KING INDUSTRIAL

6" X 48" BELT & 12" DISC SANDER

MODEL: KC-788FX

INSTRUCTION MANUAL

IMPORTANT INFORMATION

2-YEAR LIMITED WARRANTY FOR THIS BELT & DISC SANDER	**KING CANADA TOOLS** OFFERS A 2-YEAR LIMITED WARRANTY FOR INDUSTRIAL USE.

PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

REPLACEMENT PARTS

Replacement parts for this tool are available at our authorized KING CANADA service centers across Canada. For servicing, contact or return to the retailer where you purchased your product along with your proof of purchase.

LIMITED TOOL WARRANTY

KING CANADA makes every effort to ensure that this product meets high quality and durability standards. KING CANADA warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations and lack of maintenance. KING CANADA shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products. To take advantage of this warranty, the product or part must be returned for examination by the retailer. Shipping and handling charges may apply. If a defect is found, KING CANADA will either repair or replace the product.

PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

1. KNOW YOUR TOOL

Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

2. GROUND THE TOOL.

This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. **NEVER** connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE.

Keep in good working order, properly adjusted and aligned.

4. REMOVE ADJUSTING KEYS AND WRENCHES.

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. KEEP WORK AREA CLEAN.

Cluttered areas and benches invite accidents. Make sure the floor is clean and not slippery due to wax and sawdust build-up.

6. AVOID DANGEROUS ENVIRONMENT.

Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

7. KEEP CHILDREN AWAY.

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILD-PROOF.

Use padlocks, master switches or remove starter keys.

9. USE PROPER SPEED.

A tool will do a better and safer job when operated at the proper speed.

10. USE RIGHT TOOL.

Don't force the tool or the attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL.

Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

12. ALWAYS WEAR SAFETY GLASSES.

Always wear safety glasses (ANSI Z87.1). Everyday eyeglasses only have impact resistant lenses, they are **NOT** safety glasses. Also use a face or dust mask if cutting operation is dusty.

13. DON'T OVERREACH.

Keep proper footing and balance at all times.

14. MAINTAIN TOOL WITH CARE.

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS.

Before servicing, when changing accessories or attachments.

16. AVOID ACCIDENTAL STARTING.

Make sure the swich is in the ''OFF'' position before plugging in.

17. USE RECOMMENDED ACCESSORIES.

Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

18. NEVER STAND ON TOOL.

Serious injury could occur if the tool tips over. Do not store materials such that it is necessary to stand on the tool to reach them.

19. CHECK DAMAGED PARTS.

Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure that they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts that are damaged should be properly repaired or replaced.

20. NEVER LEAVE MACHINE RUNNING UNATTENDED.

Turn power ''OFF''. Don't leave any tool running until it comes to a complete stop.

MACHINE SPECIFICATIONS

Model: KC-788FX

Belt size:	6″ x 48″	Belt table size:	5 7/8″ x 9 7/8″
Disc size:	12″	Disc table size:	7″ x 16″
Belt speed:	1570 Ft./Min	Disc table tilts:	45˚ up and down
Disc speed:	2000 RPM	Motor: (pre-wired for 115V)	1.5 HP, 115/230V, 1ph.
Belt table tilts:	45˚ up and down	Weight:	215 lbs.
Dust chutes:	4″		

ELECTRICAL CONNECTIONS

⚠ WARNING

ALL ELECTRICAL CONNECTIONS MUST BE DONE BY A QUALIFIED ELECTRICIAN. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY! ALL ADJUSTMENTS OR REPAIRS MUST BE DONE WITH THE SANDER DISCONNECTED FROM THE POWER SOURCE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY!

Power source

Your sander's motor was designed for a specific frequency and voltage. Make sure the voltage indicated on the machine nameplate corresponds to the electrical outlet voltage output.
The motor is controlled by a switch with a removeable safety key which limits the usage of your sander to authorized users.

Your sander must be properly grounded. Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock.

⚠ **WARNING:** IF NOT PROPERLY GROUNDED, THIS SANDER CAN CAUSE ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS. TO AVOID SHOCK OR FIRE, IF THE POWER CORD IS WORN OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.

115V OPERATION

As received from the factory, your sander is ready to run for 115V operation. This sander is intended for use on a circuit that has an outlet and a plug which looks like the one illustrated in Fig.1.

⚠ **WARNING:** DO NOT USE A TWO-PRONG ADAPTORS FOR THEY ARE NOT IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES. NEVER USE IN CANADA.

230V OPERATION

If 230V, single phase operation is desired, the following instructions must be followed:
1. Disconnect the machine from its power source.
2. The sander comes with four motor leads that are connected for 115V operation. Reconnect these four motor leads for 230V operation, as indicated on the inside of the capacitor cover.
3. The 115V plug supplied with the sander must be replaced with a CSA listed plug suitable for 230V operation. This plug is illustrated in Fig.2. Contact your authorized service center or qualified electrician to install the plug and to change the connections from 115V to 230V. The sander must comply with all local and national codes after the 230V plug is installed.
4. A sander with a 230V plug should only be connected to an outlet having the same configuration as illustrated by the grounded outlet box in Fig.2. No adaptor is available or should be used for 230V operation.

EXTENSION CORDS

For circuits that are further away from the electrical circuit box, the wire size must be increased proportionately in order to deliver ample voltage to the sander motor.
1. A drop in voltage and power will result with the use of an extension cord.
2. The wire size must be suffucient in order to deliver the necessary voltage to the sander motor.
3. Use only 3-wire extension cords which have 3-prong grounding type plugs and 3-hole receptacles which accept the tool's plug.
4. If the extension cord is cut or damaged, do not use. Replace it immediately.

Your sander is protected with a thermal overload which prevents damages to the motor and other electrical components. The thermal overload is tripped when the temperature is too high during operation. This thermal overload stops the machine to avoid overheating the motor. Let the sander cool down and then press the reset button. The sander is ready to be used once it has cooled down.

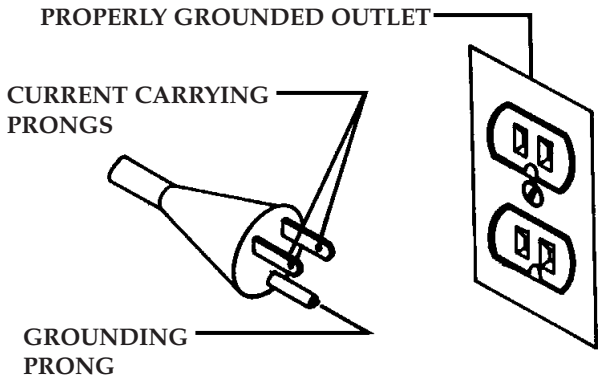

FIGURE 1

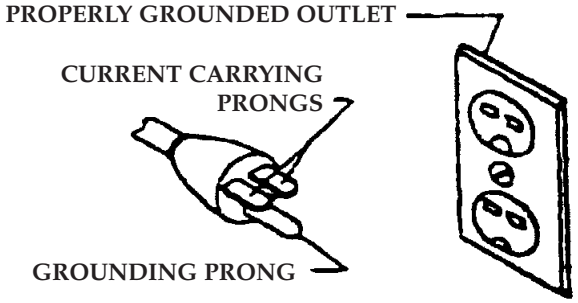

FIGURE 2

UNPACKING & GETTING TO KNOW YOUR SANDER

Unpacking & checking contents

To get the maximum performance out of your sander, clean it well before using and assemble it with precision. As soon as you receive your sander, we recommend you do the following;

1. Completely unpack the sander and compare the loose parts (Fig.3) with the list below.
2. Report all damages to your local distributor if any parts are defective or damaged.
3. Clean all surfaces which have a anti-rust protective coating with a light solvent or kerosene. Do not use paint thinner or gasoline. These products will damage the painted parts of your sander. To avoid rusting, apply a coat of paste wax to these parts.

Your sander is shipped close to being assembled. The sander assembly must be assembled to the cabinet stand as well as additionnal loose parts; make sure all parts are accounted for before proceeding with the assembly. (Fig.3).

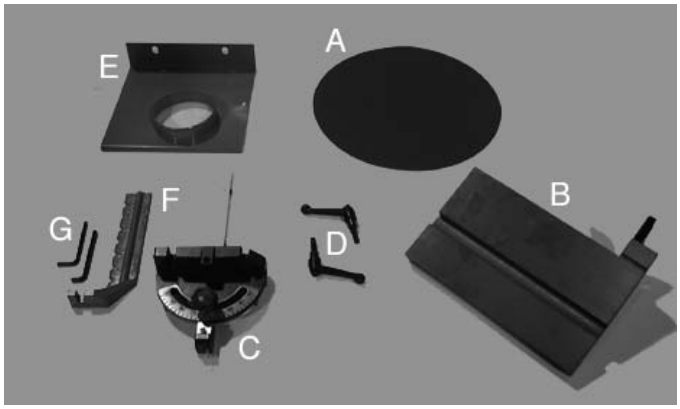

FIGURE 3

A. Sanding disc
B. Belt table with angle support
C. Miter gauge assembly
D. 2 Lock handles
E. Dust chute
F. Backstop
G. 2 Hex. keys
H. Hardware bag (not shown)

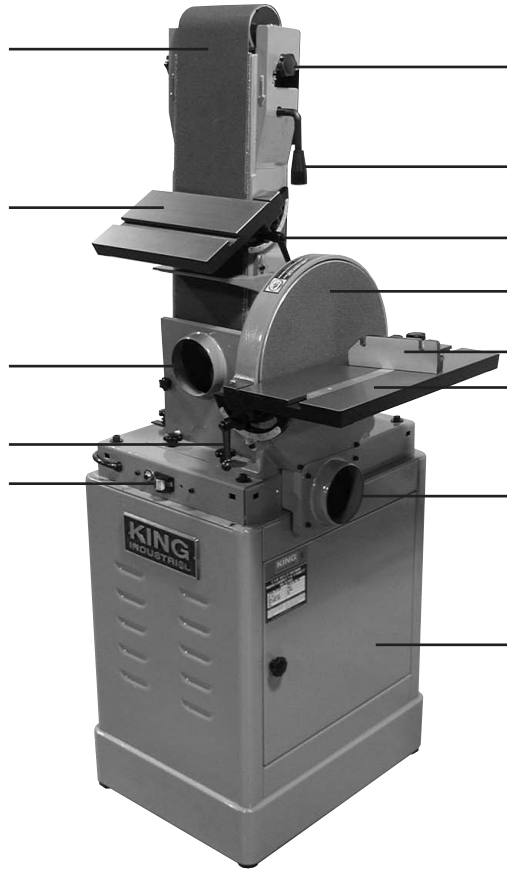

FIGURE 4

Getting to know your belt & disc sander

1. Lock knob-Belt tracking
2. Quick belt tension release handle- Tensions belt
3. Belt table lock handle- Locks table at desired angle
4. Sanding disc- 12″
5. Miter gauge
6. Disc table
7. Disc dust chute- 4″
8. Cabinet stand- w/motor and quick connect plug
9. Sanding belt
10. Belt table
11. Belt dust chute- 4″
12. Disc table lock handle- Locks table at desired angle
13. Switch/thermal overload- On/Off- Prevents overheating

ASSEMBLING RUBBER FEET TO CABINET STAND

Place the cabinet stand on its side with the cabinet door on top. One rubber foot must be assembled to each corner hole of the cabinet.

1. Insert a rubber foot into one of the four hole on the bottom of the cabinet stand.
2. Open cabinet door by unlocking lock knob.
3. Now that you have access to the inside of the cabinet, fix the rubber foot to the cabinet using a flat washer and hex. nut. (Fig.5).
4. Repeat these steps for the other three rubber feet.
5. Close and lock cabinet door knob mentioned in step #2.
6. Place the cabinet stand upright on a flat and solid foundation. Your work space should be well lit, make sure you leave yourself sufficient space to manipulate your work piece without obstructions.

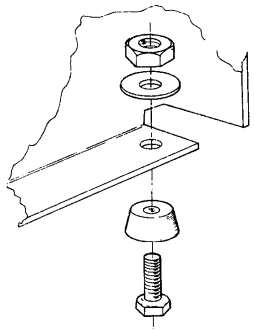

FIGURE 5

ASSEMBLING SANDER ASSEMBLY TO CABINET STAND

1. Place the sander assembly onto the cabinet stand. Make sure the disc table is on the same side as the cabinet door.
2. Align the sander assembly mounting holes with those of the cabinet stand.
3. Using four cap screws and washers, fix the sander assembly to the cabinet stand using a hex. key. See Fig.6.

FIGURE 6

ASSEMBLING V-BELT TO MOTOR PULLEY

1. Unlock and open cabinet stand door.
2. Loosen lock knob (A-Fig.7), this knob holds the motor in place.
3. Lift the motor and slide the V-belt onto the motor pulley.
4. Lower motor, this will tension the V-belt.
5. To obtain proper V-belt tension, a 1/2" center deflection is required. This is obtained by applying a slight finger pressure. Once proper belt tension is obtained, tighten lock knob (A).

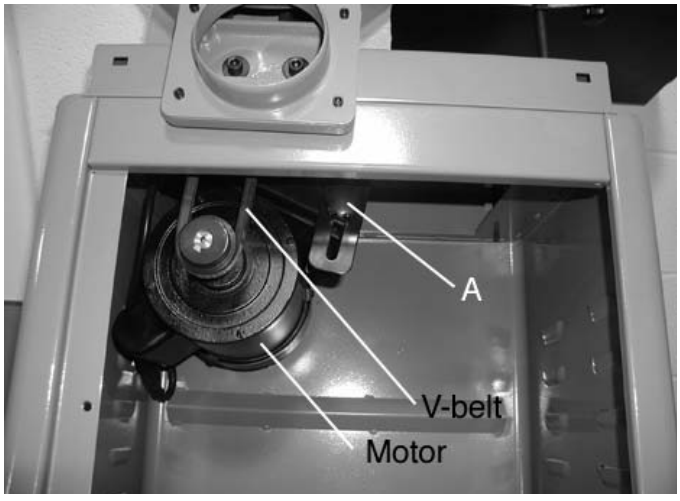

FIGURE 7

INSTALLING BELT TABLE

1. To allow the trunnion to slide, place the belt table on the belt housing.
2. The belt table must be positioned at the 0˚ mark, this will align the trunnion with the angle indicator.
3. Use a flat washer and a lock handle to fix the belt table into position (Fig.8). Screw the lock handle into the threaded hole in the belt housing.
4. The belt tension lever is not engaged when receiving your sander. To tension the belt, lower the belt tension lever towards the belt table.
5. The space between the belt table and the belt must not exceed 1/16".
6. Wearing protective gloves, rotate the belt and make sure the belt travels easily. See section "Belt Adjustment" if the belt does not travel easily.

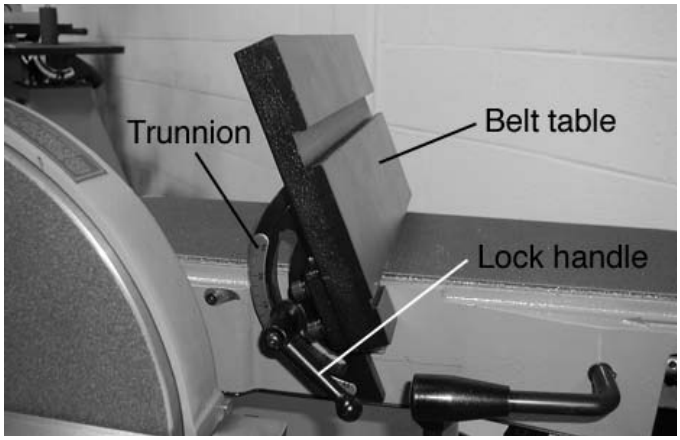

FIGURE 8

POSITIONING THE DISC TABLE

1. Your sander is shipped with the disc table assembled to the disc guard. Loosen the two lock handles and position the disc table square to the disc.

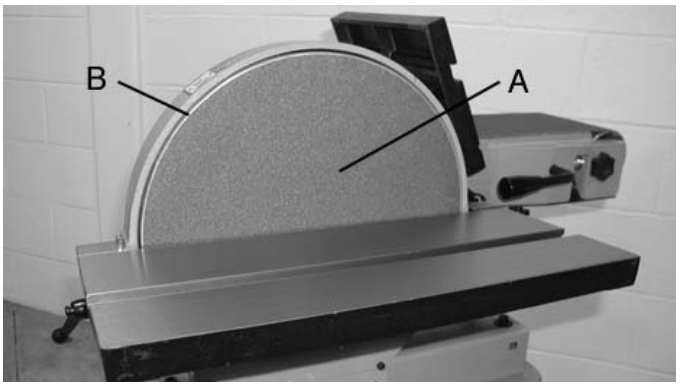

FIGURE 9

INSTALLING SANDING DISC TO ALUMINUM DISC

1. The sanding disc (A- Fig.9) was not installed onto the aluminum disc (B) and therefore must be installed.
2. Before applying the sanding disc to the aluminum disc, make sure the aluminum disc is clean and free of all dirt and dust particules .
3. Remove the sanding disc adhesive backing.
4. Slide the sanding disc between the disc table and the aluminum disc. Center the sanding disc with the aluminum disc.
5. Pressure must be applied to make sure the two surfaces stick well together.
6. The sanding disc must be installed evenly on the aluminum disc.
7. The distance between the disc table and the sanding disc must not exceed 1/16".
8. Using a square, make sure the disc table is at a 90^0 angle to the sanding disc. Readjust the angle indicator if necessary.
9. Wearing protective gloves, rotate the sanding disc and make sure it turns easily and is in full contact with the aluminum disc.

FIGURE 10

INSTALLING MITER GAUGE ON TABLE (DISC OR BELT)

1. The assembled miter gauge can be placed and used on either the belt or the disc table. (Fig.10).
2. Slide the miter gauge assembly into the belt or disc table slot. The miter gauge is now ready to be used.

INSTALLING BACKSTOP

1. The backstop (A- Fig.11) can be installed instead of the belt table. It is designed to be used when the sanding belt is used in the horizontal position.
2. Lower sanding belt housing to its horizontal position.
3. Loosen belt table lock handle, hold belt table and remove lock handle and the remove belt table.
4. Fix backstop to belt housing (B) using a flat washer and cap screw as shown in fig. 11.

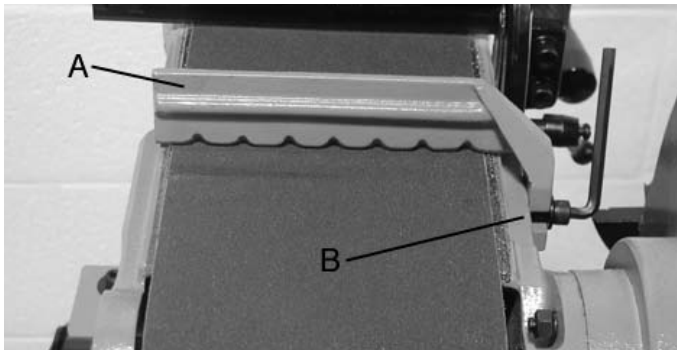

FIGURE 11

ADJUSTING BELT HOUSING POSITION

The belt housing can be positioned horizontally or vertically. It can also be positioned at any angle in between depending on your sanding needs. To adjust, follow these instructions;

1. Loosen and remove the three knobs (A-Fig.12).
2. Remove the belt dust chute.
3. Loosen the two fixing nuts (B).
4. Slowly lift or lower the belt housing to the desired angle.
6. To obtain the perfect horizontal position, lower completely until it comes in contact with the stop bolt underneath the belt housing.
7. To secure into position, retighten the two fixing nuts (B).
8. Reinstall the belt dust chute using the three knobs mentioned in step #1.

SANDING BELT TRACKING

Your sander is shipped with the belt tracking mechanism properly adjusted. The sanding belt should run centered and tracking properly between the belt drums. If an adjustment is necessary, follow these instructions:

1. Loosen the two knobs (A-Fig.13) located on both sides of the belt housing.
2. Start the sander.
3. Insert a 1/8" or 5/32" hex. key into the adjustment shaft hole (B).
4. Stand in front of the sanding disc. To track the belt towards you, turn the adjustment shaft to the right. To track the belt away from you, turn the adjustment shaft to the left.
5. The sanding belt should run centered and tracking properly between the belt drums.
6. Stop the sander.
7. To finalize the tracking adjustment, retighten knobs (A) on each side of the belt housing.

REPLACING THE SANDING BELT

1. The sanding belt must be replace once it is ripped, used or gleaming.
2. To release the sanding belt tension, lift the belt tension lever (C-Fig.13).
3. Loosen and remove knob and washer (A-Fig.14).
5. Remove support (B-Fig.14).
6. Loosen and remove the four knobs (C-Fig.14) found at the rear of the belt housing.
7. Remove belt housing cover (D-Fig.14).
8. Remove the used sanding belt and slide the new sanding belt around drums (A-Fig.15). NOTE: The arrows on the inside of the sanding belt must point towards the belt table, doing the opposite will increase the risk of ripping the sanding belt leaving it useless.
9. Center the sanding belt between the drums and tension the sanding belt using the belt tension lever (C-Fig.13).
10. Reinstall the belt housing cover using the four knobs (C-Fig.14) and also reinstall the support (Fig.14).
11. If the sanding belt requires a tracking adjustment, follow the instructions in the previous section " Sanding belt tracking".

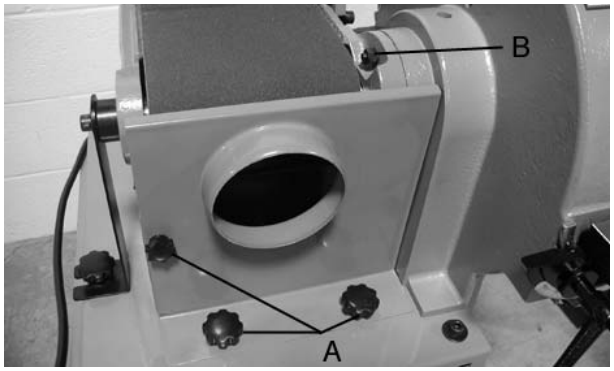

FIGURE 12

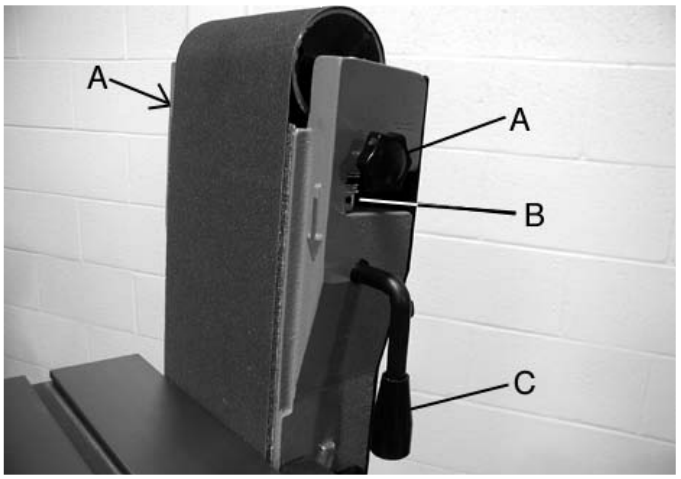

FIGURE 13

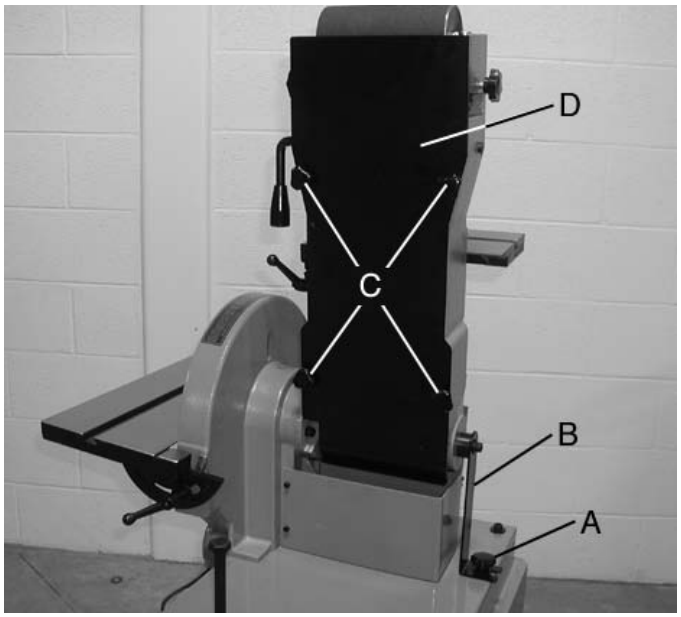

FIGURE 14

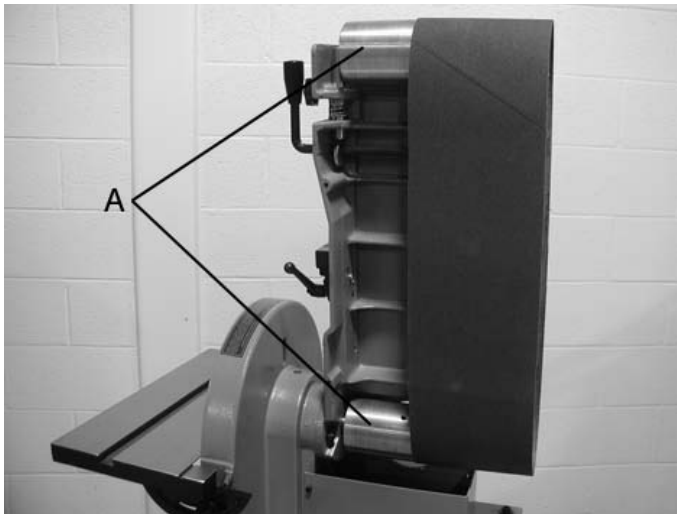

FIGURE 15

REPLACING SANDING DISC

1. Loosen and remove the four cap screws (A-Fig.16) from the disc cover (B).
2. Loosen and remove the two top cap screws (C) from the disc dust chute.
3. Remove the disc cover (B).
4. Remove the used sanding disc from the aluminum disc. It is not necessary to remove the aluminum disc.
5. If needed, the aluminum disc must be cleaned before installing the new sanding disc. Choose the appropriate sanding disc and apply it to the aluminum disc.
6. Reinstall the disc cover.
7. Reinstall the two dust chute cap screws.
8. Reinstall the four disc cover cap screws.

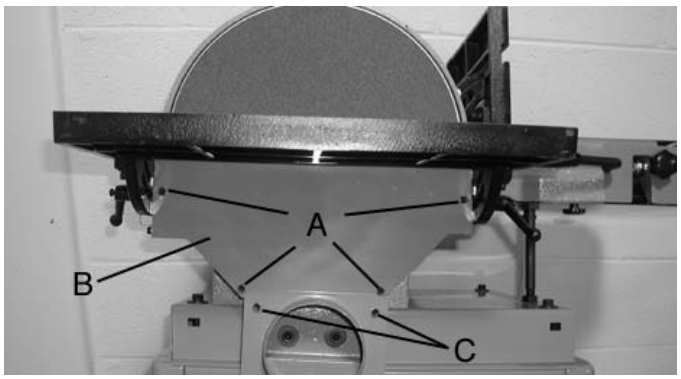

FIGURE 16

USING AND ADJUSTING MITER GAUGE

1. The miter gauge can be used on the belt or disc table. The miter gauge is used to hold and support the work piece at a chosen angle during a sanding operation.
2. The miter gauge body (A-Fig.17) angle can be adjusted. Loosen knob (B) and reposition to the desired angle.
3. Retighten knob (B) to lock into the desired angle.
4. This miter gauge comes with a positive stop at 90˚ and 45˚ left and right.
5. To use these pre-set stops, loosen knob (B) and slowly pull out the index pin (C). Slightly turn the miter gauge body, push the index pin back in and continue to turn the miter gauge body until the index pin engages the screw.
6. Make sure the desired angle is true.
7. To set the miter gauge square with the disc, use a combination square. If the angle pointer needs to be repositioned, loosen pointer screw and readjust.

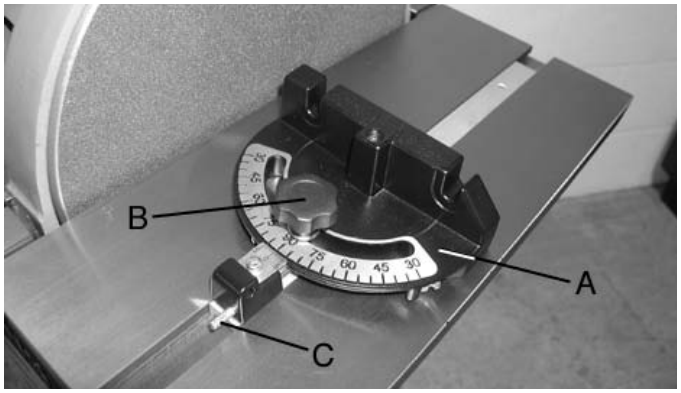

FIGURE 17

REPLACING THE DRIVE V-BELT

1. Stop the sander and unplug from the power source.
2. Loosen and remove the two lock handles on each side of the disc table.
3. Remove the disc table.
4. Loosen the set screw (Fig.18) which holds the aluminum disc in place. This set screw is accessible from the top of the disc housing using a long hex. key; do not remove this set screw.
5. Loosen and remove the four cap screws from the disc cover (B-Fig.16).
6. Loosen and remove the four cap screws from the disc dust chute.
7. Remove the disc cover and dust chute.
8. Remove the aluminum disc.
9. Loosen the cabinet door knob.
10. Open the cabinet door.
11. To loosen the drive V-belt tension, loosen the motor support knob (A-Fig.19) and lift the motor.
12. Remove and replace the drive V-belt.
13. To properly tension the drive V-belt, release the motor slowly and tighten motor support knob.
14. Do not over tension the drive V-belt. Excessive tension will reduce the V-belts' and the sanders' life span.
15. Close the cabinet door and retighten cabinet door knob.
16. Reinstall the aluminum disc and secure into place by tightening the set screw.
17. Reinstall the disc cover and dust chute using the same cap screws as described in steps #5 and #6.
18. Reinstall the disc table to the disc guard using the two lock handles described in step #2.

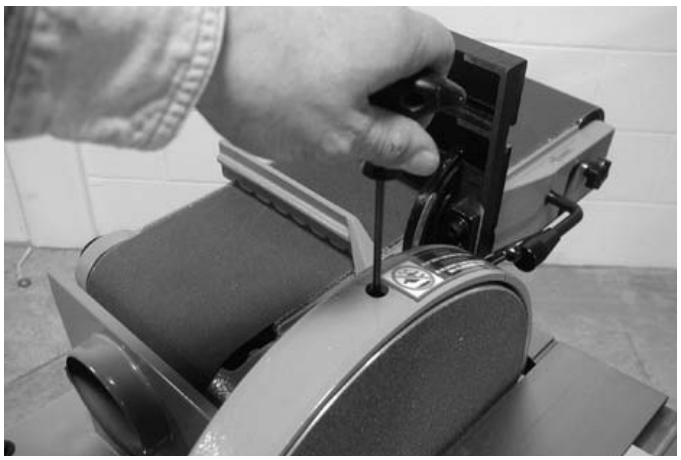

FIGURE 18

FIGURE 19

OPERATIONS & MAINTENANCE

OPERATIONS

- The sander must be unplugged from the power source before adjusting or replacing parts.
- The table lock handles must be properly tightened.
- The guards must be properly installed, adjusted and locked.
- All mobile parts must have sufficient space to move and they must move freely.
- Make sure lock knobs and handles do not loosen during operation (caused by vibrations).
- Wait for the sanding belt to reach full speed before sanding or polishing.
- The motor must turn clockwise as for the sanding disc. The sanding belt must travel towards the floor when in the vertical position.
- Do not force a workpiece on any sanding surface.
- Always support your workpiece when sanding on the belt or disc.
- Do not attemt to rapidely push a corner of a workpiece against the sanding disc or belt.
- When polishing metal, constantly move the workpiece on the sanding surface to avoid overheating.
- The sanding disc or belt must be replaced when it is ripped, glazed or frayed.
- Metal workpieces may become too hot to manipulate.

HORIZONTAL SANDING

1. Set the belt housing in the horizontal position as described in section "Adjusting belt housing position".
2. Remove belt table lock handle and remove table.
3. Use backstop to support your workpiece.
4. To sand curved surfaces, the end drum can be used to this operation.

BELT SANDING

1. **Sanding a flat surface**: Firmly hold the workpiece with both hands; keep your fingers away from the sanding belt.
   Using the backstop: The backstop is used to support and position your workpiece during a sanding operation. Place an end of your workpiece against the backstop, then apply it to the sanding belt. Be very careful when sanding thin workpieces on the sanding belt.
   Sanding long pieces: Do not apply too much pressure on a long workpiece. Apply only enough pressure so that the sanding belt removes the material.
2. **Sanding curved sides**: External curves must be sanded on the flat portion of the sanding belt. Internal curves must be sanded on the drum portion of the sanding belt.
3. **End sanding**: It is more pratical to end sand a long workpiece with the sanding belt in its vertical position.
4. The workpiece must be moved equally along the sanding belt.
5. Use the miter gauge for precise work.
6. To sand a perfectly straight edge, make sure the belt table is perfectly square with the sanding belt.

DISC SANDING

1. When sanding small flat surfaces or convex edges is needed, disc sanding is the best way to achieve good results.
2. Move the workpiece downwards on the right side of the sanding disc.
3. The sanding disc turns much faster and removes more of the external edge.
4. Use the miter gauge for precise work.

MAINTENANCE

REGULAR MAINTENANCE

1. Your work space and your sander should be clean after ever use.
2. Remove all accumulated dirt and dust on the sander.
3. The drums must be kept clean. Dirt on the drums will cause tracking problems and slippage of the sanding belt.
4. The dust chute must be used to avoid major accumulation of dust inside the sander.
5. The motor must be kept clean at all times, Use a vacuum to clean.
6. Regular soap can be used to clean rubber parts, guards and painted parts.

LUBRICATION

1. The ball bearings are permanently lubricated; they need no further lubrication.
2. Lightly apply paste wax on table surfaces if the workpiece does not slide easily.
3. Do not apply paste wax on the sanding belt plate. Wax may get onto the drums and cause the sanding belt to slip.

REQUIRED MAINTENANCE

1. The power cord must be replaced immediately if it is used, cut or damaged.
2. Sanding disc and belt must be replaced once used.
3. Replace all used or damaged parts before using the sander.
4. Do not attempt to repair the sander yourself, contact a qualified technician.

TROUBLESHOOTING

Problem	Probable cause	Solution
• Motor doesn't start.	• Voltage drop. • Motor short circuit or bad connection. • Thermal overload is tripped.	• Check power source. • Check all motor connections. • Press thermal overload button to reactivate.
• Motor doesn't start; fuse burnt, circuit breaker tripped.	• Plug or switch short circuit. • Motor short circuit or bad connection. • Imcompatible fuse or circuit breaker in the electric box. • Thermal overload is tripped.	• Check plug or switch for bad insolation or contact. • Check all motor connections or bad wire insolation. • Install proper fuse or circuit breaker. • Press thermal overload button to reactivate.
• Motor does not develop maximum power (Voltage decrease at motor terminal).	• The power source is overloaded with lamps, accessories or another motor. • Wiring too small or circuit line too long. • Electrical company overload. • Drive V-belt is tensioned incorrectly.	• Reduce charge on circuit. • Increase wire size or reduce length of circuit line. • Request voltage check by power supplier. • Reajust V-belt tension.
• Motor overheats.	• Motor overload. • Drive V-belt is overtensioned.	• Reduce charge on circuit. • Retension V-belt properly.
• Motor chokes (caused by burnt fuse or tripped circuit breaker).	• Short circuited motor or bad connec tion. • Voltage too low. • Imcompatible fuse or circuit breaker in the electric box. • Motor overloaded.	• Check all motor connections or bad wire insolation. • Rectify voltage. • Installez les fusibles et les disjoncteurs appropriés. • Reduce charge on circuit.
• Sander slows down during operation.	• Applying too much pressure on the workpiece.	• Apply less pressure.
• Sanding belt is positioned off the top drum.	• Belt tracking is incorrect.	• Refer to manual for proper belt tracking.