6" Belt and 12" Disc Abrasive Finishing Machine

(Model 31-731)

INSTRUCTION MANUAL

PART NO. 420-01-651-0013 - 05-28-03

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. **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. **DRESS PROPERLY.** Do not wear tie, gloves, or loose clothing. Remove watch, rings, and other jewelry. Roll up your sleeves. Clothing or jewelry caught in moving parts can cause injury.
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 ABRASIVE FINISHING MACHINES

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

1. **DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge is safety.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
4. **NEVER TURN THE MACHINE "ON"** before clearing the table/work area of all objects (tools, scraps of wood, etc.). Flying debris is dangerous.
5. **NEVER TURN THE MACHINE "ON"** with the workpiece contacting the abrasive surface. Kickback can occur.
6. **SECURE THE MACHINE** to a supporting surface. Vibration can cause the machine to slide, walk, or tip over.
7. **COVER THE POWER TAKE-OFF SHAFT** when not using accessories. Unguarded rotating shafts can create an entanglement hazard which can result in injury.
8. **USE A DUST COLLECTION SYSTEM.** Some types of wood are known to cause disease or other health problems.
9. **CLEAN THE MACHINE** and dust collector thoroughly when processing different types of workpieces (wood, steel, or aluminum). Combining wood and metal dust can create an explosion or fire hazard. **DO NOT SAND OR POLISH MAGNESIUM**. Fire will result.
10. **PREVENT THE WORKPIECE** from contacting the sanding belt before starting the tool. Loss of control of the workpiece is dangerous.
11. **AVOID AWKWARD OPERATIONS AND HAND POSITIONS.** A sudden slip could cause a hand to move into the abrasive disc or belt.
12. **MAINTAIN A MAXIMUM CLEARANCE OF 1/16"** between the table and the abrasive disc. The workpiece could be drawn into the space between the abrasive disc and the table.
13. **SUPPORT THE WORKPIECE** firmly with a miter gauge, backstop, or work table when sanding with a belt. Hold the workpiece firmly. Loss of control of the workpiece can result in injury.
14. **AVOID KICKBACK** by sanding in accordance with the directional arrows. Feed the workpiece against the downward rotation side of the disc or the forward rotation of the belt. Loss of control of the workpiece can result in injury.
15. **DO NOT SAND** very small or very thin workpieces that cannot be safely controlled. Loss of control of the workpiece can result in injury.
16. **PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece is dangerous.
17. **NEVER PERFORM LAYOUT, ASSEMBLY, OR SET-UP WORK** on the table/work area when the machine is running. A sudden slip could cause a hand to move into the abrasive surface. Severe injury can result.
18. **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. Someone else might accidentally start the machine and cause injury to themselves.
19. **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 120/240, or 200/460 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.

⚠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.

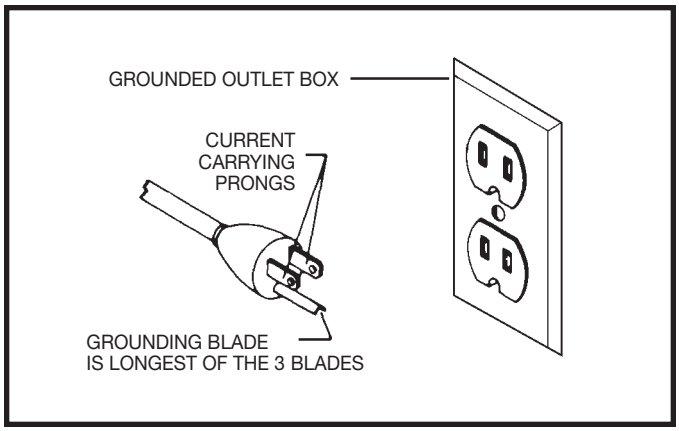

Fig. A

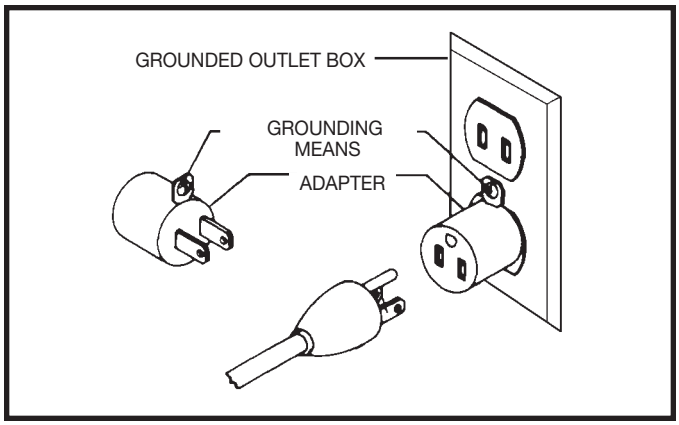

Fig. B

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.

⚠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.

4. Permanently connected machines:
If the machine is intended to be permanently connected, the machine should be connected to a grounded metal permanent wiring system, or to a system having an equipment-grounding conductor.

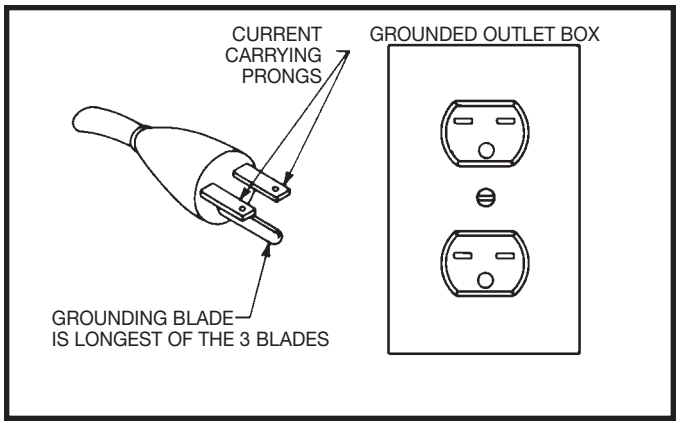

Fig. C

THREE PHASE OPERATION

If the motor on your machine is wired for 200V, 230V, or 460V, three phase, the necessary wiring from the starter to the power should be completed by a qualified electrician.

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 31-731 is a abrasive finishing machine. The Delta Model 31-731 includes two tilting tables, 4½" arbor pulley, V-belt, 80-grit aluminum oxide belt and 50-grit aluminum oxide disc.

UNPACKING AND CLEANING

CAUTION **YOUR MACHINE IS SHIPPED WITHOUT BELT TENSION APPLIED TO THE SANDING BELT. BEFORE OPERATING THE MACHINE IT IS VERY IMPORTANT THAT THE SANDING BELT IS PROPERLY ADJUSTED FOR CORRECT BELT TENSION AND IS TRACKING PROPERLY AS EXPLAINED IN THE SECTION "ADJUSTING TENSION AND TRACKING OF THE SANDING BELT."**

Carefully unpack the machine and all loose items from the shipping container. 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.

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.**

STAND AND ELECTRICALS

If you purchased your machine complete with stand and electricals, factory mounted and wired, the stand is shipped as shown in Fig. 2. The switch (A) Fig. 2 and motor (B) Fig. 3 are completely assembled to the stand and the necessary wiring from the motor to the switch has been completed.

Fig. 2

ASSEMBLING MACHINE TO STAND

Place the machine on the stand with the arbor pulley over the opening (A) Fig. 4, on the top of the stand. The drive belt is shipped on the arbor pulley of the machine and must be inserted down through the opening (A). The disc end of the machine is to be positioned on the same end of the stand that the switch (B) Fig. 4, is located. Line up the four holes on the base of the machine with the four holes (C) in the top of the stand. Place a 3/8" flat washer on a 3/8"-16x3" hex head screw (D) Fig. 5, (two are shown), insert screw through the hole in the base of the machine and the hole in the top of the stand. Thread a 3/8"-16 hex nut onto the screw and tighten securely. Repeat this process for the three remaining holes.

Fig. 3

Fig. 4

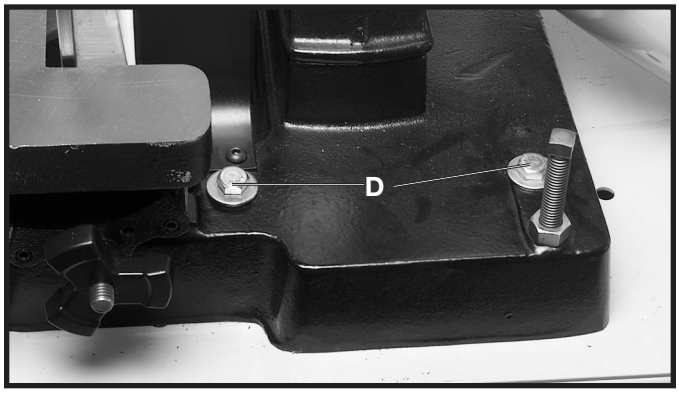

Fig. 5

ALIGNING PULLEYS, ASSEMBLING BELT AND ADJUSTING BELT TENSION

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE

Using a straight edge (A) Fig. 6, make certain the motor pulley (B) is aligned with the arbor pulley. If necessary, the motor pulley (B) can be adjusted on the motor shaft by loosening set screw and moving the motor pulley (B) in or out as needed. The motor (E) can also be moved in or out along the mounting bars (F) by loosening the four mounting screws, two of which are shown at (G) and moving the motor (E).

Assemble the drive belt (H) Fig. 7 to the arbor pulley and motor pulley (B). Adjust for proper belt tension by raising or lowering motor (E) on motor mounting posts (J) (one is shown), by loosening four mounting nuts, two of which are shown at (K). If necessary, the motor mounting bars (F) can be repositioned on two mounting posts (J). **NOTE: MAKE CERTAIN BOTH PULLEYS ARE KEPT IN ALIGNMENT WHEN ADJUSTING BELT TENSION.** Correct belt tension is obtained when there is approximately one inch deflection in the center span of the belt using light finger pressure.

⚠WARNING BE CERTAIN TO TIGHTEN ALL MOUNTING HARDWARE ONCE FINAL ADJUSTMENTS ARE MADE.

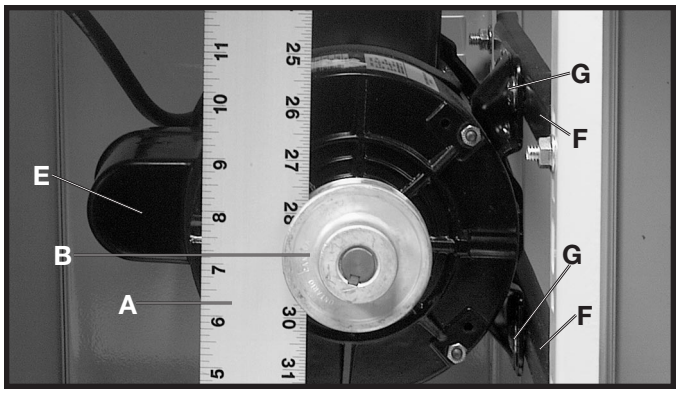

Fig. 6

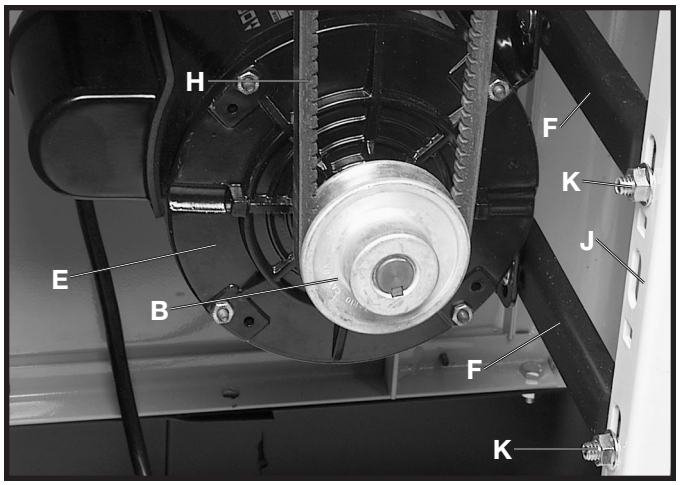

Fig. 7

INSTALLING ABRASIVE DISC

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Make certain the disc assembly (A) Fig. 8, is clean, dry, and free of any oil or grease.

2. Separate and fold back approximately half of the adhesive backing (B) Fig. 8, from the abrasive disc (C), supplied with the machine. Insert the abrasive disc (C), with the backing (B), between the table (D), and disc assembly (A), as shown in Fig. 8, and press the top half of the adhesive disc (C), in position.

3. Manually turn the disc assembly (A) Fig. 9, and remove the paper backing from the abrasive disc (C), and firmly press onto face of disc (A).

⚠WARNING MAKE CERTAIN THE ABRASIVE DISC (C), IS SECURELY IN POSITION BEFORE APPLYING POWER TO THE MACHINE.

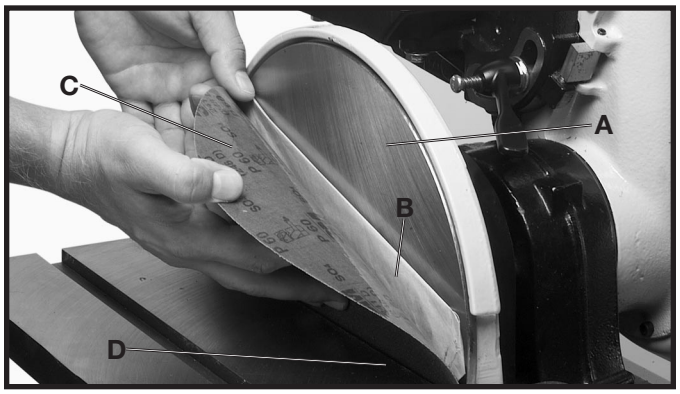

Fig. 8

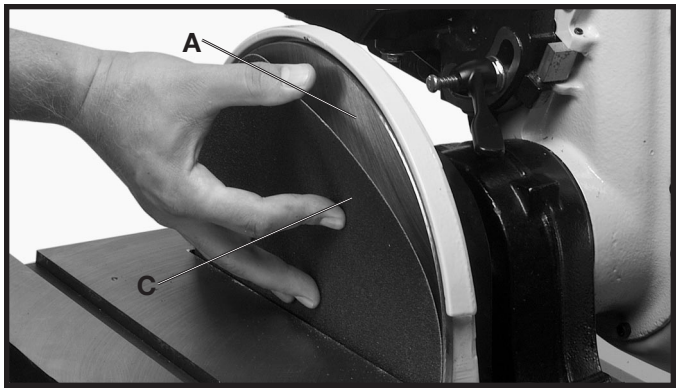

Fig. 9

OPERATING CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING THE ABRASIVE FINISHING MACHINE

To start the machine, push “ON” button (A) Fig. 10. To stop the machine, push “OFF” button (B).

Fig. 10

LOCKING SWITCH IN THE “OFF” POSITION

IMPORTANT: When the tool is not in use, the switch should be locked in the OFF position using a padlock (A) Fig. 11, with a 3/16" diameter shackle to prevent unauthorized use.

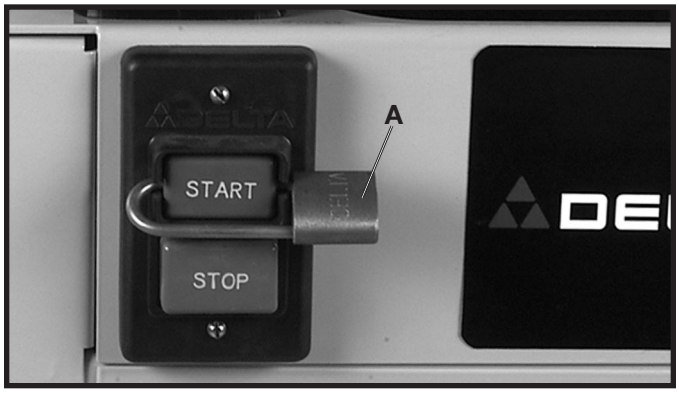

Fig. 11

ADJUSTING TENSION AND TRACKING OF SANDING BELT

CAUTION **YOUR MACHINE IS SHIPPED WITHOUT BELT TENSION APPLIED TO THE SANDING BELT. BEFORE OPERATING THE MACHINE IT IS VERY IMPORTANT THAT THE SANDING BELT IS PROPERLY ADJUSTED FOR CORRECT BELT TENSION AND IS TRACKING PROPERLY, AS FOLLOWS:**

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

1. Remove lock knob and washer (A) Fig. 12. Remove top cover (B).

2. Turn the belt tension handle (C) Fig. 13, clockwise to increase belt tension. Correct tension is determined by two things:

(1) The belt should be flat on the platen.

(2) The belt should be sufficiently tensioned to prevent slipping on very heavy work. For ordinary work, a tension just sufficient to take the curl out of the belt is recommended.

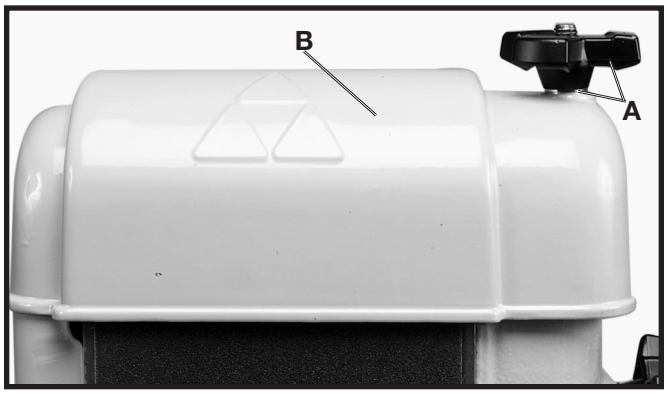

Fig. 12

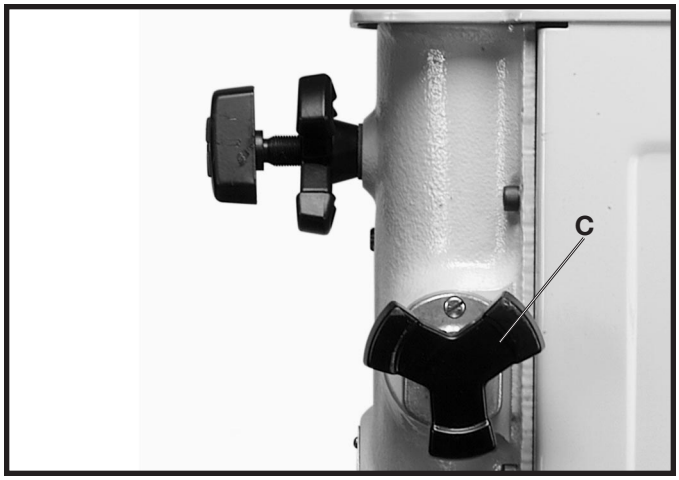

Fig. 13

3. Loosen tracking lock knob (D) Fig. 14, and while rotating the belt (F) by hand, as shown, tighten or loosen tracking knob (E) until the belt is running true on the pulleys.

4. Then jog the machine on and off to check further if the belt is tracking properly. If the belt is leading to one side or the other, very gently turn the tracking knob (E) Fig. 14, clockwise to move the belt toward the adjusting screw and counterclockwise to move the belt away from the adjusting screw while jogging the machine on and off.

5. A final adjustment can be made with the motor running. **THIS ADJUSTMENT IS USUALLY VERY SLIGHT.** After the belt is tracking properly, tighten the lock knob (D) Fig. 14, being careful the adjusting screw (E) does not turn.

6. Replace top cover (B) Fig. 12.

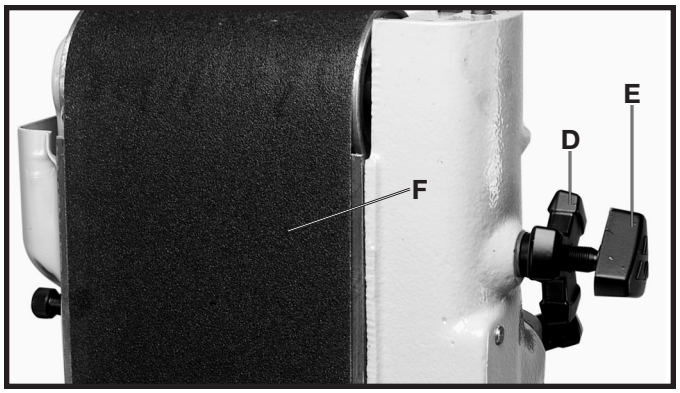

Fig. 14

ADJUSTING BELT SANDER TABLE

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

To tilt the table, loosen the table tilting handle (A) Fig. 15, move the table to the desired angle, and tighten the table tilting handle. The table tilting handle can be repositioned by pulling out the handle and repositioning it on the hex nut located underneath the handle. Positive table stops are provided at 90° and 45°. To adjust the stops, proceed as follows:

1. Loosen the table locking handle (A) Fig. 15, and lift the table up to approximately 10 degrees.

2. Flip out stop bracket (C) Fig. 16, and lower the table until the adjustable screw (D) contacts stop bracket (C).

3. Place a square on the table with one end of the square against the platen.

4. Turn the adjusting screw (D) Fig. 16 until the table is at 90° to the platen and adjust the pointer (E) Fig. 15, to the 0° mark on the angle-of-tilt scale (F) Fig. 15.

5. The same procedure is followed when adjusting the table to stop at the 45° position as shown in Fig. 17.

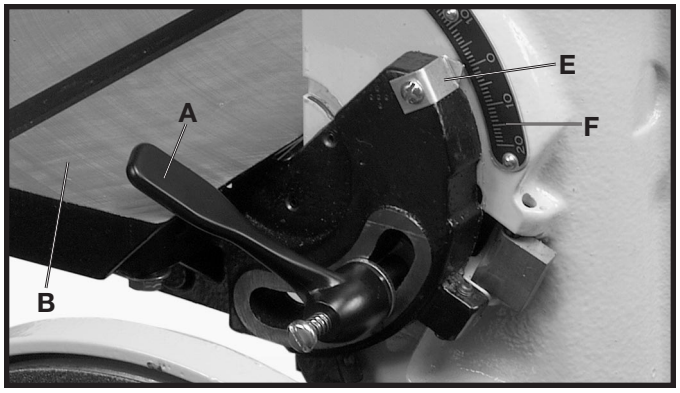

Fig. 15

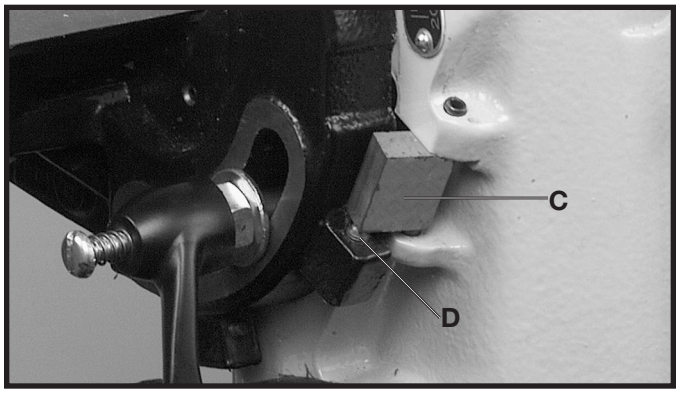

Fig. 16

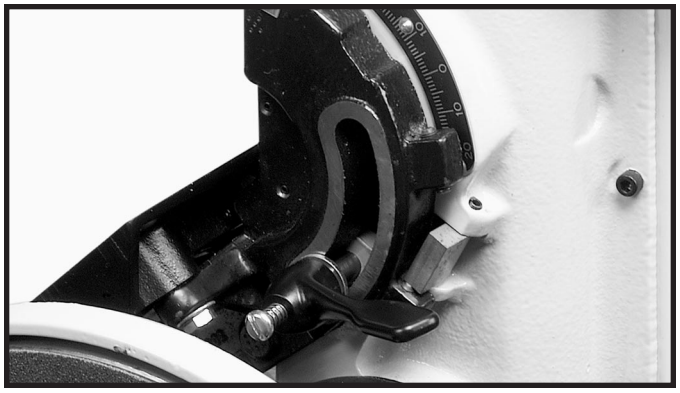
Fig. 17

ADJUSTING POSITION OF SANDING ARM

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

The sanding arm can be positioned in the vertical or horizontal position, or at any desired angle in between as follows:

1. Loosen two bolts (A) Fig. 18, move the sanding arm to the desired position, and tighten the two bolts.

⚠WARNING THE SANDING ARM SHOULD NEVER BE REPOSITIONED WHILE THE MACHINE IS RUNNING.

2. When moving the sanding arm to the horizontal position, the arm will contact the stop (B) as shown in Fig. 19.

⚠WARNING BEFORE STARTING THE MACHINE AFTER REPOSITIONING THE SANDING ARM ALWAYS CHECK THE TRACKING OF THE BELT.

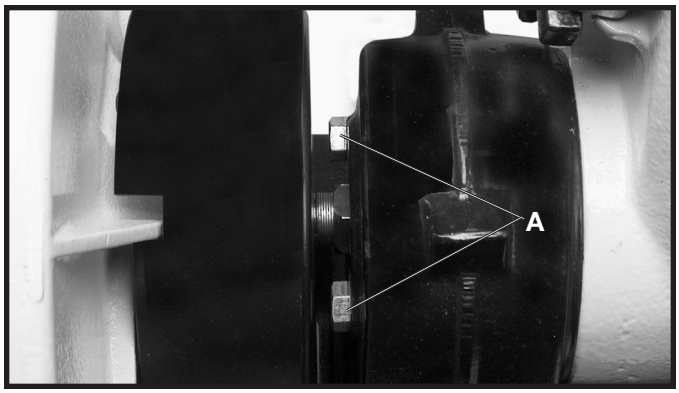

Fig. 18

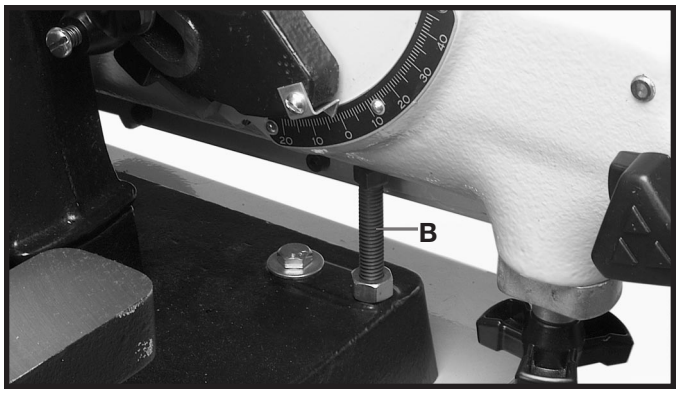

Fig. 19

ADJUSTING DISC SANDER TABLE

The table is set at the factory so that the edge of the table is approximately 3/32" away from the face of the disc assembly. This is done to provide enough clearance for the table when it is tilted to 45 degrees. If it is ever necessary to move the table away from or closer to the disc, loosen the four screws that hold the table to the trunnions and move the table away from or closer to the disc. If you cannot obtain enough movement of the table with this method, proceed as follows:

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Remove two screws, one of which is shown at (A) Fig. 20, and remove belt guard (B).

2. Remove hole plug (C) Fig. 21, and locate the two screws that fasten the disc to the shaft.

3. Using wrench (F) Fig. 22, loosen the two screws on hub of sanding disc and move the disc (D) in or out on the shaft as needed.

4. Tighten two screws and replace hole plug and belt guard.

NOTE: After this adjustment is made, make certain the miter gage slot (E) Fig. 22 is parallel with the disc (D) by following the instructions in **"ADJUSTING MITER GAGE SLOTS PARALLEL WITH THE BELT AND DISC."**

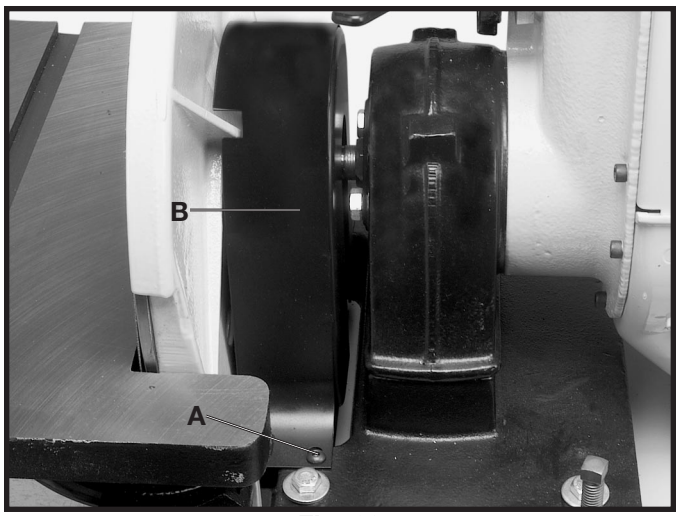

Fig. 20

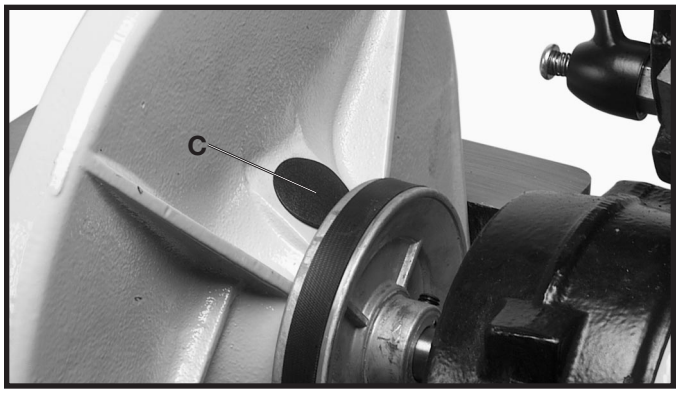

Fig. 21

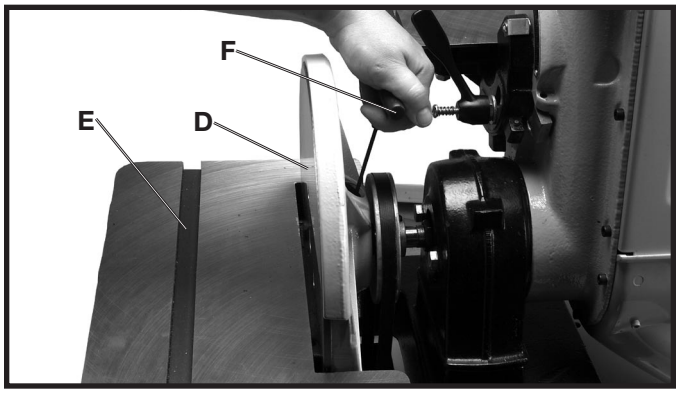

Fig. 22

ADJUSTING TABLE SQUARE WITH SANDING DISC

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Place an accurate square (C) Fig. 23, on the table with one end of the square against the disc.

2. Loosen the table locking knobs (A) Fig. 23, which are located on each end of the table and move the table until it is at 90 degrees to the disc. Then tighten the table locking knobs (A).

3. Adjust the pointer (B) Fig. 25A, so it points to the "0" mark on the scale.

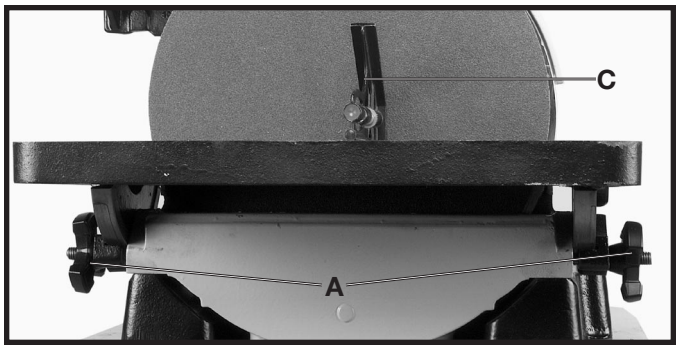

Fig. 23

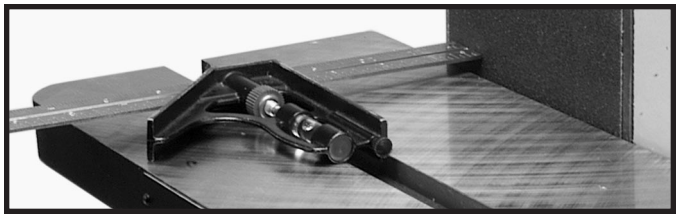
Fig. 24

ADJUSTING MITER GAGE SLOTS PARALLEL WITH THE BELT AND DISC

These adjustments are made at the factory; however, during shipment they may have been disturbed. If an adjustment is necessary, proceed as follows:

BELT SANDER

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Check to see if the miter gage slot is parallel with the sanding belt by placing a square in the miter gage slot with one end of the square against the platen, as shown in Fig. 24.

2. Slide the square the full width of the platen checking to be sure the distance between the miter gage slot and the platen is the same.

3. If an adjustment is necessary, loosen the three screws (A) Fig. 24A that hold the table to the bracket and shift the table until the slot is parallel to the platen. Then tighten the three screws.

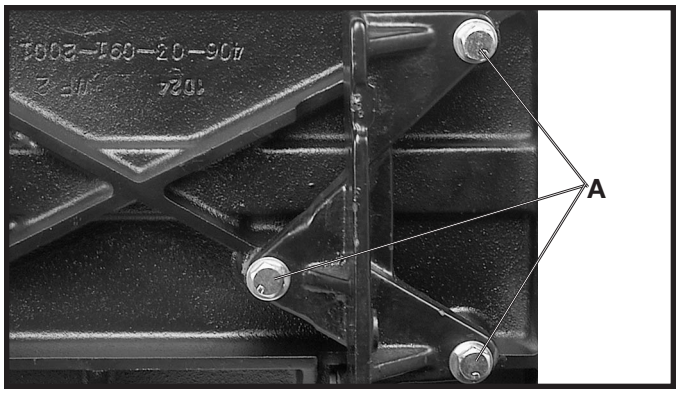

Fig. 24A

DISC SANDER

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Check to see if the miter gage slot is parallel with the disc by placing a square in the miter gage slot with one end of the square against the disc, as shown in Fig. 25.

2. Using a pencil, make a mark on the disc where the square contacts the disc, as shown in Fig. 25.

3. Rotate the disc to the other end of the table and check the distance with the miter gage.

4. If an adjustment is necessary, loosen the four screws (A) Fig. 25A, (two of which are shown), that hold the table to the trunnions and adjust the table until the miter gage groove is parallel with the disc. **NOTE:** When making this adjustment be sure the table locking handles are tightened.


Fig. 25

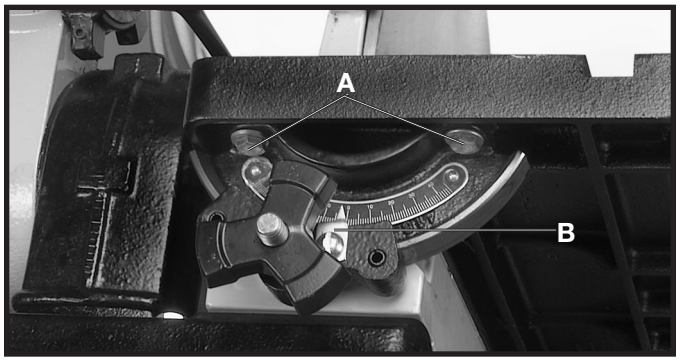

Fig. 25A

ADJUSTING THE PLATEN

The platen (A) Fig. 24, is set at the factory 1/32 of an inch higher than the crown of the drums (B). This allows the belt, when properly tensioned, to lay flat on the platen and eliminate stretching and bulging which might occur if the platen is not at the right height.

When using the machine with a loose belt for "strapping," the platen is removed and replaced as follows:

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Remove the side cover and top idler drum guard.

2. Remove the three screws (C) Fig. 26, that attach the platen to the machine and remove the platen.

3. When replacing the platen, attach it to the machine with the three screws (C) Fig. 26. Do not tighten the three screws.

4. Using a straight edge (D) adjust the platen (A) Fig. 26, so it is 1/32" higher than the crown of the drums (B), and tighten the three screws (C).

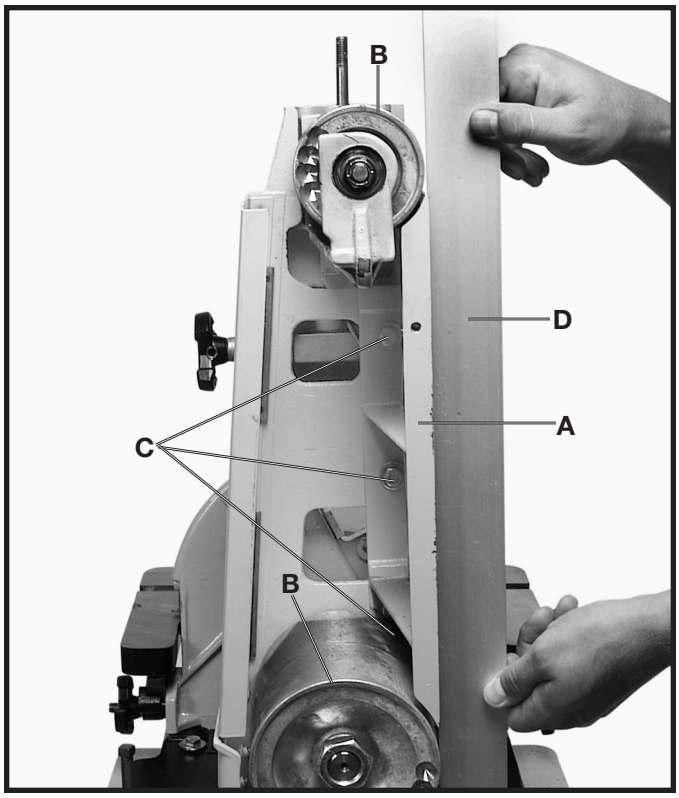

Fig. 26

ABRASIVE BELTS & DISCS - THEIR SELECTION AND USE

Delta supplies a wide range of belts and discs for use on your Belt and Disc Finishing Machine. These belts and discs are recommended for a wide range of work on wood, metals, plastics and other materials. However, when a large amount of production work of one kind is to be done, it is best to call in a coated abrasive specialist for specific belt and disc recommendations.

All materials may be worked on a dry belt or disc. But for professional quality or for production work a low melting point grease should be used for cooler cutting, better finish, and for longer belt life. Even coarse belts will "load" when grinding aluminum dry, and so a lubricant should always be used for this material. To a varying degree, this is true of other non-ferrous metals like soft brass and zinc.

A grease stick is often applied to the belt or disc to prevent "loading" of the belt on softer materials especially aluminum. When grinding steel or some kinds of plastic, the grease stick is often used to prevent over-heating of the work piece. Many times a single belt is used for both stock removal and for finish, just by lubricating one half of the belt with light grease for stock removal and the other side or half of the belt with a heavy grease for polishing to bring out a good finish. This can be done only when the parts are very small and need not be moved across the face of the belt.

When an abrasive belt smaller than 6" is desired, the 6" belt can be split. This can be done by turning the belt inside out and with a knife or other sharp instrument cut a slot in the belt at the desired width. Then proceed to tear the belt.

CAUTION ONLY TEAR THE BELT A FEW INCHES AT A TIME ONE WAY THEN REVERSE THE TEARING ACTION. THIS METHOD WILL REDUCE THE TENDENCY OF THE BELT TO UNRAVEL.

For certain applications, a mist coolant attachment (not supplied by Delta) will be helpful. If the use of a mist coolant causes the Abrasive Belt to slip on the lower drive pulley, this can be corrected by using a "tire" which can be homemade by wrapping the pulley with a piece of coated abrasive belt. The grit is, of course, turned to the outside and cement should be used sparingly to avoid lumps under the "tire."

NOTES

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).

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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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