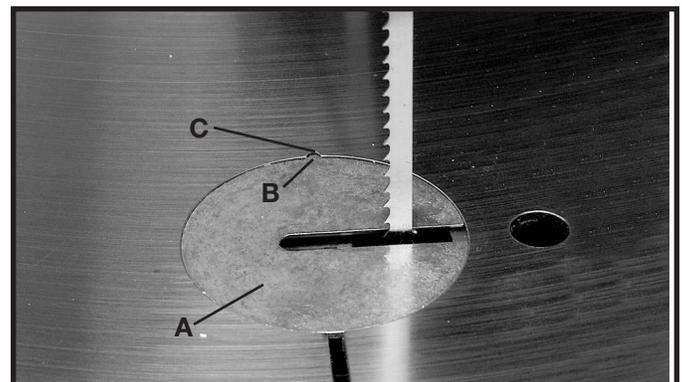


Fig. 33

ON / OFF SWITCH TO STAND

1. Remove the two outer hex nuts and lock washers (A) Fig. 34 from the switch box (B).

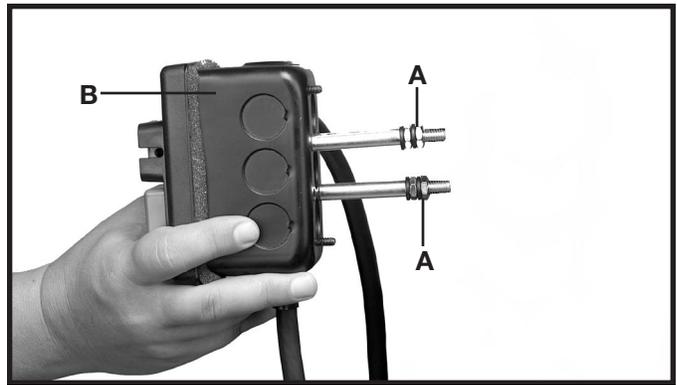


Fig. 34

2. Insert two screws (C) Fig. 35, located on back of switch box, into two holes (D) located in the band saw arm.

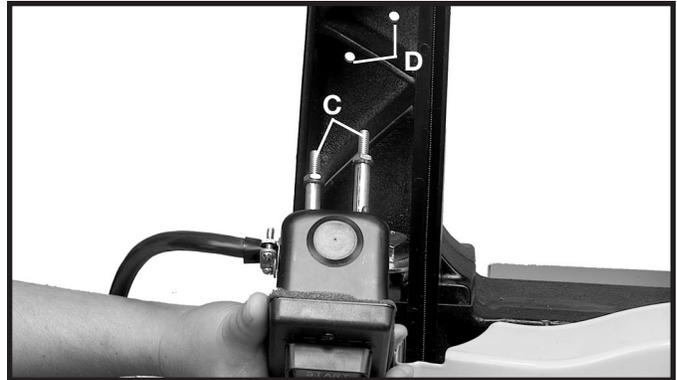


Fig. 35

3. Use the two nuts and lockwashers (L) Fig. 36, removed in **STEP 1**, to fasten the switch box to the bandsaw arm.

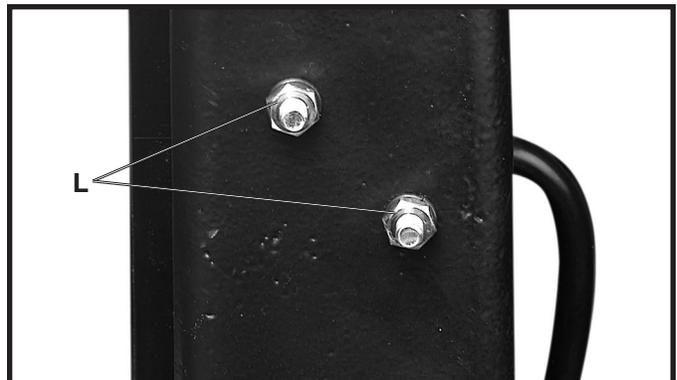


Fig. 36

4. Remove the screw and cable clamp (E) Fig. 37 from the lower arm of the band saw.

5. Insert the switch cord and power cord (F) Fig. 37 into the clamp (E), and fasten to the bandsaw.

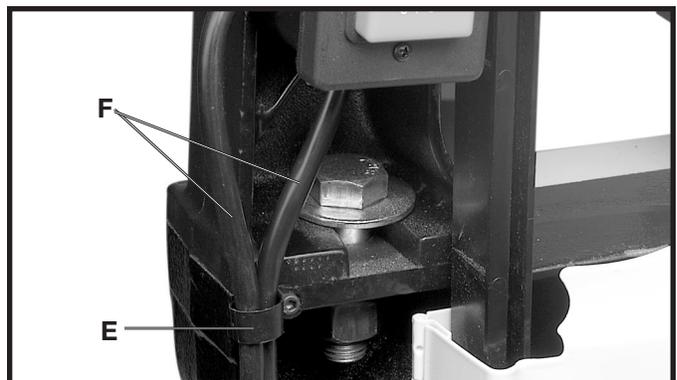


Fig. 37

OPERATING CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING SAW

The power switch is located on the left side of the machine. To turn the machine “ON”, push the green start button (A) Fig. 41. To turn the machine “OFF”, push the red stop button (B).

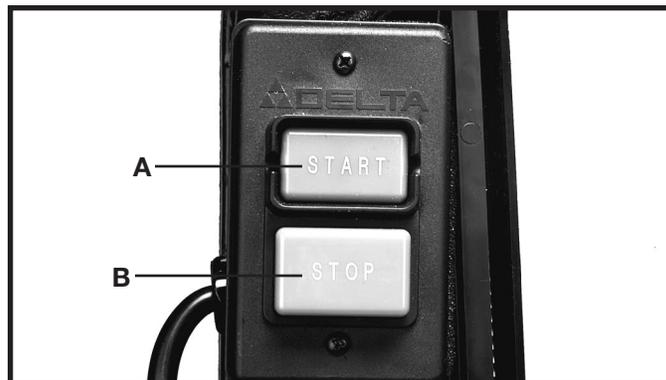


Fig. 41

LOCKING SWITCH IN THE “OFF” POSITION

IMPORTANT: When the tool is not in use, the switch should be locked in the “OFF” position to prevent unauthorized use, using a padlock (C) Fig. 42 with a 3/16" diameter shackle.

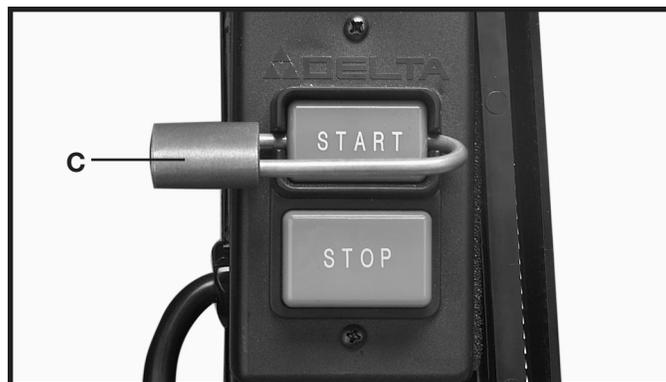


Fig. 42

TILTING THE TABLE

1. **⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.**

2. The table on the band saw can be tilted 45 degrees to the right and 9 degrees to the left. To tilt the table to the right, loosen the two clamp handles (A) Fig. 43, tilt the table to the desired angle as shown on the scale (D) Figs. 43 and 44, and tighten two locking handles (A) Fig. 43.

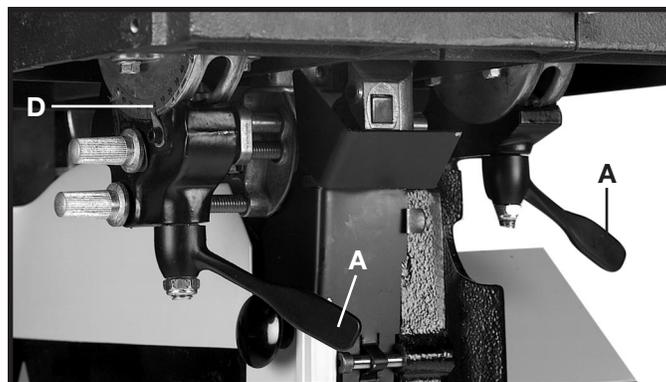


Fig. 43

3. To tilt the table to the left, loosen the two locking handles (A) Fig. 43, and tilt the table to the right until the table stops (B) Fig. 44 can be accessed. Rotate the table stop (B) Fig. 44, and tilt the table to the left. Tighten the two locking handles (A) Fig. 43.

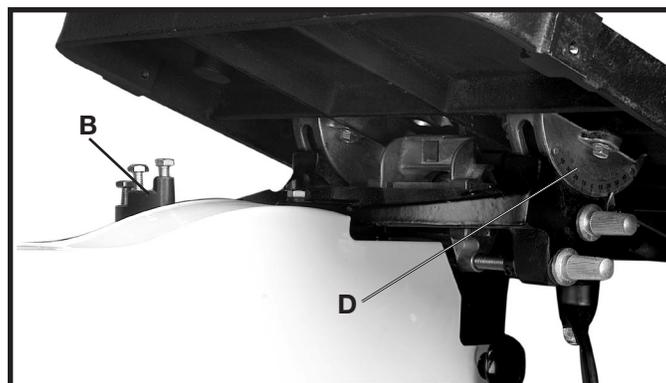


Fig. 44

ADJUSTING THE TABLE STOPS

To adjust the 90 degree stop

1. **⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.**
2. Loosen the table clamp handles (A) Fig. 43, and tilt the table to the right.
3. Rotate the stop (B) Fig. 45 out of the way.
4. Place a square (G) Fig. 46, on the table and set blade square to table.
5. Tighten table clamp handles (A) Fig. 43.
6. Rotate the stop (B) Fig. 45, until the tallest screw is under the table.
7. Turn the screw up or down until the screw touches the table skirt.
8. Loosen screw (K) Fig. 47 and move pointer (J) to the "0", and tighten screw (K).

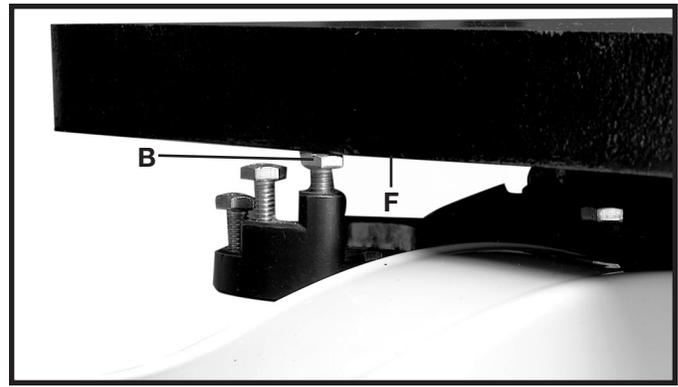


Fig. 45

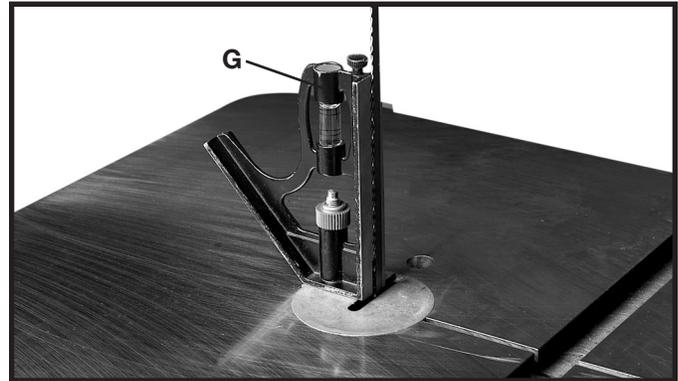


Fig. 46

To set the adjustable stops:

The adjustable stops (quick stop table presets) can be used to set the table anywhere from 0 to 9 degrees left for beveling operations.

1. **⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.**
2. Loosen the two clamp handles (A) Fig. 43.
3. Tilt the table to the right, and turn the stop until either stop screw (M) or (N) Fig. 48, is under the table skirt.
4. Tilt the table to the left until it rests on the selected stop screw (M) or (N) Fig. 48.
5. The angle can be set by turning the stop screw and checking the angle on the side of the scale with pointer (J) Fig. 47.
6. Adjust the other stop screw (M) or (N) Fig. 48, in the same manner.

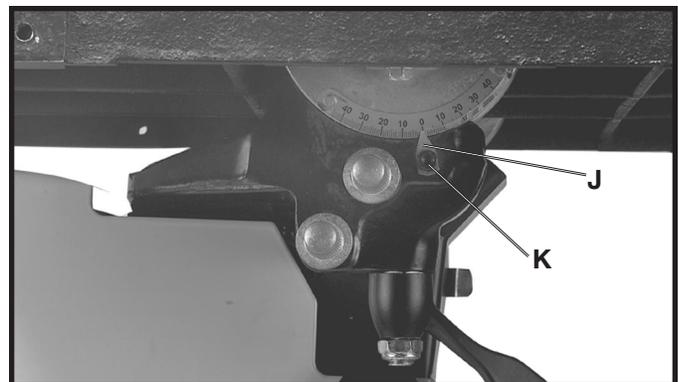


Fig. 47

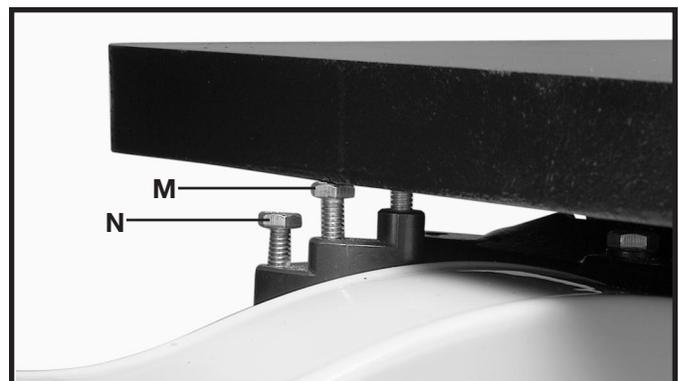


Fig. 48

ADJUSTING BLADE TENSION

The band saw is equipped with a quick tensioning blade mechanism. To apply tension, move the tension handle (A) to the left as shown. To release tension, move the tension lever lock (B) Fig. 49 up, and move the tension handle (A) to the right as shown in Fig. 50.

To adjust the blade tension proceed as follows:

1. **⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.**
2. Push up on the blade tension lever lock (B) Fig. 49, move the blade tension handle to the right, to remove the blade tension.
3. The blade tension handle can be set for blade widths of 3/4", 1/2", 3/8", 1/4", and 1/8".
4. Pull out on the blade tension handle (A) Fig. 50, and turn the the tension lever until the appropriate width of the blade is shown on the top of the blade tension lever scale (C) and then release the blade tension lever handle.
5. Move the blade tension handle to the left until the lever lock (B) Fig. 49 engages the blade tension lever handle (A).
6. The band saw blade tension can be fine tuned by turning adjustment nut (N) Fig. 51, while the blade is tensioned.
7. A series of graduations is located on the back of the upper wheel slide bracket (T) Fig. 51. These graduations indicate the proper tension for various widths of blades.

NOTE: THESE GRADUATIONS ARE CORRECT FOR AVERAGE WORK, AND WILL NOT BE AFFECTED BY REBRAZING OF THE SAW BLADE.

CAUTION WHEN CUTTING THIN PIECES, 3/4" OR LESS, SET THE BLADE TENSION BELOW THE MAXIMUM SETTING FOR BLADE WIDTH, TO EXTEND BLADE LIFE.

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

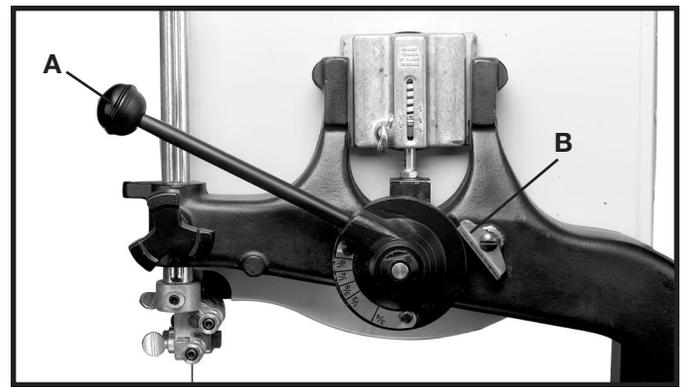


Fig. 49

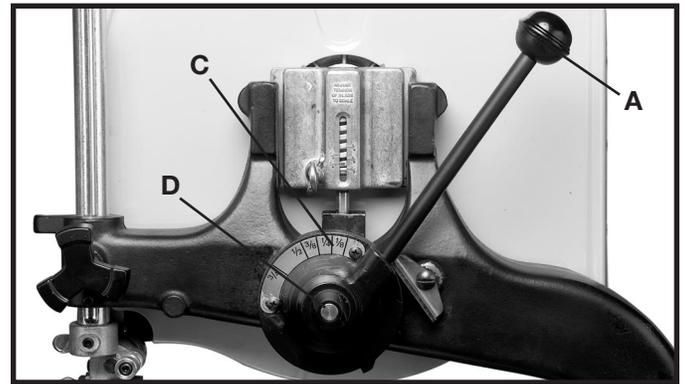


Fig. 50

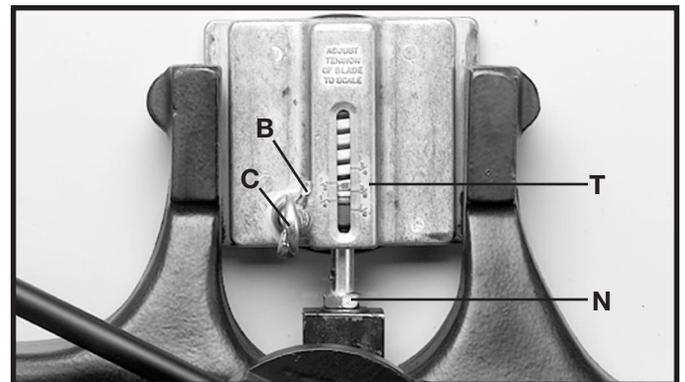


Fig. 51

TRACKING THE BLADE

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.

CAUTION BEFORE TRACKING THE BLADE, MAKE SURE THAT THE BLADE GUIDES AND BLADE SUPPORT BEARINGS ARE CLEAR OF THE BLADE.

After applying tension to the blade, rotate the upper wheel slowly forward by hand and observe the blade's movement. The blade (A) Fig. 52 should travel in the center of the upper tire. If the blade creeps toward the front edge, loosen the wing nut (B) Fig. 51, and turn the thumb screw (C) clockwise. This action draws 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 (C) Fig. 51 only a fraction of a turn each time.

⚠ WARNING NEVER TRACK THE BLADE WHILE THE TOOL IS RUNNING.

After the blade is tracking in the center of the tires, tighten the wing nut (B) Fig. 51.

VERTICAL ADJUSTMENT OF THE UPPER BLADE GUIDE AND GUARD ASSEMBLY

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.

Adjust the blade guides and bearings according to the following instructions.

Set the upper blade guide and guard assembly (A) Fig. 53 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.

ADJUSTING THE 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, proceed as follows:

1. **⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE
2. Make sure that the bottom blade guides and support bearings are not touching the blade.
3. Check the upper blade guide assembly. The blade guides (A) Fig. 54 should be parallel to the blade. To adjust, loosen the screw (B) and rotate the complete guide assembly (C). When the blade guides are parallel with the blade, tighten the screw (B).
4. Adjust the guides (A) Fig. 55 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. 55. When the guides (A) are set properly, tighten thumb screw (C).

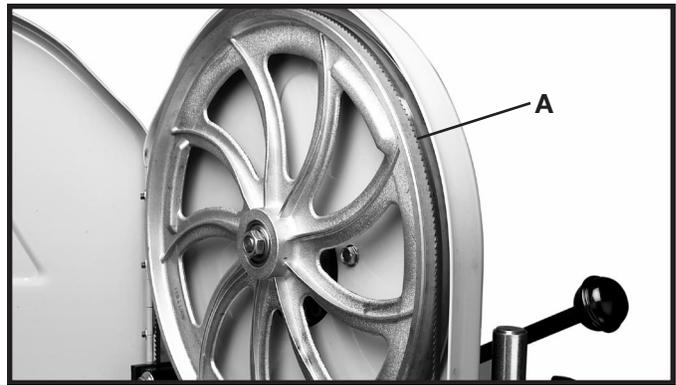


Fig. 52

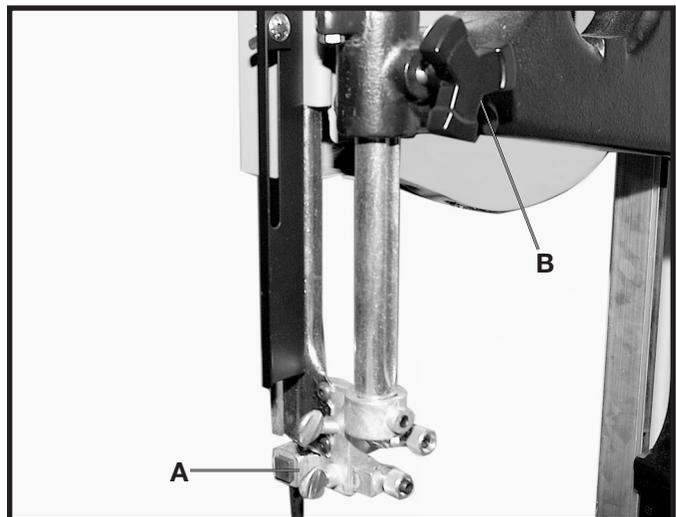


Fig. 53

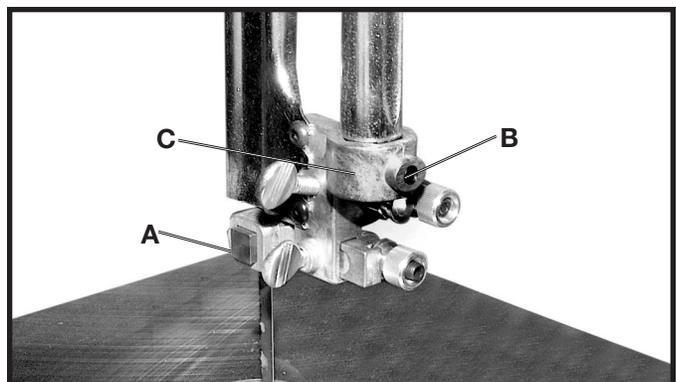


Fig. 54

5. Two set screws (B) Fig. 55 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. When the blade guide wears to a point that it cannot be adjusted close to the blade, loosen screw (B) Fig. 55 and reverse the blade guides (A) Fig. 55.

7. The upper blade support bearing (E) Fig. 55 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.

8. 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. 55. 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.

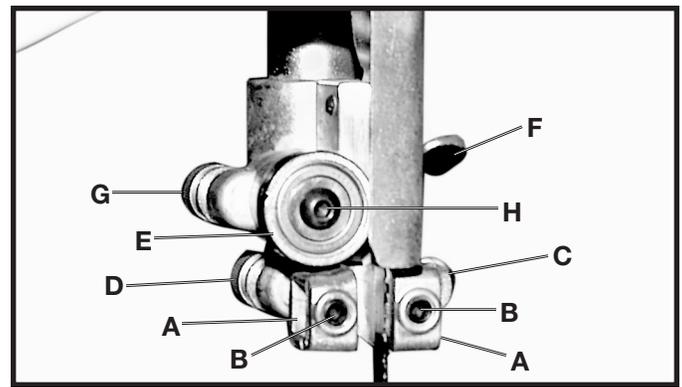


Fig. 55

ADJUSTING LOWER BLADE GUIDES AND BLADE SUPPORT BEARING

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

1. **⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.**

2. Adjust the front edge of the guide blocks (B) Fig. 56 so that they are just behind the “gullets” of the saw teeth. Turn the knurled knob (C) Fig. 56 to make this adjustment. Check the support bearing (D) Fig. 56. It should not be touching the back of the blade.

3. Loosen the two screws (A) Fig. 56. 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. 56 so that it is about $1/64$ " behind the back of the blade.

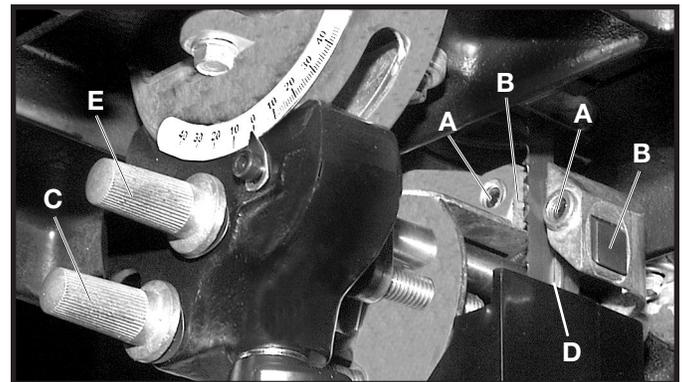


Fig. 56

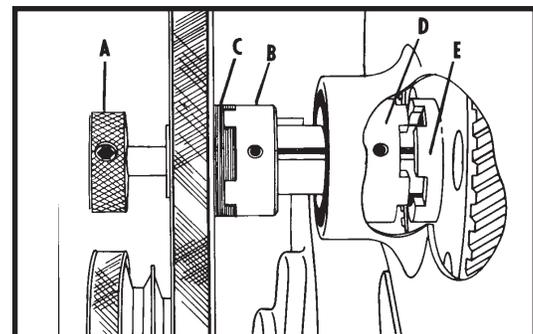


Fig. 57

CHANGING SPEEDS

An advantage of this machine is that it can be changed instantly from a slow-speed metal cutting band saw to a high-speed wood cutting band.

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.

Be certain that the band saw is in the “off” position and the power is disconnected when changing from either metal-to-wood cutting or from wood-to-metal cutting.

When using the machine for cutting wood (3000 SFM), pull the shifter knob (A) Fig. 57 all the way out so that the lugs of the clutch (B) are engaged with the hub (C) of the drive pulley. This action will disengage the clutch (D) from the hub (E) of the gear that transmits power through the gear box. It may be necessary to rotate the pulley manually in order to line up the clutch lugs with the slots in the hub of the pulley. This action provides a direct drive from the motor pulley to the drive pulley, by-passing the gear box.

When using the machine for cutting metal (40, 60, 85, 115, 160, 220, and 335 SFM), push the shifter knob (A) Fig. 58 all the way in, disengaging the clutch (B) from the hub (C) of the pulley. An additional clutch (D) is located inside the band saw. It must be engaged with the hub (E) of the gear that transmits power through the gear box. When pushing in on the shifter knob (A) Fig. 58, rotate the lower wheel of the band saw to feel when the engagement occurs.

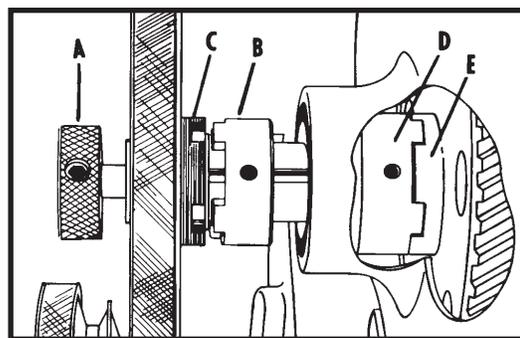


Fig. 58

With the longest belt on the inside groove of the motor pulley (B) Fig. 59 and on the drive pulley (C), and the small belt in one of the remaining three grooves of the motor pulley and the corresponding groove of the gear box pulley (E), speeds of 40, 60, 85, and 3000 SFM are readily available. To obtain speeds of 40, 60, and 85 SFM, push the shifter knob (F) Fig. 59 all the way in, and position the small belt on one of the three outside grooves of the motor pulley (B) and the gear box pulley (E).

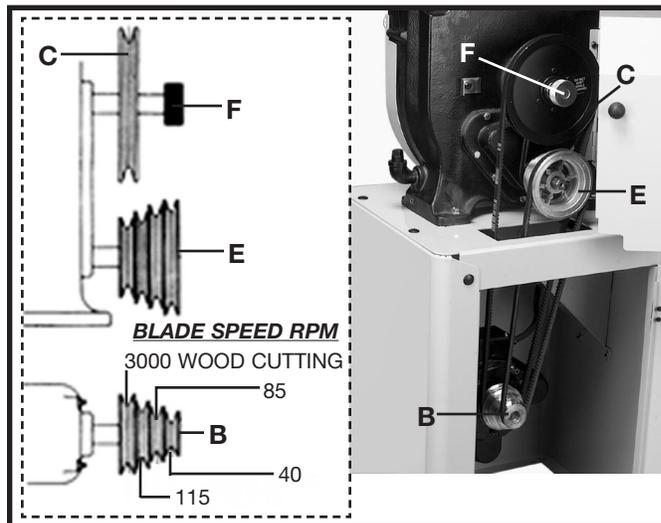


Fig. 59

Blade speeds of 115, 160, 220, 335, and 3000 SFM are available by simply interchanging the positions of the motor pulley and the gear box pulley. Fig. 60 shows the motor pulley (A) positioned on the gear box shaft and the gear box pulley (B) positioned on the motor shaft. With the long belt positioned on the inside groove of the pulleys (A) and (B) Fig. 60, speeds of 160, 220, and 335 SFM are obtained when the shifter knob (D) is pushed in.

To obtain a blade speed of 115 SFM, push in the shifter knob (D), remove the long belt from the pulleys (B) and (C), and place the small belt on the inside groove of the motor pulley (B) and the inside groove of the gear box pulley (A).

Except for the one speed of 115 SFM, both belts may be left on the machine, regardless of the blade speed.

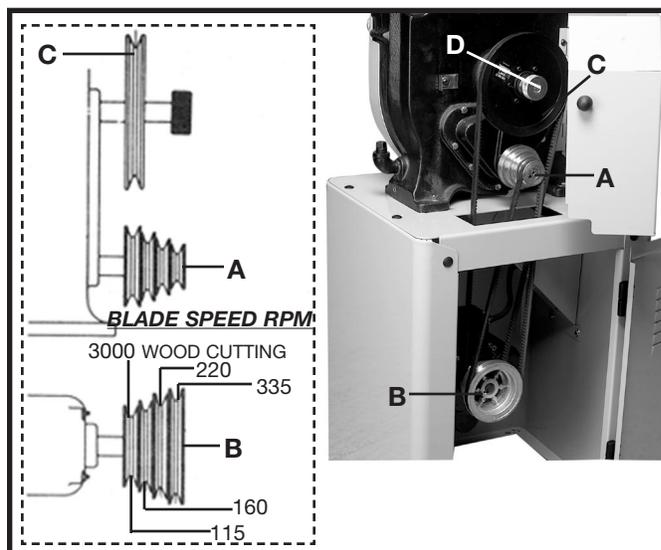


Fig. 60

OPERATIONS

Before starting the machine, insure that all adjustments are properly made and the guards are in place. Turn the upper wheel by hand to make sure that everything is correct **BEFORE** turning on the power.

⚠ WARNING Keep the top blade guide assembly within 1/8" of the work piece at all times. Do not force the material against the blade. Light pressure on the work piece will produce a smoother cut, and prevent excess friction, and heating of the blade.

KEEP THE SAW BLADE SHARP. Very little forward pressure is required for normal cutting. Keep the workpiece moving at a slow and consistent rate against the blade to ensure a smooth and accurate cut.

Avoid twisting the blade, by trying not to turn sharp corners. Remember, you must saw around corners.

CUTTING CURVES

When cutting curves, turn the stock carefully so that the blade follows without twisting. If a curve is so abrupt that it is necessary to repeatedly back up and cut a new kerf, a narrower blade, a blade with more set, or additional relief cuts Fig. 61, may be necessary to allow the blade to cut more efficiently. The more set a blade has, the easier it will allow the stock to be turned, but the cut is usually rougher.

When withdrawing the piece being cut, changing the cut, or for any other reason, be careful not to accidentally draw the blade off the wheels. In most cases, it is easier and safer to turn the stock and saw out through the waste material, rather than try to withdraw the stock from the blade.

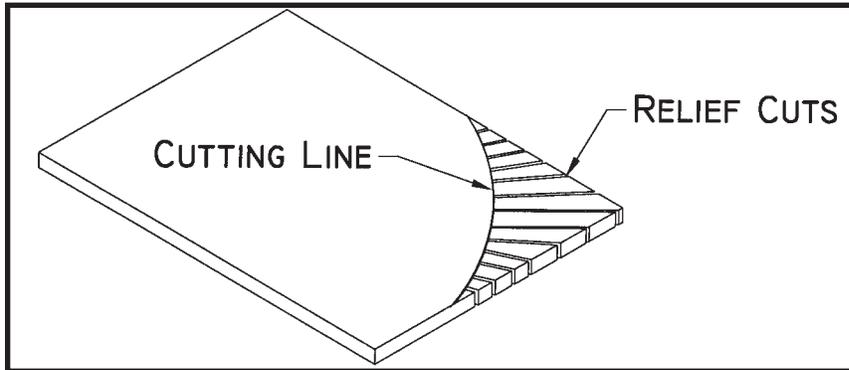


Fig. 61

TROUBLESHOOTING GUIDE

In spite of how well a band saw is maintained, problems can occur. The following troubleshooting guide will help you solve the more common problems:

Trouble: SAW WILL NOT START.

Probable Cause

1. Saw not plugged in.
2. Fuse blown or circuit breaker tripped.
3. Cord damaged.

Remedy

1. Plug in saw.
2. Replace fuse or reset circuit breaker.
3. Replace cord.

Trouble: SAW WILL RUN, BUT BLADE WILL NOT TURN.

Probable Cause

1. Gearbox is disengaged.

1. Properly engage the shifter knob.

Trouble: BREAKER KICKS OUT FREQUENTLY.

Probable Cause

1. Extension cord too light or too long.
2. Feeding stock too fast.
3. Blade in poor condition (dull, warped, gummed).
4. Low voltage supply.

Remedy

1. Replace with adequate size cord.
2. Feed stock more slowly.
3. Clean, sharpen, or replace blade.
4. Contact an electrician.

Trouble: BAND SAW VIBRATES EXCESSIVELY.

Probable Cause

1. Machine not mounted securely to stand.
2. Stand on uneven surface.
3. Worn belt.
4. Pulley not aligned.
5. Motor not fastened securely.

Remedy

1. Tighten all mounting hardware.
2. Reposition on flat level surface.
3. Replace belt.
4. Adjust pulleys.
5. Tighten all mounting hardware.

(continued on next page)

Trouble: BAND SAW DOES NOT COME UP TO SPEED.

Probable Cause

1. Low voltage due to improper extension cord size.
2. Low voltage.

Remedy

1. Replace with adequate size cord.
2. Contact an electrician.

Trouble: BLADES BREAK.

Probable Cause

1. Blade not tensioned properly.
2. Blade guides improperly adjusted.
3. Blade support bearing improperly adjusted.
4. Blade not tracking properly on wheel.
5. Bad weld on blade.
6. Worn tires.
7. Forcing wide blade around short radius.
8. Dull blade or insufficient set.
9. Upper blade guide/guard assembly set too high.
10. Continuous running of machine when not actually cutting.

Remedy

1. Adjust blade tension.
2. Adjust blade guides.
3. Adjust blade support bearing.
4. Adjust blade tracking.
5. Replace blade.
6. Replace tires.
7. Change to a narrower blade.
8. Replace or sharpen blade.
9. Set upper blade guide/guard assembly within 1/8" of workpiece.
10. Turn off machine when not performing cutting operation.

Trouble: BLADE WILL NOT TRACK.

Probable Cause

1. Blade too loose.
2. Upper wheel not properly adjusted.
3. Improperly adjusted blade support bearing.
4. Worn tires.

Remedy

1. Adjust tension.
2. Adjust upper wheel.
3. Adjust blade support bearing.
4. Replace tires.

Trouble: CUT DOES NOT AGREE WITH SETTING ON THE TILT SCALE.

Probable Cause

1. Pointer out of adjustment.

Remedy

1. Adjust pointer.

Trouble: BLADE WILL NOT STAY ON WHEEL.

Probable Cause

1. Blade not tensioned properly.
2. Blade guides improperly adjusted.
3. Blade support bearing improperly adjusted.
4. Blade not tracking properly.
5. Bad weld on blade.
6. Worn tires.

Remedy

1. Adjust blade tension.
2. Adjust blade guides.
3. Adjust blade support bearing.
4. Adjust blade tracking.
5. Replace the blade.
6. Replace tires.

Trouble: BAND SAW MAKES UNSATISFACTORY CUTS.

Probable Cause

1. Blade not tensioned properly.
2. Blade guides improperly adjusted.
3. Blade support bearing improperly set.
4. Blade not tracking properly.
5. Bad weld on blade.
6. Worn tires.
7. Incorrect blade for work being done.
8. Dull blade or insufficient set.
9. Upper blade guide set too high.
10. Speed set incorrectly.

Remedy

1. Adjust blade tension.
2. Adjust blade guides.
3. Adjust blade support bearing.
4. Adjust blade tracking.
5. Replace the blade.
6. Replace tires.
7. Change the blade.
8. Replace blade.
9. Set upper blade guide within 1/8" of work piece.
10. Adjust speed.

BAND SAW BLADES

A band saw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain long use from a band saw blade if you use it properly. Be sure you use blades of the proper thickness, width, and temper for the various types of material and cuts.

Always use the widest blade possible. Use narrow blades only for sawing small, abrupt curves and for fine, delicate work. This will save blades and will produce better cuts. For cutting wood and similar materials, Delta offers blades in widths of 1/8", 1/4", 3/8", 1/2" and 3/4". Delta also offers several 1/2" blades for metal cutting of different teeth per inch configurations.

Any one of a number of conditions may cause a band saw blade to break. Blade breakage is, in some cases, unavoidable, being the natural result of the peculiar stresses to which blades are subjected. Blades will break often due to avoidable causes, such as the lack of care to the blade or the blade not being properly adjusted to the band saw. The most common causes of blade breakage are:

- (1) faulty alignments and adjustments of the guides.
- (2) forcing or twisting a wide blade around a curve of short radius.
- (3) feeding the work piece too fast into the blade.
- (4) dullness of the teeth, or absence of sufficient set.
- (5) improperly tensioned blade.
- (6) top guide set too high above the work piece being cut.
- (7) using a blade with a lumpy or improperly finished braze or weld.
- (8) continuous running of the saw blade when not cutting.

Use blades that are 93 1/2" in length on this machine.

Always use a sharp blade. Keep it free from gum and pitch. Clean frequently with a stiff fiber brush.

Narrow blades are used for cutting small circles or curves while the wider blades are best suited for straight cutting such as ripping.

A new blade, in most cases, will perform better and last longer than a re-sharpened blade.

Ensure that the blade guides are adjusted properly.

Do not force or twist the blade around a curve or a very short radius.

Feed the workpiece through the blade at a consistent rate, allow the blade to do the cutting – do not feed the work piece too fast. Do not apply excessive tension to the blade. Set the tension to the proper tension as shown on the tension scale.

MATERIAL STEELS	UNDER 1/4"		1/4" TO 3/4"		1 "AND UP	
	TEETH PER INCH	FPM	TEETH PER INCH	FPM	TEETH PER INCH	FPM
Angle Iron	24	160	14	160		
Armor Plate	18	40	14	40	10	40
Carbon Steel	24	85	14	60	14	40
Chromium Steel	24-18	85	14	60	14	40
Cold Rolled Steel	24-18	220	14	220	14	160
Drill Rod	14	85	14	60		
Graphite Steel	18	60	14	40	14	40
High speed Steel	24	85	14	60	14	40
Machinery Steel	18	160	14	160	14	160
Molybdenum Steel	18	85	14	60	14	40
Nickel Steel	18	40	14	40	14	40
Silicon Manganese	18	85	14	85	14	60
Stainless Steel	24	40	14	40	10	40
Structural Steel	24	160	14	160	14	115
Tungsten Steel	18	40	14	40	10	40
FOUNDRY METALS						
Brass-hard and soft	18	335	14	335	10	335
Bronze - Aluminum	18	335	14	335	14	335
Bronze - Manganese	18	160	14	115	14	85
Bronze - Naval	18	160	14	115	14	85
Bronze - Phosphorus	18	335	14	335	14	220
Cast Iron - Gray	18	115	14	85	10	60
Cast Iron - Malleable	18	160	14	115	14	85
Cast Steel	18	160	14	115	14	85
Copper - Beryllium	18	160	14	85	10	40
Gunnite	24	335	18	220	14	160
Meehanite	18	160	14	115	10	85
Monet	18	115	14	85	10	60
Nickel - Cold Rolled	14	60	10	40	10	40
Nickel Silver	18	220	14	220	14	220
Silver	24	220	18	220	14	220
NON-METALS						
Bakelite	10	335	10	220	10	160
Cork	10	3000	10	3000	10	3000
Fibre	14	3000	10	3000	10	3000
Hose -Canvas, Rubber	10	3000				
Hose - Metallic	24	220				
Mica	24	335	18	220	14	220
Plastics	14	3000	14	3000	10	3000
Porcelain	24	160	18	115		
Slate	24	335	18	220	14	160
Transite	24	335	18	220	14	85

SUGGESTED SKIP TOOTH BLADES AND SPEEDS

MATERIAL STEELS	UNDER 1/2"		1/2" TO 2"		2"AND UP	
	TEETH PER INCH	FPM	TEETH PER INCH	FPM	TEETH PER INCH	FPM
Aluminum	3	3000	3	3000	3	3000
Asbestos	4	3000	4	3000	4	3000
Babbitt	4	3000	3	3000	3	3000
Brake Lining	6	3000	4	3000		
Carbon	4	3000	3	3000	3	3000
Copper – Drawn	6	3000	4	3000	4	3000
Duralumin	3	3000	3	3000	3	3000
Lead	6	3000	4	3000	4	3000
Magnesium	3	3000	3	3000	3	3000
Paper Board	6	3000	4	3000	4	3000
Rubber – Hard	6	3000	4	3000	4	3000
Zinc	6	3000	4	3000	4	3000
Plastics	See note		4	3000	4	3000
Builders Board	6	3000	4	3000	4	3000
Hardwoods	6	3000	4	3000	4	3000
Plywoods	6	3000	4	3000	4	3000
Softwoods	6	3000	4	3000	4	3000

NOTE: Some types of plastics lend themselves to more pronounced results with the regular saw blades. Sheets under 1/4" thickness and tubing under 1/4" wall thickness are not adapted to skip tooth blades.

WIDTH	MIN. CUTTING RADIUS	WIDTH	MIN. CUTTING RADIUS
1/8"	1/4"	3/8"	1"
3/16"	1/2"	1/2"	1-1/4"
1/4"	3/4"	3/4"	1-3/4"

MAINTENANCE

CHANGING THE BLADES

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Open the upper and lower wheel guard doors and blade guard door.
2. Release tension on the saw blade.
3. Remove table alignment pin and table insert.
4. Take the blade off the wheel, and guide it through the slot in the table.
5. Install the new blade by reversing the procedure. Table alignment pin should be re-seated by gently tapping it with a hammer.

LUBRICATION

The gear case is filled at the factory with 1-1/2 quarts of oil. The case should be drained after 1500 to 2000 hours of operation and filled with a good grade of heavy adhesive gear oil. A pipe plug is located below the elbow (B) Fig. 62. Remove this plug to drain the oil.

This machine is equipped with a 1/2" street elbow (B) Fig. 62 and a pipe plug (A). Remove the plug (A) to check the oil level and, when necessary, to add oil. The oil level should be approximately at the top of the bend in the elbow (B).

The sealed-for-life ball bearings on the wheels of the bandsaw and the blade supports require no lubrication.

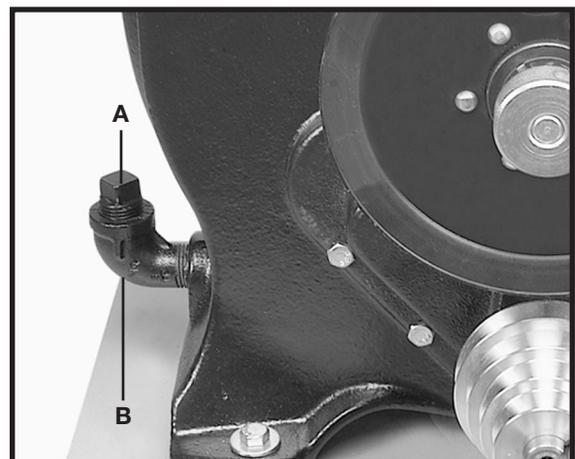


Fig. 62

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

▲WARNING Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.



PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable • Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-800-223-7278 (In Canada call 1-800-463-3582).



Two Year Limited New Product Warranty

Delta will repair or replace, at its expense and at its option, any new Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. For all refurbished Delta product, the warranty period is 180 days. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

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Phone: (510) 357-9762
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Phone: (303) 487-1809
Fax: (303) 487-1868

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Unit #107
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Fax: (954) 321-6638

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Fax: (630) 424-8895

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Fax: (630) 910-0360

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