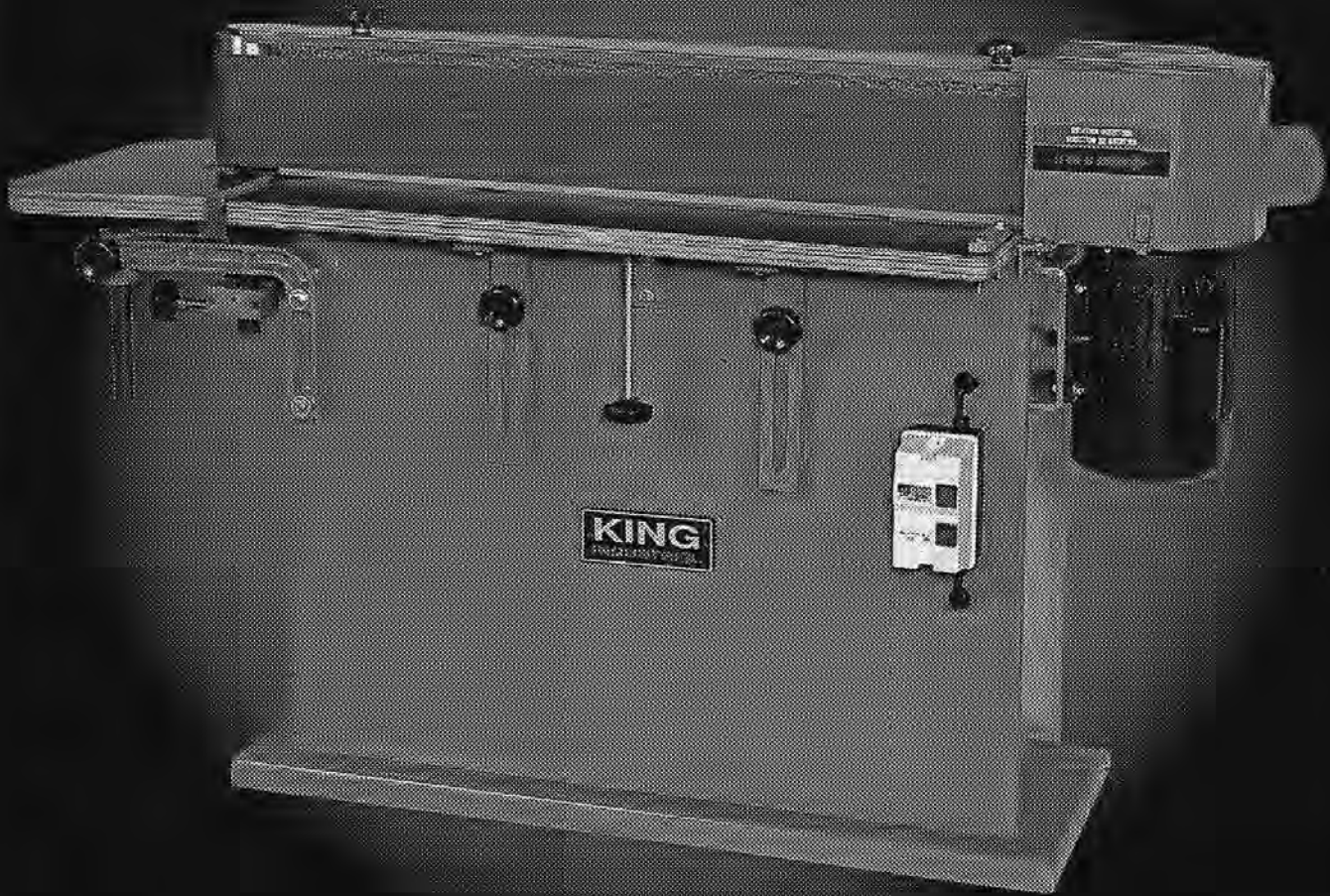




# EDGE SANDER



# INSTRUCTION MANUAL

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Help us help you....

Read this book carefully.

Thank-you and congratulations on your choice of the Edge Sander. We have prepared this Operator's Manual so that you may fully appreciate the qualities of your machine.

If you go through this Operator's Manual in detail, it will help you understand how your machine works; give you instructions on its required regular maintenance for a prolonged, problem-free machine life; and provide you with a guide to increasing your awareness of operational safety.

**Do not operate the edge sander until you have read this entire manual and understand its operation thoroughly!**

Keep it handy for answers to your questions.

It is imperative that operators understand normal safety procedures regarding this edge sander.

### **IMPORTANT - TO THINK ABOUT**

#### **KEEP HANDS AWAY FROM ABRASIVE BELT!**

If you received a damaged edge sander, immediately contact the dealer that sold you the edge sander.

Save time and money! Before you request service, check the "Trouble Shooting" on pages 10, 11 & 12. It lists causes of minor operating problems that you can correct yourself.

#### **SPECIFICATIONS:**

1. Abrasive Belt Size . . . . . 6" x 108"
2. Table Size . . . . . 37" x 7 3/4"  
. . . . . 19" x 12"
3. Platen Size . . . . . 6 7/8" x 39"
4. Motor . . . . . 2HP, 3Ph 4 P
5. Motor Contact Wheel . . . . . 7"O.D. x 6" Face
6. Dust Outlet . . . . . 4"
7. Machine Size (approx) 64 1/2" x 22 1/2" x 44"
8. Net Weight (approx) . . . . . 492 lbs.
9. Packing Dimensions (approx) 66" x 20" x 48"
10. Gross Weight (approx) . . . . . 684 lbs.

(Design and specifications subject to change without notice)

#### **PARTS DIAGRAM & PARTS LISTS**

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

# IMPORTANT SAFETY INSTRUCTIONS

Read all instructions before using this machine.

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## SAFETY RULES FOR ALL TOOLS

As with all power tools there is a certain amount of hazard involved. Use this machine with the respect and caution demanded as far as safety precautions are concerned. This will lessen considerably the possibility of personal injury. However, if normal safety precautions are overlooked or completely ignored, personal injury to the operator can develop.

There are also certain applications for which this tool was designed. We strongly recommend that this tool not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to its application do not use the tool until you have written us and we have advised you.

\*Know your power tool. Read the Owner's Manual carefully. Learn the tools applications and limitations as well as the specific potential hazards peculiar to it.

\*Keep guards in place and in working order.

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

\*Keep work area clean. Cluttered areas and benches invite accidents.

\*Avoid dangerous environment. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

\*Don't force tool. It will do the job better and be safer at the rate for which it was designed.

\*Use the right tool. Do not force the tool or an attachment to do a job it was not designed for.

\*Wear proper apparel. No loose clothing, such as gloves, neckties, or jewelry should be worn that could get caught in the machine's moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

\*Avoid accidental starting. Make sure switch is in "OFF" position before plugging in cord.

\*Use safety glasses. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

\*Don't overreach. Keep your proper footing and balance at all times.

\*Maintain tools in top condition. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

\*Disconnect tools before servicing and when changing accessories such as cutters, bits, arbors, adapters, collets, and abrasive belt.

\*Use recommended accessories. Consult the Owner's Manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.

\*Never stand on tool. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

\*Check for damaged parts. Before further use of the tool, any part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, mounting, and/or any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced immediately.

\*Direction of feed. Feed work into a cutter or bit against the direction of rotation of the cutter or bit only.

\*Never leave tool running unattended - turn power off. Don't leave the tool until it comes to a complete stop.

\*Drugs, Alcohol, Medication. Do not operate this or any other tool while under the influence of drugs, alcohol, or any medication.

# IMPORTANT SAFETY INSTRUCTIONS

Read all instructions before using this machine.

## Additional Safety Rules For The Edge Sander

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\*Before you turn on the machine, be sure everyone is clear of the machine. Keep hands away from the abrasive belt.

\*Never take off safety guards.

\*Make certain the abrasive belt is not torn or loose.

\*When you turn on the machine, please make sure whether the machine's rotation direction is correct or not? It should be the same as marked on the machine label. If not correct, please change the power connection.

\*When you change & install the abrasive belt, please make sure that the abrasive belt has the same rotational direction as the machine. (See label on the machine)

\*Make sure the abrasive belt is tracking correctly.

\*Support workpiece with work table.

\*When the front work table is going to be used at an incline, please make sure that the inclined direction is correct and the work table is firmly fixed on the machine, Fig. 1, shows the correct front work table inclination.



Fig. 1.

\*Wear eye protection.

\*Don't wear gloves, neckties, or loose clothing.

\*Keep hands away from the abrasive belt.

\*Before operating the machine, be sure the abrasive belt is in the right track. The simple way to test it is to turn on the machine, check whether the abrasive belt is on the right track, then turn it off immediately.

\*Sand with the grain of wood.

\*Hold the work firmly, so that it may not be driven from your hands.

\*Feed workpiece against rotation of abrasive belt.

\*When in operation, do not push the abrasive belt. Excessive pressure against the abrasive belt is never necessary. It will only result in the damage of the abrasive belt or the workpiece.

## SAVE THESE INSTRUCTIONS

### Unpacking And Cleanup

To ensure maximum performance from your edge sander, clean it properly, and install it accurately before use.

As soon as you receive the edge sander, we recommend you follow these procedures:

1. Inspect packing crate for damage in transit. Record damage, and report it immediately to shipper
2. Open crate and check that machine arrived in good condition. If not, let your industrial distributor know immediately.
3. Before lifting machine, remove all foot bolts locking it to its shipping base.
4. Transport machine to location with a hand truck or dolly.
5. Do not use solvents on plastic parts and electric cord; solvents dissolve or damage plastic and electric cord.

# Installation Requirements – IMPORTANT... Please Read Carefully.

## Machine Installation & Levelling Adjustment

For the most part your machine is assembled. For shipping purposes the work tables, dust chute, steel platen and several other pieces are packed unattached.

You must install this machine on firm level ground. Adjust your position using a level to ensure maximum performance.

Please follow the following instructions for installation of your machine.

First, place the machine in the spot you have chosen, and mark four holes on the floor, then, move the machine away and drill four holes for 5/16" lag bolts. Reposition the machine back on to the spot and install the lag bolts but do not tighten until you have completely levelled your sander.

Using shims and a level to measure the machine table top in the lateral and longitudinal direction. Adjust so as to properly level your machine in all directions. Tighten the lag bolts and recheck the levelness of the table top. Repeat the above procedure again if necessary.

## Grounding Information And Power Connections

**IMPORTANT** - To think about!

This machine has been factory wired; and before connecting from the starter to the power source, be sure that the voltage is of the same characteristics as tied on cord tag.

**Running on low voltage will injure the motor.**

The necessary wiring from the starter to the power source should be completed by a competent electrician.

**For personal safety, this machine must be properly grounded.**

The edge sander must be grounded while in use to protect the operator from electric shock.

If this edge sander is 3-phase type, there is a four conductor power source cable. If single-phase type, there is a three conductor power source cable. But whether 3-phase or single-phase their power source cable all have one ground conductor, the color is green or yellow with green.

**Never connect the green wire to a live terminal. NEVER!**

The edge sander must be connected to a grounded, metal-enclosed wiring system per your local electrical code.

When wiring is completed tape all power box joints to keep out dust.

All wiring must conform to the National Electrical Code, State Laws and O.S.H.A.

### ELECTRICAL CONTROLS

**CAUTION:** Please be sure that your hands are clear of the machine and abrasive belt before starting machine.

This edge sander is equipped with a push-button magnetic control system: the start and stop push-buttons are mounted on the top/front of the machine.

When starting the machine, please make sure the rotational direction is correct, if not, change power connection. If the machine is 3-phase change any two of the three power leads; if single-phase then you should check the motor connection. (refer to wiring diagram in connection box)

## ADJUSTING YOUR EDGE SANDER

If you are going to do any machine adjustment, please disconnect machine from the power source.

### Change Abrasive Belt

Changing the abrasive belt of your edge sander is very easy and fast. This machine uses a 6" x 108" abrasive belt, the grit of the abrasive belt depends on what kind of finish you are going to obtain. For more information, see page 11, "Use Of Correct Abrasive Belt".

The following procedures show you how to change the abrasive belt:

1. Disconnect the machine from the power source, this is most important!
2. Loosen the two push buttons (A) Fig. 2, on the dust chute, then you can open the dust-hood.
3. Take the abrasive belt safety guard (B) out by removing the two knob bolts (C), which are on the safety guard.

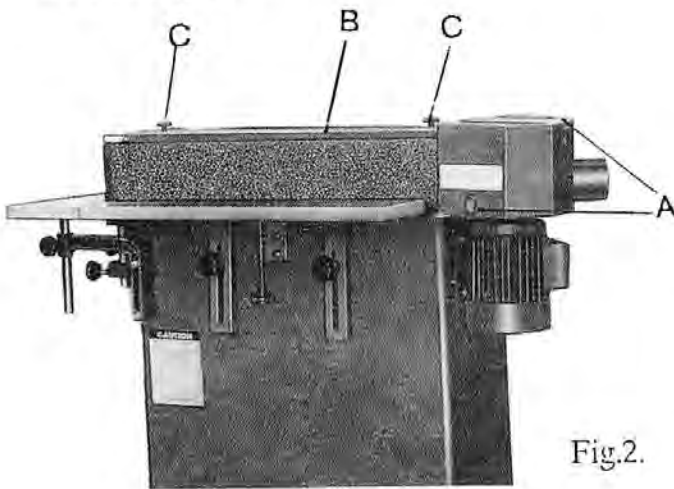


Fig.2.

4. Rotate the abrasive belt tension adjustment knob (D), Fig. 3, clockwise to release idler pulley device (E), then you can move out the old abrasive belt and put a new one on.

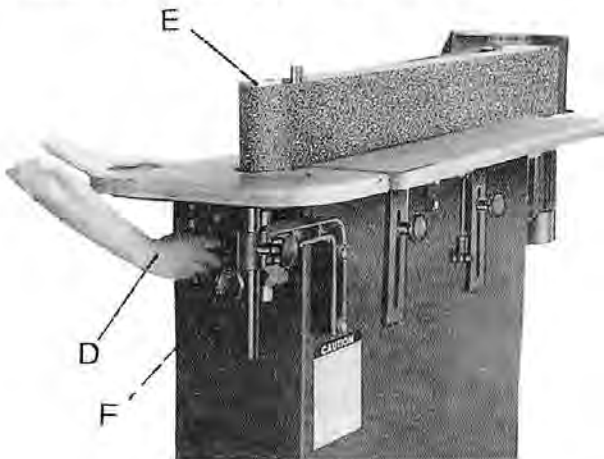


Fig.3.

**NOTE:** Identify the abrasive belt direction before you install the abrasive belt, because the abrasive belt rotational direction must be the same as the machine. The abrasive belt direction should follow the arrow direction which is marked on the reverse side of the abrasive belt.

If there is no arrow direction marked on the reverse side of the abrasive belt you are using, please find the joint (connection area) of the belt, this area is connected by layers. The top layer of the abrasive belt surface will determine its direction. (see Fig. 4) Using the wrong abrasive belt rotational direction may cause the abrasive belt to break.

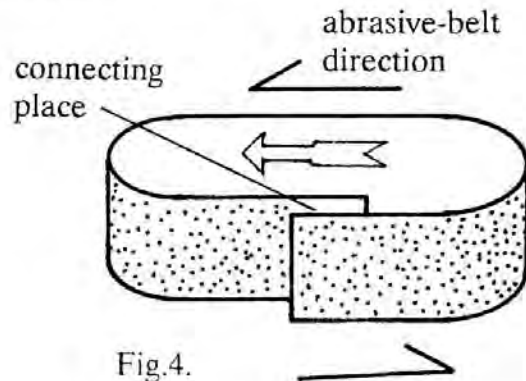


Fig.4.

5. Place the new abrasive belt between the contact wheel and idler pulley, then adjust the tension adjustment knob (D). Counterclockwise will maximize the tension, clockwise will minimize it.

6. Rotating the abrasive belt along the correct direction with one hand Fig. 5, you can test whether the abrasive belt tracking is correct or not on the machine, with your other hand correct the adjustment by using the track adjustment knob (F). If you want to lower the abrasive belt, rotate the track adjustment knob clockwise and vice versa. When suitable level is obtained, the abrasive belt will rotate steadily and have the same level.

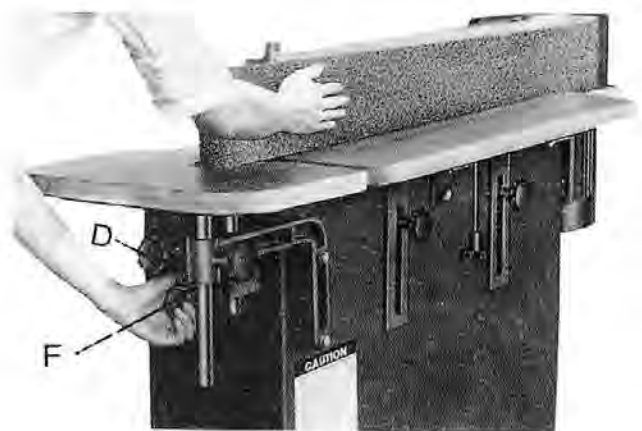


Fig.5.

7. After you finish the track testing, replace the safety guard (B) and close the dust-hood, tighten the knob.

8. Before hooking the machine to power and starting be sure the area is clear and your hands are away from the abrasive belt.

9. Turn the machine on and off quickly several times to check whether the abrasive belt rotation is normal and whether the rotation track is correct or not. If not, you need to adjust track adjustment knob (F) as noted above in Fig. 5.

### Abrasive-Belt Tracking Adjustment

The correct abrasive belt tracking during machine rotation is that the abrasive belt should keep the same steady level without moving too high or low. If this inconsistency occurs, please follow the following procedures to adjust:

1. Disconnect the machine from the power source, this is most important! Please don't forget.
2. To determine the tracking situation of the abrasive belt, rotate the belt in the correct direction by hand, see Fig. 5.
3. While rotating the belt with one hand turn adjustment knob (F) with the other hand to get the correct tracking level. If the abrasive belt is too high, rotate the adjustment knob (F) clockwise; if the abrasive belt is too low, then rotate the adjustment knob (F) counterclockwise.

NOTE: PLEASE REMEMBER THAT THE ABRASIVE BELT TRACK ADJUSTMENT EQUIPMENT IS VERY SENSITIVE, SO, ADJUST THIS GENTLY.

4. Making sure all workers are away from the machine and keeping all hands away from the abrasive belt, connect the power source to the machine. Turn the machine on and off quickly several times to check whether the abrasive belt rotation is normal or not.

### Abrasive-Belt Tension Spring Fatigue Compensation Adjustment

Adjustment of the abrasive belt will cause spring fatigue when used for a long period. If this happens, you don't need to change the spring, just rotate the tension adjustment screw (A) Fig. 6, clockwise until you achieve the proper tension spring fatigue compensation.

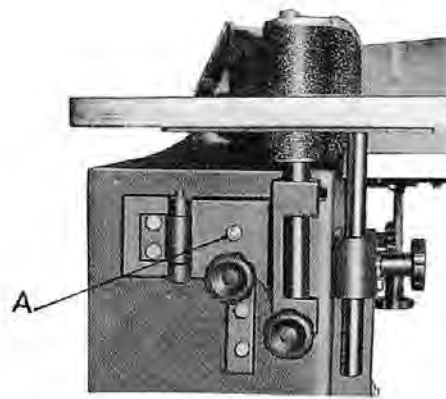


Fig.6.

### Front Work-Table Inclination Adjustment

Using the inclined table method on this edge sander you may obtain a better abrasive surface contact, decreased sanding marks, and burr residue with results equal to that of an expensive oscillating sanding machine.

The procedures for adjusting the front worktable is as follows:

1. Disconnect machine from the power source, this is most important!
2. Loosen the two fixed knobs (A), Fig. 7, raise the front worktable (B) by rotating the adjustment knob (C) and incline the degree you wish. Then tighten the two fixed knobs (A).

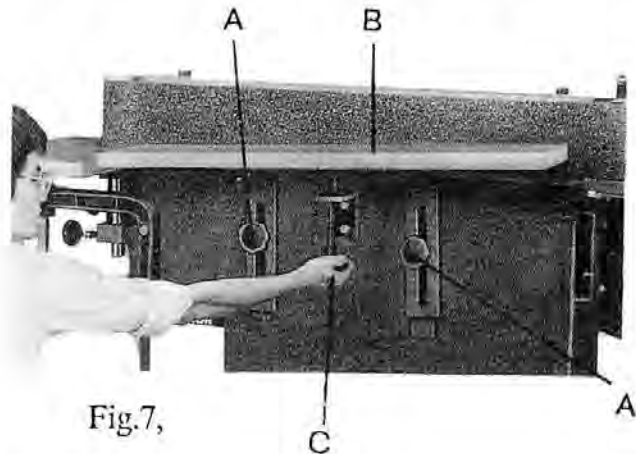


Fig.7,

### Steel Platen Adjustment

The steel platen is located between the motor contact wheel and the idler pulley. The surface of the steel platen should protrude about 1/8" - 1/4" past the motor contact wheel and the idler pulley in order to assure that the abrasive belt will be in contact totally with the steel platen.

The procedures to adjust this platen are very simple:

1. Disconnect the machine from the power source, this is most important!
2. Follow previous "Change Abrasive Belt" procedures to remove the abrasive belt.
3. Loosen the two fixed screws (A), Fig. 8, on the steel platen.

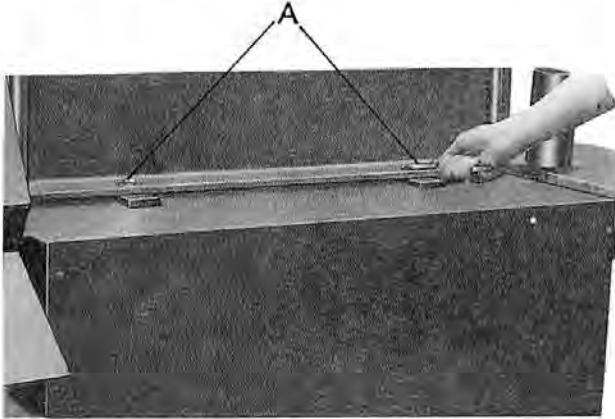


Fig.8.

4. Using a straight edge (B), Fig. 9, to measure the protruding distance between the surface of the steel platen and the two pulleys (i.e. motor contact wheel & idler pulley).
5. Tap, with hand, the steel platen, Fig. 9, until the protruding distance is 1/8" - 1/4". Remember that with the platen on both sides the distance from the motor contact wheel and the idler pulley should be the same.

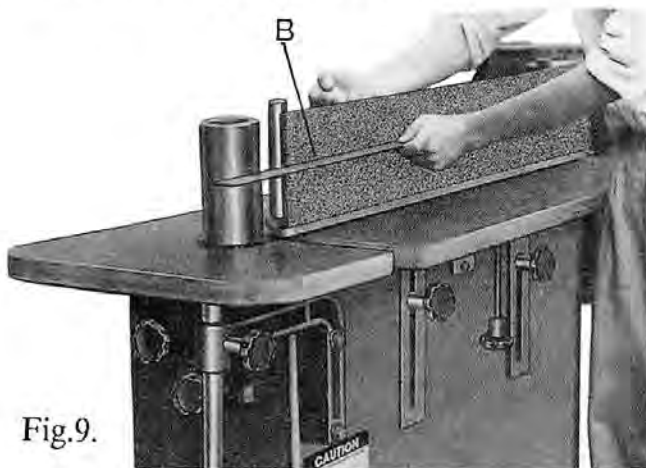


Fig.9.

6. Tighten the two fixed screws (A), Fig. 7, on the steel platen
7. Follow previous "Change Abrasive Belt" procedures to replace the abrasive belt, then the steel platen adjustment is complete.

#### Aligning Motor And Abrasive Belt

The motor and the abrasive belts on this machine were aligned before shipping. If you find them out of alignment due to shipping please adjust as follows:

1. Disconnect the machine from the power source, this is most important!
2. Adjust the front worktable to its lowest position.
3. Loosen the two fixed screws on the dust chute and take off the dust chute.
4. Remove the safety guard.
5. Rotate the belt by hand in order to check if the belt is completely parallel with the steel platen, top left to top right, this can be measured with a straight edge if necessary.
6. If the abrasive belt left to right is not parallel with the steel platen then the motor is not adjusted properly. To adjust follow the procedure detailed below. By loosening the motor mounting screws (E) Fig. 10 and adjusting with the two jack screws (D).

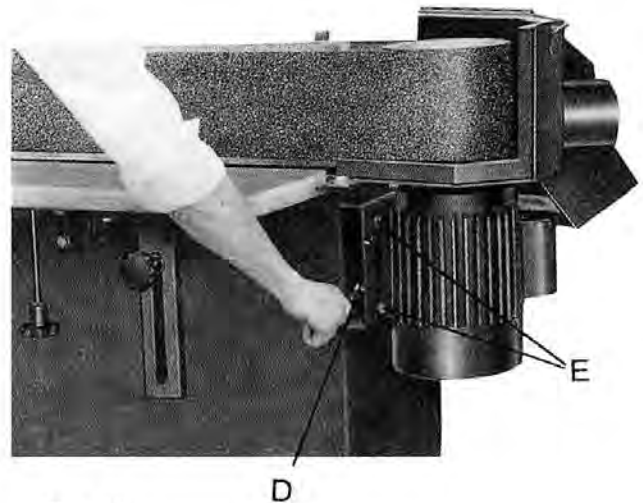


Fig.10,

7. If the right side of the abrasive belt (near motor) is too high, adjust motor inclination outward. If the left side of the abrasive belt (near idler pulley) is too high, adjust motor inclination inward, until the abrasive belt is parallel with the steel platen then tighten the four motor fixed screws (E).
8. Rotate the abrasive belt by hand again to make sure that the abrasive belt is completely parallel with the steel platen. Do the above adjustment again if necessary.
9. Replace the safety guard and dust-hood, adjust the abrasive belt tracking (follow previous "Abrasive Belt Tracking Adjustment") if necessary.



**LUBRICATION GUIDE OF YOUR EDGE SANDER**

Do not operate machine until properly lubricated.

All ball bearings are sealed type and require no further lubrication.

Apply a drop of light machine oil occasionally on the hinge of the tension mechanisms as shown in Fig. 11 (A). Service the machine every 6 weeks.

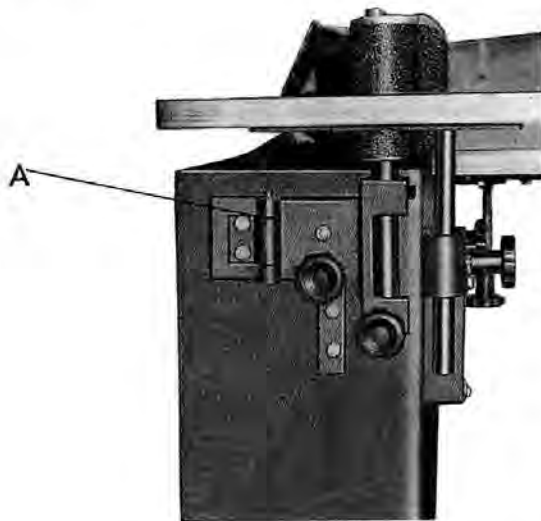
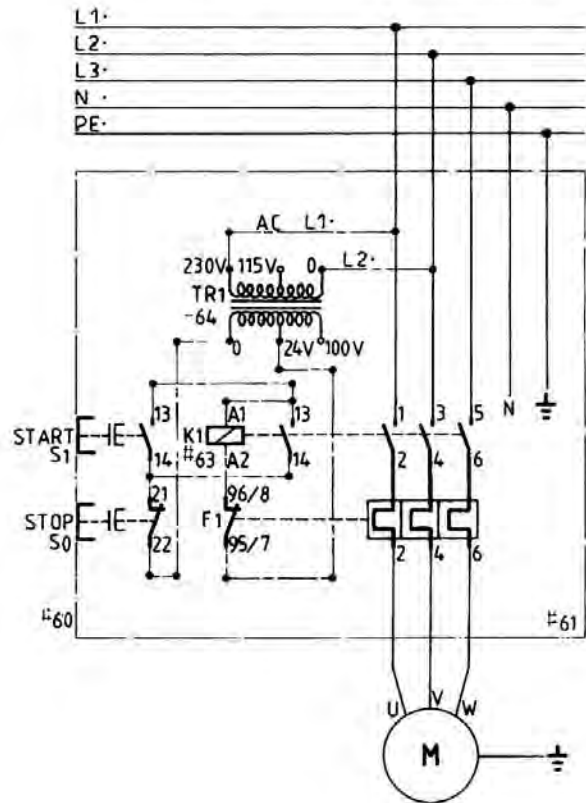


Fig.11,

**Connection Diagrams** Impulse Contact Control

1 Rotary Speed



**USE OF CORRECT ABRASIVE BELT**

**CHART "A"**

Use chart "A" for selecting an abrasive belt. Aluminum oxide is recommended for general use in the home workshop.

ABRASIVE	USE	COARSE	GRIT MEDIUM	FINE
Aluminum Oxide	Hardwood	30-40	60-80	100-120
	Aluminum	40	60-80	100
	Copper	40-50	80-100	100-120
	Steel	24-30	60-80	100
	Ivory	60-80	100-120	120-280
	Plastic	50-80	120-180	240

**CHART "B"**

Chart "B" groups abrasives into five classes, indicating the grit numbers that fall in each.

TYPE	VERY FINE	FINE	MEDIUM	COARSE	VERY COARSE
Aluminum Oxide	220-360	120-180	80-100	40-60	24-36

**Contact your local Dealer for all your sanding supplies. We have an outstanding line of Abrasive Belts for your convenience.**

Should any difficulty arise during operation, check the power cord and connection, then go through the following list.

QUESTIONS?

USE THIS TROUBLE SHOOTING GUIDE

This machine was designed for very simple sanding operations and with proper, lost cost maintenance it will give you years of quality service.

		SYMPTOM	POSSIBLE CAUSES AND CORRECTIONS
POWER		Sander will not start	Fuse blown or circuit breaker tripped. *Replace fuse or reset circuit breaker.  Cord Damaged. *Have cord replaced by an Authorized Repair Station or qualified electrician.
		Overload kicks out frequently.	<ul style="list-style-type: none"> <li>• Extension cord too light or too long.</li> <li>* Replace with adequate size cord.</li> <li>• Excessive bite or feed pressure too great.</li> <li>* Allow abrasive-belt to cut freely-do not force.</li> <li>• Motor not wired for correct voltage.</li> <li>* Refer to motor name plate for correct wiring.</li> </ul>
		Abrasive-belt does not come up to speed.	Extension cord too light or too long. *Replace with adequate size cord. Low (house) current. *Contact a qualified electrician. Motor not wired for correct voltage. *Refer to motor name plate for correct wiring. Excessive bite or feed pressure too great. *Allow abrasive belt to cut freely - do not force.
INSTALLATION	MECHANISM	Machine vibrates excessively	<ul style="list-style-type: none"> <li>• Stand or bench on uneven floor.</li> <li>* Reposition on flat level surface.</li> <li>Fasten to floor if necessary.</li> <li>Refer to page 5.</li> </ul>
			Improper motor mounting. *Check and adjust motor mounting. Abrasive belt not tensioned correctly. *Tensioning of the abrasive belt is accomplished through the use of the spring which gives you the right amount of pressure for long belt life. Adjust abrasive belt tension by turning knob No. 11 out, and make sure the knob is released so the full tension of the spring is working.

Trouble Shooting

SYMPTOM		POSSIBLE CAUSES AND CORRECTIONS
POWER	Machine vibrates excessively	<p>The spring, #28, for the tension mechanism is elastic fatigued or broken.                      *Replace with a new spring.</p> <p>The contact wheel, rubber covered #53, is too loose.                      *Tighten the cap screw #52 in the motor shaft.</p> <p>Abrasive belt broken.                      *Replace with a new abrasive belt.                      Bad abrasive belt.                      *Replace with a new abrasive belt.</p>
	Inadequate job on metal	<p>Wrong abrasive belt.                      *Use aluminum oxide or silicon carbide abrasive belt not flint or garnet. Refer to page 11.</p>
ABRASIVE-BELT	Sanding marks on work	<p>Abrasive belt too coarse for finish required.                      *Use very fine abrasive belt for final finish. Refer to page 11.</p> <p>Wrong abrasive belt grit.                      *Use coarser grit for stock removal.                      Work sanded across grain.                      *When surface sanding, use very fine abrasive belt then finish by hand, working in the direction of grain.</p>
	Abrasive grains quickly rub form belt	<p>Abrasive bond has lost its original properties.                      *Do not store abrasive belts where it is extremely dry or where temperatures are extremely high.                      Incorrect storage.                      *Be sure to store abrasive belt and do not fold abrasive belt.</p>
	Abrasive belt glazes	<ul style="list-style-type: none"> <li>* Sanding painted surface.</li> <li>* Use open-grain flint abrasive -- belt. Refer to page 11.</li> <li>* Wood is wet or gummy.</li> <li>* No cure.</li> </ul>
	Work burns	<p>Wrong abrasive belt grit.                      *Use coarser grit for stock removal.</p>
OPERATION		<p>Feed pressure too great.                      *Never force work into steel platen.                      Work held motionless.                      *Good idea to keep work moving.</p> <p>Abrasive belt burns, clogs quickly on thickness sanding</p>

trouble shooting (continued)

SYMPTOM		POSSIBLE CAUSES AND CORRECTIONS	
OPERATION	Sanding marks on work	<ul style="list-style-type: none"> <li>• Work held motionless.</li> <li>* Keep work moving</li> </ul>	
	END IDLER PULLEY/ CONTACT WHEEL SANDING	Abrasive-belt burns, clogs quickly on thickness sanding	<ul style="list-style-type: none"> <li>• Biting too deep</li> <li>* Adjust for slight abrasive action and make repeated passes.</li> </ul>
	Indentations in work	<ul style="list-style-type: none"> <li>• Work held motionless in one spot.</li> <li>* Keep work moving.</li> </ul>	
	Sanding end idler pulley distorts	<p>Excessive bite or feed pressure.</p> <p>*Allow abrasive belt to sand freely, do not force.</p>	
ADJUSTMENT	Work pulled from hand	<p>No support</p> <p>*Using a stop to support work. The home made stop is made of hardwood and may be attached the right of the front table.</p>	
	Abrasive-belt has broken at the joint	<p>The abrasive belt is running in the wrong direction.</p> <p>*Make sure the abrasive belt is running in the right direction.</p>	
	Sanded edge not square	<p>Result of freehand sanding.</p> <p>*Keep work piece flat on table top at all times when a square edge is desired.</p> <p>Table misaligned.</p> <p>*Check table alignment to steel platen. It should be at 90° If not, adjust accordingly.</p>	
ADJUSTMENT	Abrasive-belt has bevel	<p>Motor misalignment.</p> <p>*Check out motor and adjust motor alignment. Refer to page 5.</p>	
	Abrasive belt dropped while sanding	<p>Abrasive belt not tensioned correctly.</p> <p>*Adjust abrasive belt tension by turning knob #11 out or in for proper belt tension. The spring #28 for the tension mechanism is elastic fatigued or broken.</p> <p>*Replace with a new spring, #28.</p> <p>Abrasive belt not tracked correctly.</p> <p>*Adjust abrasive belt tracking. Refer to page 5.</p>	
	Sander sanding unsatisfactorily	<p>Incorrect positioning of the steel platen.</p> <p>*Adjust the steel platen 1/8" - 1/4" above the contact wheel and idler pulley.</p>	