

Sears

*owners
manual*

**MODEL NO.
113.22521**

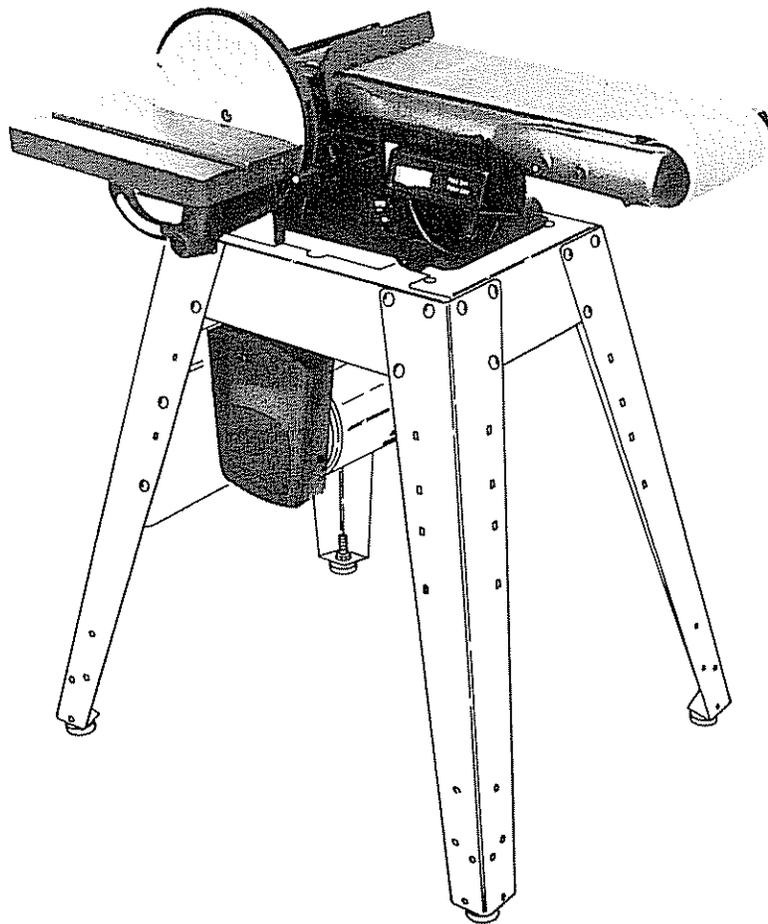
Serial
Number _____

Model and serial
number may be found
at the right-hand side
of the base.

You should record both
model and serial number
in a safe place for
future use.

CAUTION:

Read **GENERAL** and
**ADDITIONAL SAFETY
INSTRUCTIONS**
carefully



Sears

CRAFTSMAN®

BELT AND DISC SANDER

- *assembly*
- *operating*
- *repair parts*

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.

FULL ONE YEAR WARRANTY ON CRAFTSMAN BELT AND DISC SANDER

If within one year from the date of purchase, this Craftsman Belt and Disc Sander fails due to a defect in material or workmanship, Sears will repair it, free of charge.

Warranty service is available by simply contacting the nearest Sears store or Service Center throughout the United States.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state

SEARS, ROEBUCK AND CO.
BSC 41-3
SEARS TOWER
CHICAGO, IL 60684

general safety instructions for power tools

- 1. KNOW YOUR POWER TOOL**
Read the owner's manual carefully. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.
- 2. GROUND ALL TOOLS**
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**
— in working order, and in proper adjustment and alignment.
- 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. Floor must not be slippery due to wax or sawdust.
- 6. AVOID DANGEROUS ENVIRONMENT**
Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lighted. Provide adequate surrounding work space.
- 7. KEEP CHILDREN AWAY**
All visitors should be kept a safe distance from work area.
- 8. MAKE WORKSHOP KID-PROOF**
— with padlocks, master switches, or by removing starter keys.
- 9. DON'T FORCE TOOL**
It will do the job better and safer at the rate for which it was designed.
- 10. USE RIGHT TOOL**
Don't force tool or attachment to do a job it was not designed for.
- 11. WEAR PROPER APPAREL**
Do not wear loose clothing, gloves, neckties or jewelry (rings, wristwatches) to get caught in moving parts. NONSLIP footwear is recommended. Wear protective hair covering to contain long hair. Roll long sleeves above the elbow.
- 12. USE SAFETY GOGGLES (Head Protection)**
Wear safety goggles (must comply with ANS Z87.1) at all times. Also, use face or dust mask if cutting operation is dusty, and ear protectors (plugs or muffs) during extended periods of operation.
- 13. SECURE WORK**
Use clamps or a vise to hold work when practical. It's safer than using your hand, frees both hands to operate tool.
- 14. DON'T OVERREACH**
Keep proper footing and balance at all times.
- 15. MAINTAIN TOOLS WITH CARE**
Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 16. DISCONNECT TOOLS**
before servicing; when changing accessories such as blades, bits, cutters, etc.
- 17. AVOID ACCIDENTAL STARTING**
Make sure switch is in "OFF" position before plugging in.
- 18. USE RECOMMENDED ACCESSORIES**
Consult the owner's manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.
- 19. NEVER STAND ON TOOL**
Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
Do not store materials above or near the tool such that it is necessary to stand on the tool to reach them.
- 20. CHECK DAMAGED PARTS**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 21. DIRECTION OF FEED**
Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
- 22. NEVER LEAVE TOOL RUNNING UNATTENDED**
Turn power off. Don't leave tool until it comes to a complete stop.

additional safety instructions for belt and disc sander

Safety is a combination of operator common sense and alertness at all times when the finishing machine is being used.

WARNING: FOR YOUR OWN SAFETY, DO NOT ATTEMPT TO OPERATE YOUR FINISHING MACHINE UNTIL IT IS COMPLETELY ASSEMBLED AND INSTALLED ACCORDING TO THE INSTRUCTIONS . . . AND UNTIL YOU HAVE READ AND UNDERSTOOD THE FOLLOWING.

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5. Stability Of Machine	

If there is any tendency for the machine to tip over or move during certain operations such as when finishing long heavy boards, the sander should be bolted down.

6. Location

The machine should be positioned so neither the operator nor a casual observer is forced to stand in line with the abrasive belt or disc. This machine is intended for indoor use only.

7. Kickback

When finishing on the Disc, always apply the workpiece to the "Down Side" of the disc. Applying the workpiece to the "Up Side" could cause it to fly up (kickback) which could be hazardous.

8. Protection: Eyes, Hands, Face, Ears, Body

- a. Wear safety goggles that comply with ANSZ87.1-1968, and a face shield if operation is dusty. Wear ear plugs or muffs during extended periods of operation.
- b. Do not finish pieces of material too small to hold by hand.
- c. Avoid awkward hand positions, where a sudden slip could cause a hand to move into the abrasive disc or belt.
- d. Never climb on the machine.
- e. Never turn your Sander "ON" before clearing the table(s) or work surface(s) of all objects (tools, scraps of wood, etc.) except for the workpiece and related feed or support devices for the operation planned.

- f. Make sure the abrasive belt runs in the right direction. Always have the tracking adjusted correctly so that the belt does not run off the pulleys.
- g. Hold the work firmly when finishing on the abrasive belt and against the worktable when finishing on the disc.
- h. Always adjust the worktable to within 1/16 in of the abrasive disc or belt.
- i. When finishing a large piece of material, make sure it is supported at table height.
- j. Never leave the machine work area with the power on, before the machine has come to a complete stop, or without removing and storing the switch key.
- k. Never operate the machine with protective cover on the unused shaft end of the motor removed.

9. If any part of this belt disc sander should break, bend, or fail in any way or any electrical component fail to perform properly, or if any is missing, shut off power switch, remove power supply cord from power supply and replace damaged missing and/or failed parts before resuming operation.

10. Read and follow the instructions appearing on label on the rear of the Disc Dust Trap (Disc Housing):

DANGER

FOR YOUR OWN SAFETY:

- 1. READ AND UNDERSTAND OWNERS MANUAL BEFORE OPERATING MACHINE.
- 2. WEAR SAFETY GOGGLES AND DUST MASK.
- 3. KNOW HOW TO AVOID "KICKBACKS" ON SANDING DISC.
- 4. ALWAYS SUPPORT WORKPIECE WITH "BACK STOP" OR "WORKTABLE".

11. Think Safety.

CAUTION: This machine is not designed for heavy deburring operations. When finishing ferrous metals, sparks will be generated and could cause a fire. Disconnect any type of dust collecting hose from the machine. Also remove all traces of wood dust that may have accumulated inside the dust traps in the machine.

additional safety instructions for belt and disc sander

WARNING: THE 2-1/2" MACHINE PULLEY AND THE 2" MOTOR PULLEY FURNISHED, WILL RUN THE DISC AT APPROXIMATELY 2700 RPM AND THE BELT AT APPROXIMATELY 2100 (FEET PER MINUTE) WHEN USED WITH A 3450 RPM MOTOR. NEVER SUBSTITUTE OR INTERCHANGE THESE PULLEYS TO INCREASE THIS SPEED BECAUSE IT COULD BE DANGEROUS.

WARNING: DO NOT ALLOW FAMILIARITY (GAINED FROM FREQUENT USE OF YOUR MACHINE) TO BECOME COMMONPLACE. ALWAYS REMEMBER THAT A CARELESS FRACTION OF A SECOND IS SUFFICIENT TO INFLICT SEVERE INJURY.



The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with ANSI Z87.1 (shown on Package) before commencing power tool operation. Safety Goggles are available at Sears retail or catalog stores.

motor specifications and electrical requirements

This machine is designed to use a 3450 RPM motor only. Do not use any motor that runs faster than 3450 RPM. It is wired for operation on 110-120 volts, 60 Hz., alternating current. IT MUST NOT BE CONVERTED TO OPERATE ON 230 VOLTS. EVEN THOUGH SOME OF THE RECOMMENDED MOTORS ARE DUAL VOLTAGE.

THESE CRAFTSMAN MOTORS HAVE BEEN FOUND TO BE ACCEPTABLE FOR USE ON THIS TOOL.

HP	RPM	VOLTS	CATALOG NO.
1/2	3450	110-120	1216
1/2	3450	110-120	1218
3/4	3450	110-120	1219
3/4	3450	110-120	1226

CAUTION: Do not use blower or washing machine motors or any motor with an automatic reset overload protector as their use may be hazardous.

CONNECTING TO POWER SOURCE OUTLET

This machine must be grounded while in use to protect the operator from electric shock.

Plug power cord into a 110-120V properly grounded type outlet protected by a 15-amp. time delay or Circuit-Saver fuse or circuit breaker.

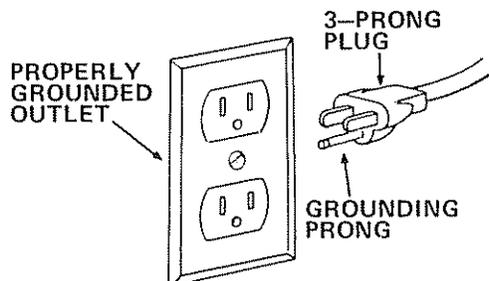
If you are not sure that your outlet is properly grounded, have it checked by a qualified electrician.

WARNING: DO NOT PERMIT FINGERS TO TOUCH THE TERMINALS OF PLUGS WHEN INSTALLING OR REMOVING THE PLUG TO OR FROM THE OUTLET.

WARNING: IF NOT PROPERLY GROUNDED THIS POWER TOOL CAN INCUR THE POTENTIAL HAZARD OF ELECTRICAL SHOCK. PARTICULARLY WHEN USED IN DAMP LOCATIONS IN PROXIMITY TO PLUMBING. IF AN ELECTRICAL SHOCK OCCURS THERE IS THE POTENTIAL OF A SECONDARY HAZARD SUCH AS YOUR HANDS CONTACTING THE ABRASIVE BELT OR DISC.

If power cord is worn or cut, or damaged in any way, have it replaced immediately.

If your unit is for use on less than 150 volts it has a plug that looks like below.



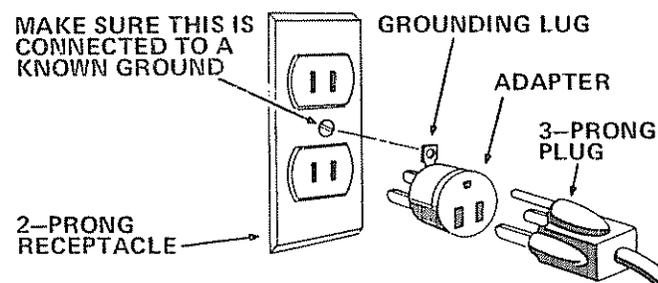
This power tool is equipped with a 3-conductor cord and grounding type plug which has a grounding prong, approved by Underwriters' Laboratories and the Canadian Standards Association. The ground conductor has a green jacket and is attached to the tool housing at one end and to the ground prong in the attachment plug at the other end.

This plug requires a mating 3-conductor grounded type outlet as shown.

If the outlet you are planning to use for this power tool is of the two prong type DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER. Use an adapter as shown and always connect the grounding lug to known ground.

It is recommended that you have a qualified electrician replace the TWO prong outlet with a properly grounded THREE prong outlet.

An adapter as shown below is available for connecting plugs to 2-prong receptacles. The green grounding lug extending from the adapter must be connected to a permanent ground such as to a properly grounded outlet box.



NOTE: The adapter illustrated is for use only if you already have a properly grounded 2-prong receptacle. Adapter is not allowed in Canada by the Canadian Electrical Code.

The use of any extension cord will cause some loss of power. To keep this to a minimum and to prevent overheating and motor burn-out, use the table below to determine the minimum wire size (A.W.G.) extension cord. Use only 3 wire extension cords which have 3-prong grounding type plugs and 3-pole receptacles which accept the tools plug.

Extension Cord Length	Wire Size A.W.G.
Up to 100 Ft.	16
100 - 200 Ft.	14
200 - 400 Ft.	10

CHECK MOTOR ROTATION

WARNING: FOR YOUR OWN SAFETY, MAKE SURE PLUG IS NOT CONNECTED TO POWER SOURCE OUTLET. WHEN CHANGING MOTOR ROTATION.

The motor must rotate COUNTERCLOCKWISE when viewed from the shaft end to which you will mount the pulley. (See page 11) If it does not, change the direction according to the instructions furnished with the motor.

unpacking and checking contents

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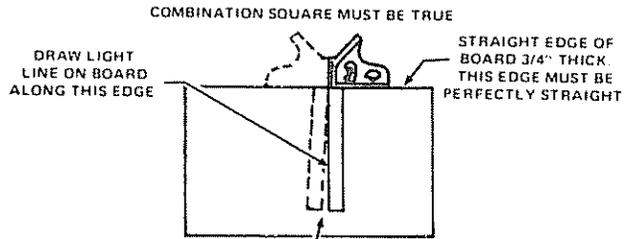
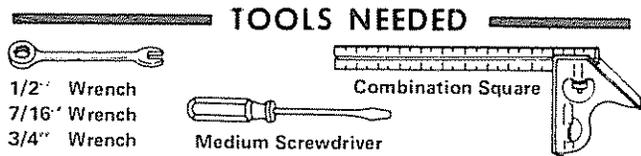
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Your Belt and Disc Sander is shipped complete in one carton (without motor or floor base).

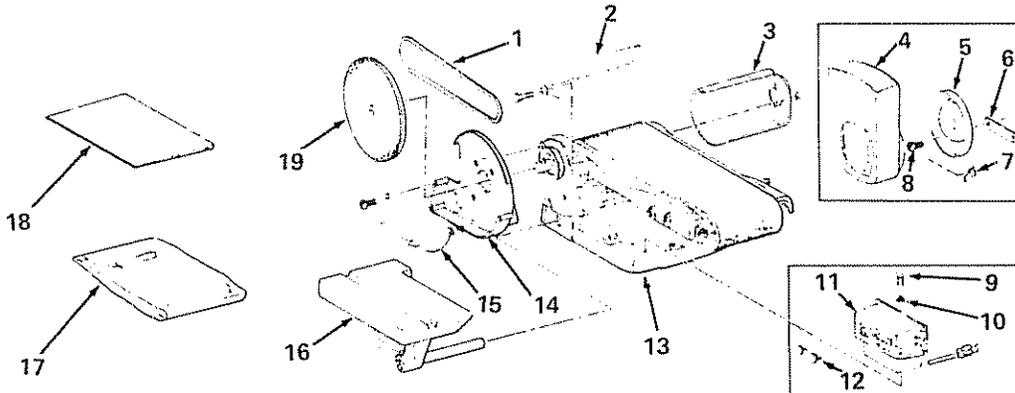
Separate all parts from packing materials and check each item with illustration and "Table of Loose Parts." Make certain all items are accounted for, before discarding any packing material.

If any parts are missing, do not attempt to assemble the Belt and Disc Sander, plug in the power cord, or turn the switch on until the missing parts are obtained and installed correctly.

Using a 1/2" wrench, remove the plywood attached to the machine. Save the nuts and bolts and washers. You will need them for attaching the machine to the base.



SHOULD BE NO GAP OR OVERLAP HERE WHEN SQUARE IS FLIPPED OVER IN DOTTED POSITION



Key No.	Table of Loose Parts	Qty.
1	V-Belt, 1/2 x 41"	1
2	Backstop	1
3	Belt, Dust Trap	1
4	Motor Pulley Belt Guard	1
5	Belt Guard Support	1
6	Belt Guard Support Bracket	1
7	"S" Clip	3
8	Pan Head Screw, Type 23, 10-32 x 1/2	3
9	Screw, Pan Head Machine 1/4-20 x 1/2	2
10	Lockwasher, 1/4"	2
11	Switch Assembly	1
12	Switch Keys	2
13	Base and Belt, Table (w/Sanding Belt)	1
14	Disc Dust Trap	1
15	Dust Trap Cover	1
16	Work Table	1

Key No.	Table of Loose Parts	Qty.
17	Bag (containing the following loose parts)	
	Motor Pulley, 2 In. Dia	1
	Wrench, 1/2"	2
	5/32 Setscrew Wrench	1
	Flat Head Machine Screw 10-32 x 1-3/4	4
	Pan Head Screw, Type 23 8-32 x 3/8	5
	Flat Washer, 21/64 x 7/8 x 1/8	1
	Hex. Head Machine Screw 5/16-18 x 1	1
	Screw, M Pan Hd, 10-32 x 9/16	1
	Lockwasher No. 10 Int. Tooth	1
	Hanger, Cable	1
18	Owner's Manual	1
19	Sanding Disc (w/Set Screw)	1

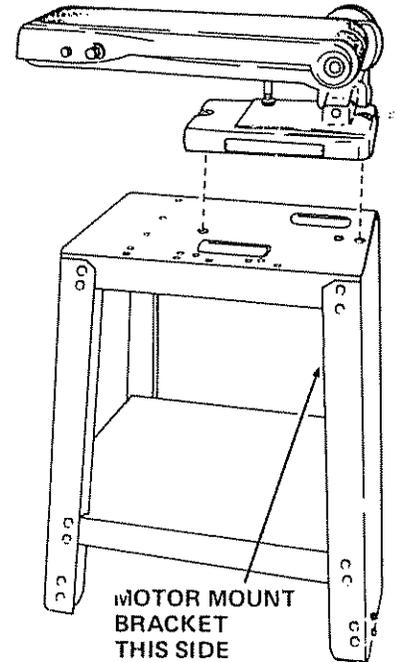
assembly

MOUNTING BELT AND DISC SANDER ON RECOMMENDED CRAFTSMAN FLOOR BASE

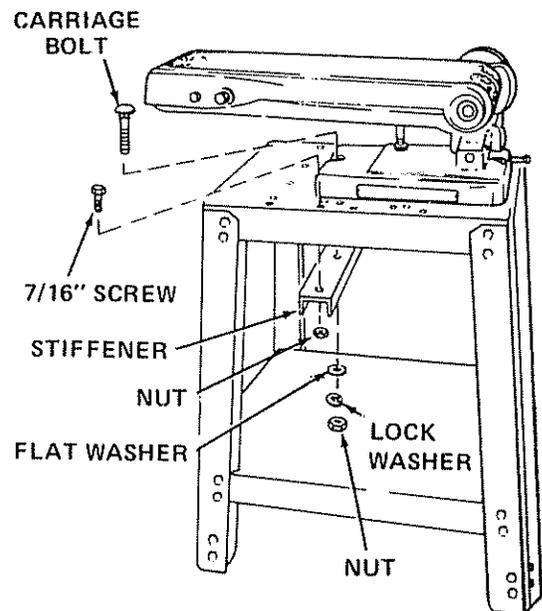
NOT SUPPLIED IN CANADA

If you purchase steel legs 9-22236 follow instructions furnished with steel legs.

- 1 Place the machine on the base, position as shown, and align mounting holes.



2. Insert the bolts and position the stiffener.
3. Insert two 7/16" long screws furnished with base through top of base and stiffener, screw on nuts and tighten.
4. Place a flat washer, a lock washer and a nut on each of the 2-1/2" bolts from underneath, and tighten.



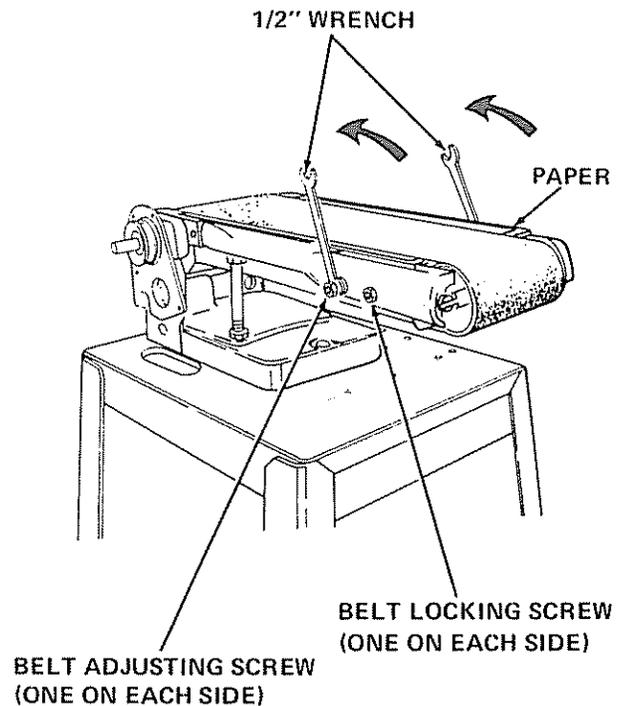
assembly

NOTE: The abrasive belt is installed on the machine at the factory so that it does not become damaged during shipment

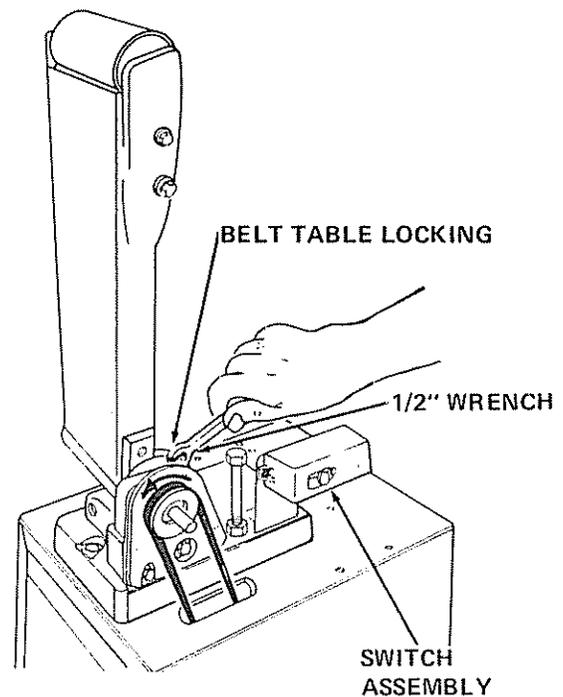
1. Loosen both belt **LOCKING** screws, using the 1/2" wrench furnished with the machine
2. Turn both of the belt **ADJUSTING** screws as shown until they stop. Retighten the two belt **LOCKING** screws so that the idler pulley does not come out.
3. Slip the belt off and remove the piece of paper
4. Remove the protective coating, that is applied at the factory, from the belt table. Use any ordinary household type grease and spot remover.

CAUTION: Never use gasoline, naphtha, or similar highly volatile solvents.

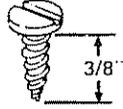
NOTE: Do not apply wax to the belt table.



1. Loosen the belt table locking bolts behind the mounting bracket using one of the 1/2" wrenches supplied with your machine.
2. Position belt table vertically and tighten only one of the bolts.
3. Place the V-Belt over the pulley
4. Attach the switch assembly to the base using the two screws and washers packed with the switch.
5. Loosen the bolt that you tightened in step 2. Position the belt table horizontally, and tighten both bolts.

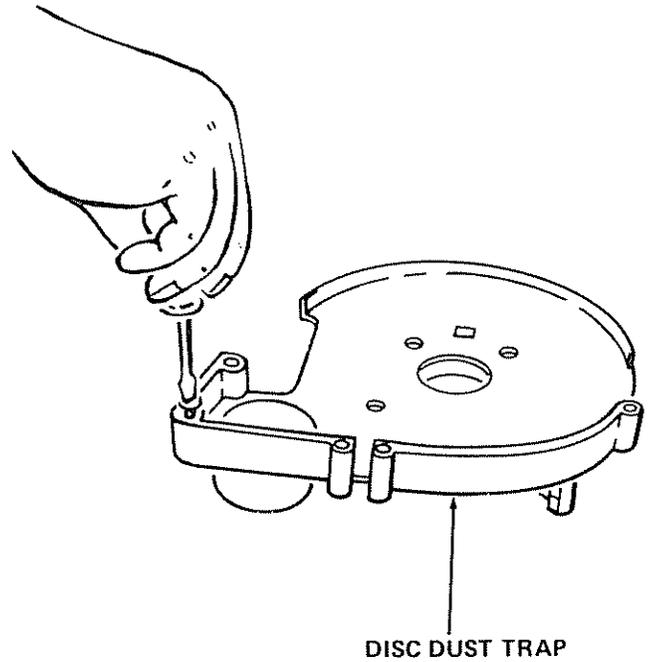


6. Find five 3/8" Pan Head Self-Treading screws from among the loose parts.

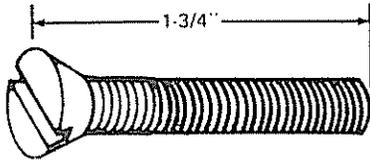


7. Place Disc Dust Trap on your workbench and screw in five Pan Head "Thread Cutting Screws," 3/8" long. Screw them in all the way.

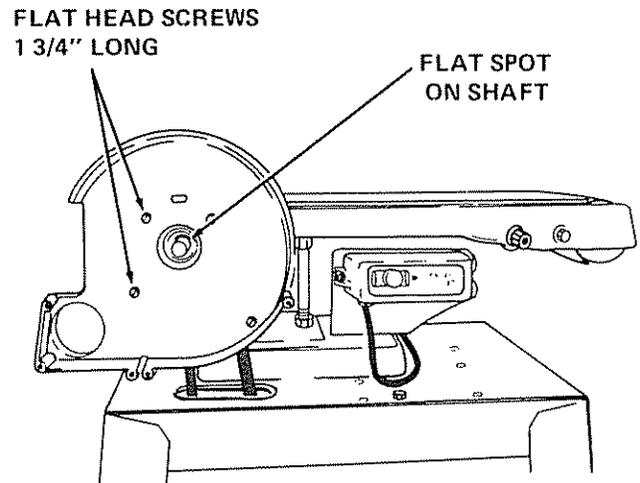
NOTE: The holes in the Trap are not threaded but the screws are "Thread Cutting Screws" and will cut a thread as they are tightened.



8. Find four Flat Head Machine Screws 1-3/4" long from among the loose parts



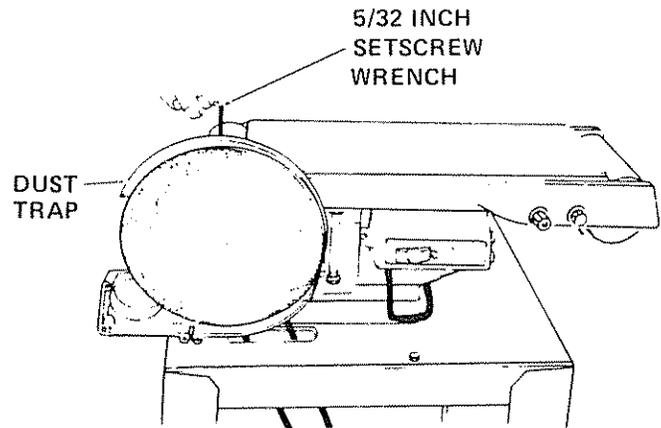
9. Attach the Disc Dust Trap with four flat head screws 1-3/4" long.
10. There is a flat spot on the shaft near the end. Rotate the shaft so that the flat spot is facing up.



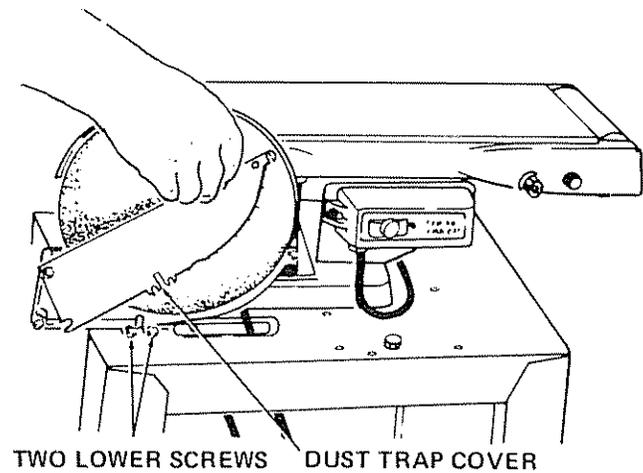
assembly

9. Place the disc on the shaft so that the set screw is facing up. Position the disc so that it is approx. 1/16 inch outward from the edge of the dust trap
10. Insert the long end of the 5/32" setscrew wrench through the hole in the disc housing and into the setscrew in the disc. Make sure setscrew is aligned with "Flat" on shaft.

NOTE: After several hours of operation, check for looseness of setscrew and retighten.

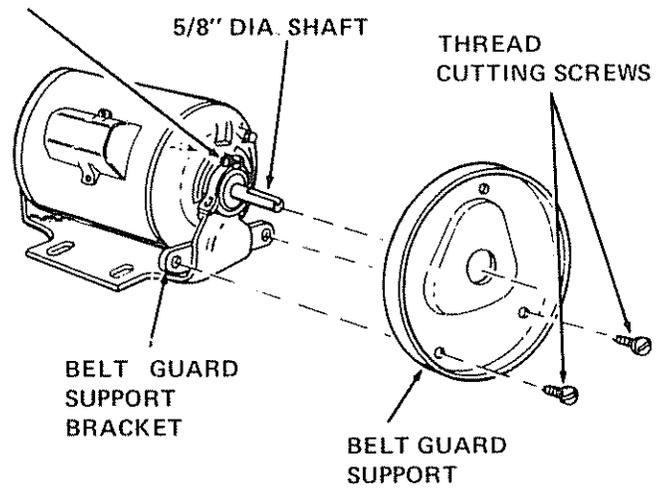


11. Remove the two lower screws which you installed in step 6 and loosen the other three screws
12. Install the Dust Trap cover and replace the two screws. Tighten all five screws.



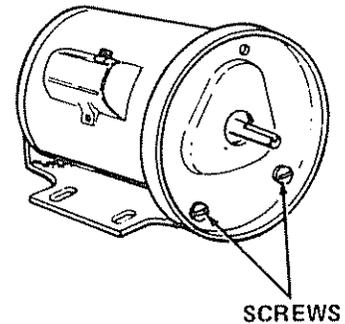
**MOTOR BASE CLAMP
SCREWS**

1. Place the motor on your workbench with the 5/8 Dia. shaft (with key way) facing you.
2. Loosen the two motor base clamp screws and rotate the motor so that the ventilation holes are facing to the side . . . tighten the screws.



3. Attach guard support to the bracket with the two screws furnished with the belt guard.

NOTE: The holes in the bracket are not threaded, but the screws are "thread cutting screws" and will cut a thread as they are tightened.



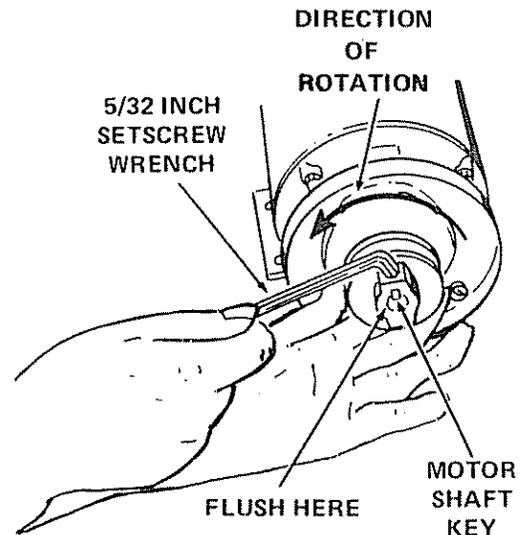
4. Loosen setscrew in motor pulley and place the pulley on the shaft with the hub flush with the end of the shaft, insert the motor shaft key and tighten setscrew with 5/32" setscrew wrench.

CHECK MOTOR ROTATION

The motor must rotate **COUNTERCLOCKWISE** when viewed from the **PULLEY** end.

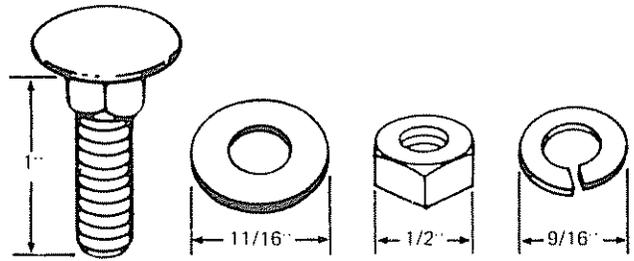
1. Place the motor on your workbench or on the floor.
2. Stand clear of the motor and plug the cord into a properly grounded outlet (See page 5). Notice the rotation of the pulley. If it is not turning **COUNTERCLOCKWISE**, **REMOVE** the plug from the outlet, and change the rotation of the motor according to the instructions furnished with the motor.

WARNING: FOR YOUR OWN SAFETY, MAKE SURE PLUG IS NOT CONNECTED TO POWER SOURCE OUTLET.

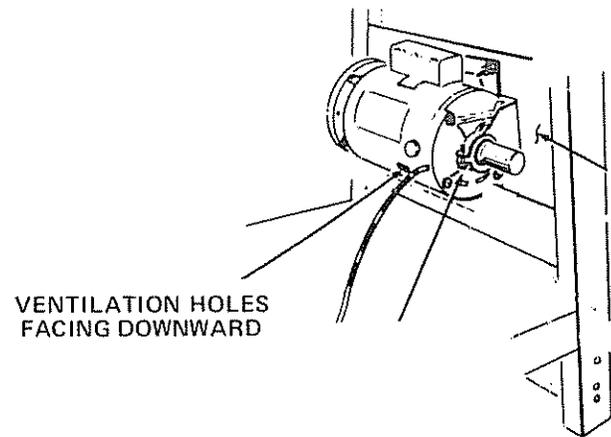
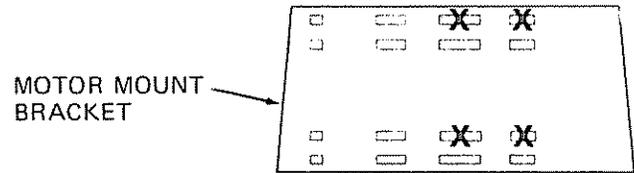


assembly

1. Find four $5/16''$ - 18 x 1'' carriage bolts, flat washers, lock washers and nuts supplied with base.

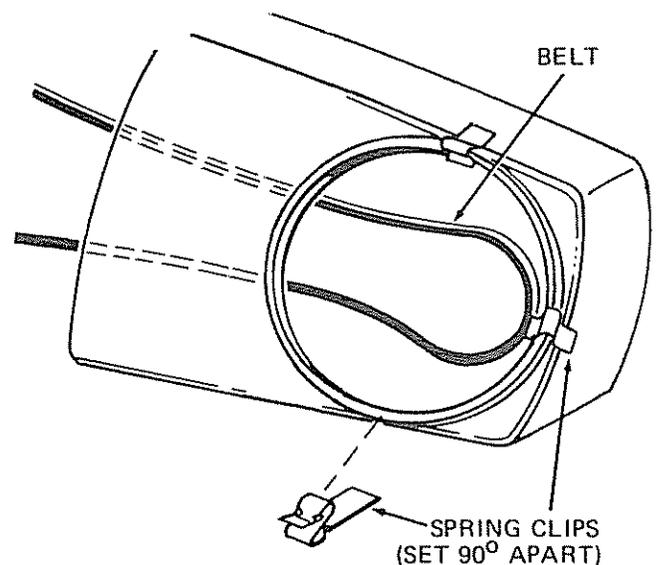


2. Insert bolts through holes marked "X" from behind motor mount bracket.
3. Attach motor . . . place a flat washer and a lock washer on each bolt . . . screw on nuts but **DON'T TIGHTEN** them.



4. Install three clips on the belt guard 90° apart with the long tabs pointing **AWAY** from the round opening.
5. Insert the belt into the open end of the guard and out the round opening.

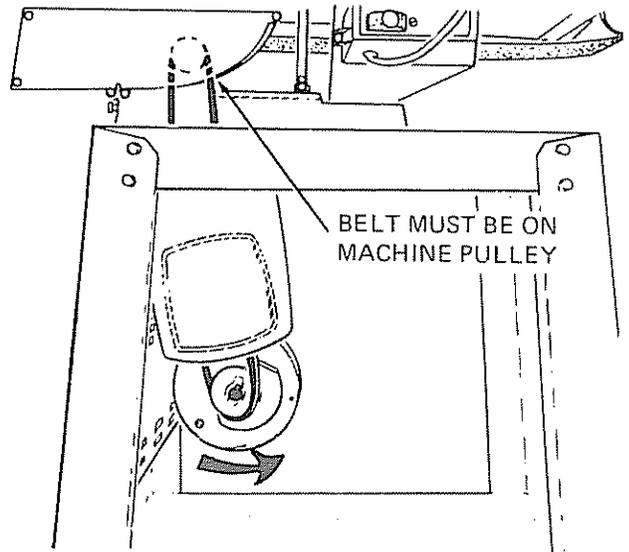
MAKE SURE BELT HAS NOT SLIPPED OFF OF MACHINE PULLEY.



6. Place the belt onto the motor pulley by rotating the pulley.
7. Snap the belt guard into position.
8. Move the motor sideways so that the belt is in the center of the opening in the top of the base.
9. PUSH downward on motor to apply tension to belt and tighten motor bolt nuts.

NOTE: It is only necessary to tension the belt so that it does not slip while running.

10. If you cannot obtain sufficient tension with the motor pushed all the way down, remove the four motor bolts and insert them in the LOWER set of holes.



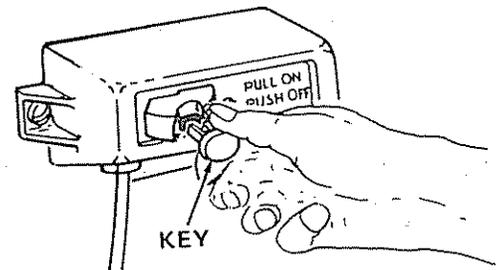
ON-OFF SWITCH

WARNING: DON'T CONNECT POWER CORD TO ELECTRICAL OUTLET IN YOUR SHOP UNTIL YOU ARE READY TO CHECK MOTOR ROTATION.

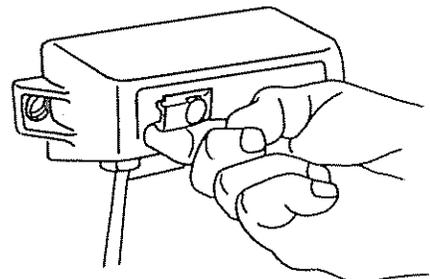
The On-Off Switch has a locking feature. THIS FEATURE IS INTENDED TO PREVENT UNAUTHORIZED AND POSSIBLE HAZARDOUS USE BY CHILDREN AND OTHERS.

1. Insert key into switch.

NOTE: Key is made of yellow plastic



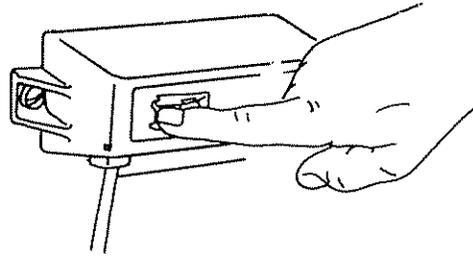
2. To turn machine on, insert finger under switch lever and pull end of switch out.



assembly

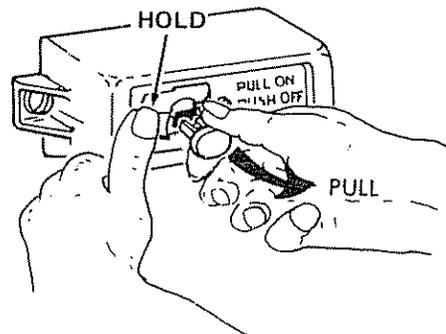
3. To turn machine OFF ... PUSH lever in.

Never leave the machine unattended until it has come to a complete stop.



-
4. To lock switch in OFF position ... hold switch IN with one hand ... REMOVE key with other hand.

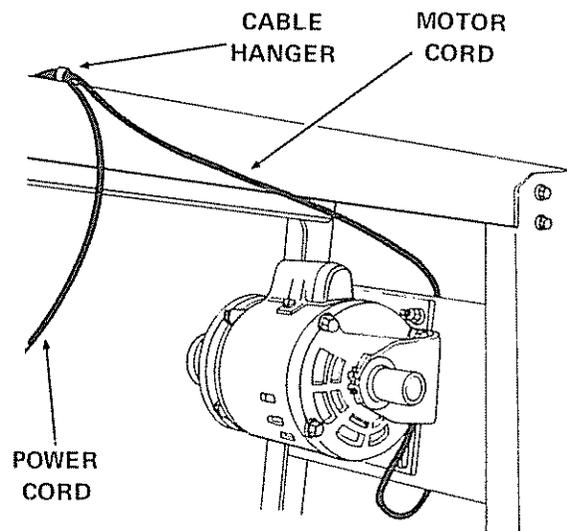
WARNING: FOR YOUR OWN SAFETY, ALWAYS LOCK THE SWITCH "OFF" WHEN MACHINE IS NOT IN USE ... REMOVE KEY AND KEEP IT IN A SAFE PLACE ... ALSO ... IN THE EVENT OF A POWER FAILURE (ALL OF YOUR LIGHTS GO OUT) TURN SWITCH OFF ... LOCK IT AND REMOVE THE KEY. THIS WILL PREVENT THE MACHINE FROM STARTING UP AGAIN WHEN THE POWER COMES BACK ON.



-
5. Find plastic cable hanger from among the loose parts.



- 6 Route the motor cord behind the motor mount, across the top of the base and plug it into the receptacle in the bottom of the switch box.
- 7 Bring the power cord alongside the motor cord . . . wrap the plastic cable hanger around the cords and attach the hanger to the top of the base.



INSTALLING WORK TABLE

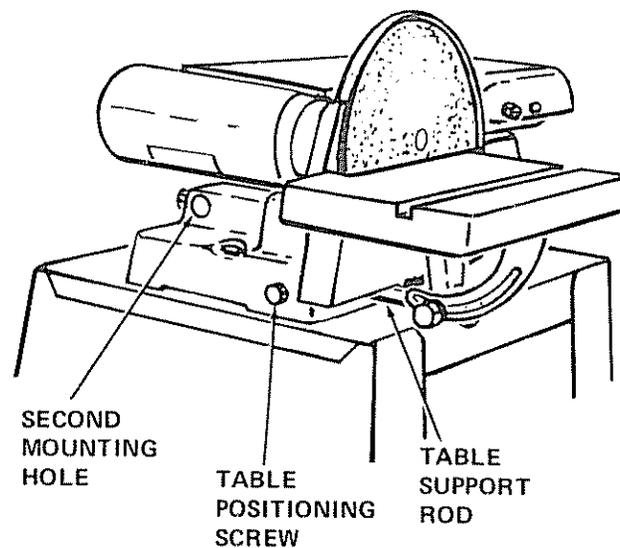
Remove the protective coating, that is applied at the factory, from the work table. Use any ordinary household type grease and spot remover.

CAUTION: Never use gasoline, naphtha, or similar highly volatile solvents.

NOTE: Apply a coat of paste wax to the work table. This will help prevent rust and make it a little easier to feed the work.

1. Loosen the table positioning screw
2. Insert the table support rod in the hole in the base until the edge of the table is approximately 1/16" from the abrasive disc. Tighten the screw.

NOTE: There is a second mounting hole in the base. This is for mounting the table when the belt is used in a vertical position.



assembly

INSTALLING ABRASIVE BELT-TENSIONING AND TRACKING

WARNING: FOR YOUR OWN SAFETY, TURN SWITCH "OFF" AND REMOVE PLUG FROM POWER SOURCE OUTLET BEFORE REMOVING OR INSTALLING ABRASIVE BELT.

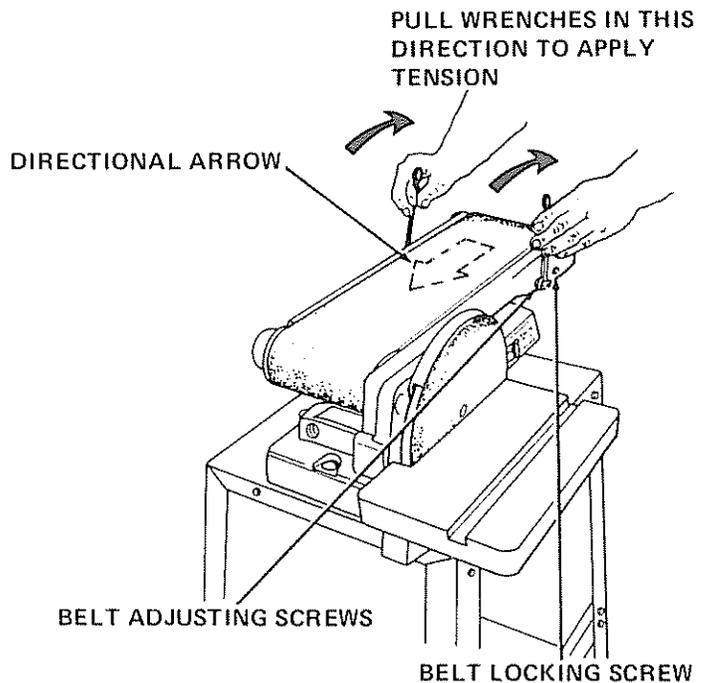
On the smooth side of the belt you will find a "directional arrow." The belt must run in the direction of this arrow so that the splice does not come apart.

1. Loosen the two belt LOCKING screws
2. Place the belt over the pulleys with the directional arrow pointing as shown. Make sure the belt is centered on both pulleys

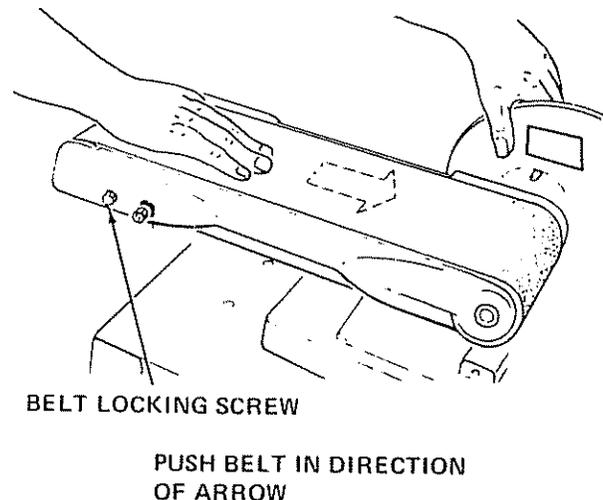
Turning the belt ADJUSTING screws will cause the idler pulley to move in or out. When the idler pulley is moved outward, it puts TENSION on the belt.

3. Place both of the 1/2" wrenches on the ADJUSTING screws and pull the wrenches toward you. This will stretch the belt. Move the wrenches back and forth a few times so that you "get the feel" of the belt while it is stretching (TENSIONING).

Apply a small amount of TENSION to the belt by pulling the wrenches toward you, so that the TENSION feels the same on both wrenches.



4. Hold the disc with your left hand to keep it from turning while pushing the belt in the direction of the arrow. If the belt slips over the pulleys, turn both ADJUSTING screws simultaneously a small amount to apply a little more tension to the belt.
5. Adjust the tension so that the belt does not slip very easily when pushing it, while you are holding the disc.
6. Tighten the locking screws
7. Plug in the power cord. Turn the switch "on", let the machine run for about three to five seconds and then turn it "off". Notice if the belt while running, moved to the right or to the left. If it did not move to the right or left, it is TRACKING properly.



8 IF THE BELT RUNS OFF TO THE RIGHT:

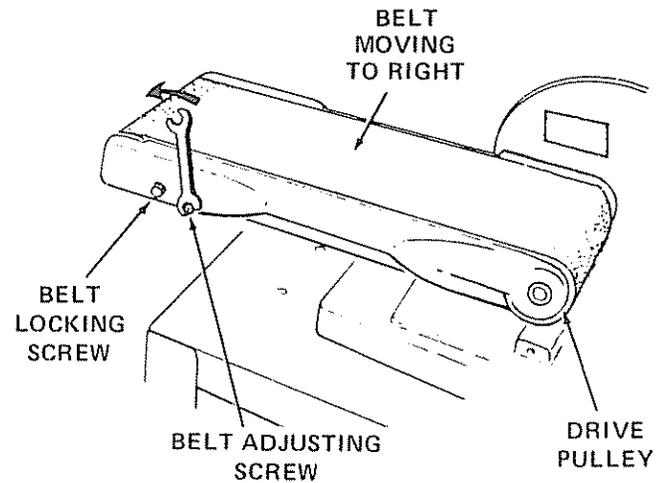
- a. Loosen the LOCKING SCREW on the RIGHT.
- b. Place wrench on the ADJUSTING SCREW on the right
- c. Turn switch on and pull the wrench toward you
This will move the belt to the left. PUSHING the wrench will move the belt to the right.
- d. The belt is tracking properly when it is centered on the DRIVE pulley

IMPORTANT: If you have difficulty tracking the belt, apply more tension.

9. IF THE BELT RUNS OFF TO THE LEFT:

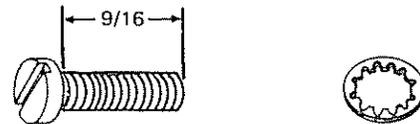
- a. Loosen the LOCKING SCREW on the LEFT.
- b. Place wrench on the ADJUSTING SCREW on the left
- c. Turn switch on and pull the wrench toward you
This will move the belt to the right. PUSHING the wrench will move the belt to the left
- d. The belt is tracking properly when it is centered on the DRIVE pulley

IMPORTANT: If you have difficulty tracking the belt, apply more tension.

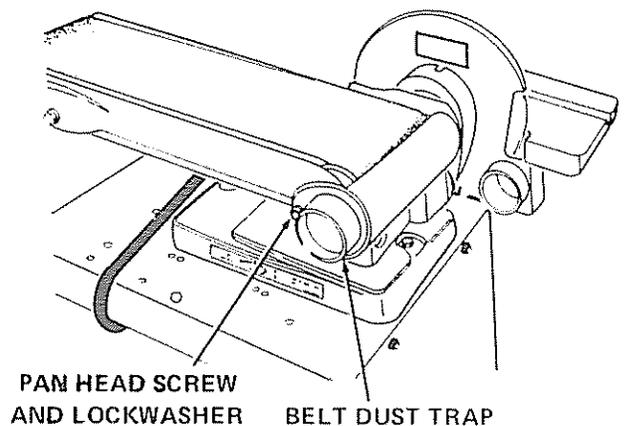


INSTALLING BELT DUST TRAP

1. Find one 10 - 32 x 9/16" Pan Head screw and a lock-washer among the loose parts.



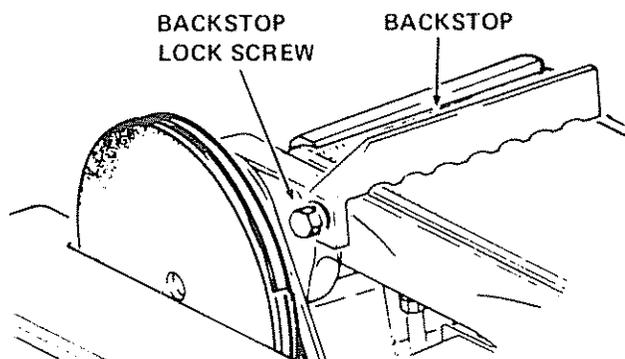
2. Attach the dust trap . . . make sure the top edge is below the surface of the abrasive belt.



assembly

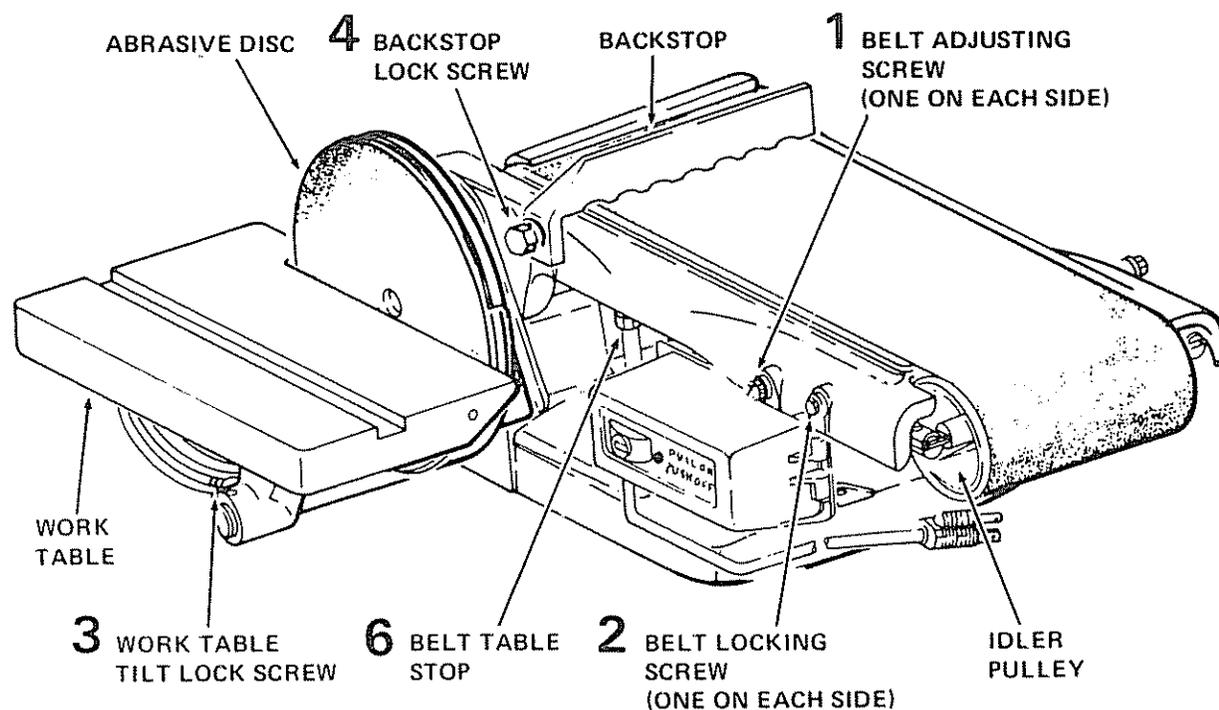
INSTALLING BACKSTOP

1. Find one 5/16" x 1" Hex. Head bolt and one flat washer among the loose parts.
2. Place the washer on the bolt, and screw it halfway into the mounting hole. Place the backstop into position and tighten the bolt. When removing the backstop, loosen the bolt but do not remove it.



getting to know your belt and disc sander

WARNING: FOR YOUR OWN SAFETY TURN SWITCH "OFF" AND REMOVE PLUG FROM POWER SOURCE OUTLET BEFORE MAKING ANY ADJUSTMENTS.

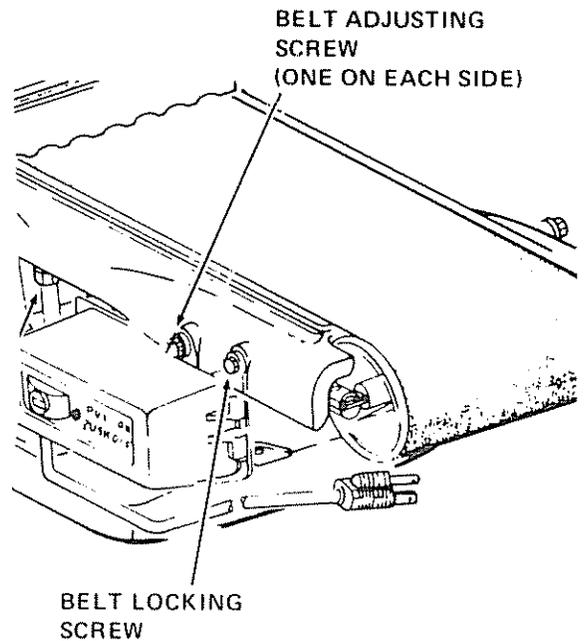


1. **BELT ADJUSTING SCREWS** cause the idler pulley to move in or out for applying tension to the belt or for tracking it. They are adjusted using the 1/2" wrenches.

See "Assembly" section . . . "Installing Abrasive Belt".

2. **BELT LOCKING SCREWS** lock the adjustment mechanism after the abrasive belt is tensioned and tracking properly. They are locked using the 1/2" wrench.

See "Assembly" section . . . "Installing Abrasive Belt".



3. **WORK TABLE TILT LOCK SCREW** locks the table. It is locked using the 1/2" wrench.

- a. Using a combination square, check the angle of the table with the disc.

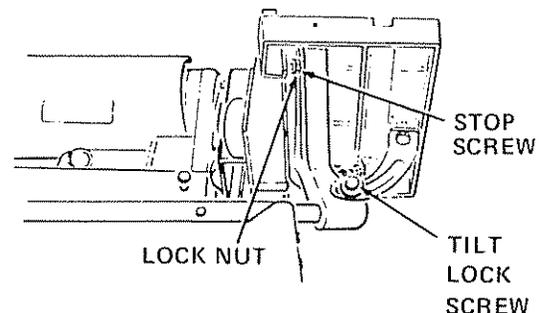
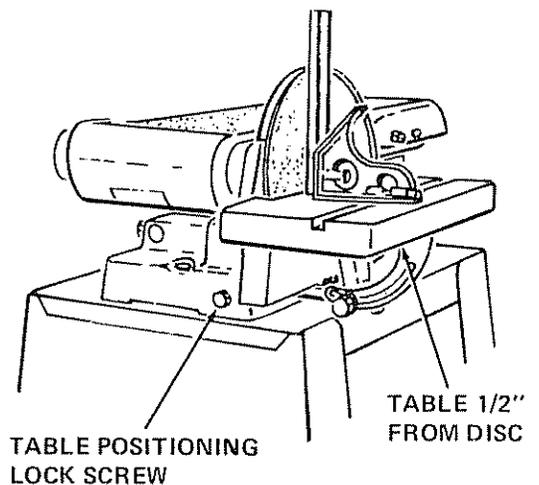
NOTE: The combination square must be "true"—See start of assembly section on Pg. 6 for checking method.

- b. If the table is not 90° with the disc . . . loosen tilt lock screw and tilt table.

- c. Loosen the lock nut using a 7/16" wrench.

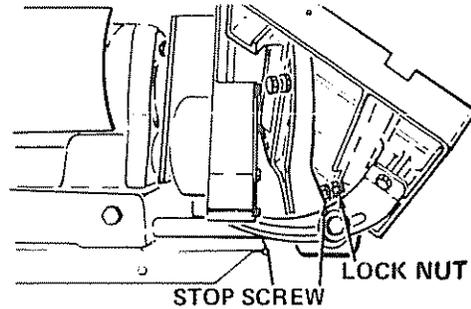
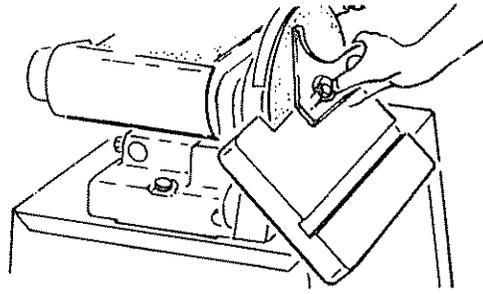
- d. Screw the stop screw in or out, using a 7/16" wrench so that when the table touches the stop screw, the table is 90° to the disc.

- e. Tighten the lock nut.

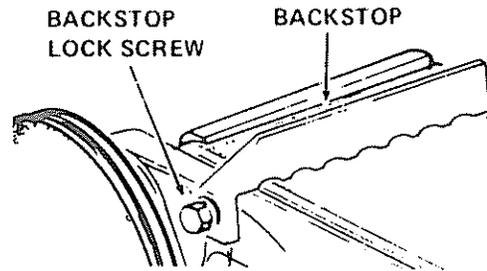


getting to know your belt and disc sander

- f. Loosen the table positioning lock screw . . . position the table approximately 1/16" away from the disc
- g. Tilt the table downward but don't tighten the lock screw, and position it as close to the disc as possible. Using the head of a combination square, check the angle of the table with the disc.
- h. If the table is not 45° with the disc:
- i. Raise the table and loosen the lock nut using a 7/16" wrench.
- j. Screw the stop screw in or out, using a 7/16" wrench so that when the table touches it, it is 45° with the disc.
- k. Tighten the lock nut.



-
4. **BACKSTOP LOCK SCREW** locks the backstop in place. It is locked using the 1/2" wrench.

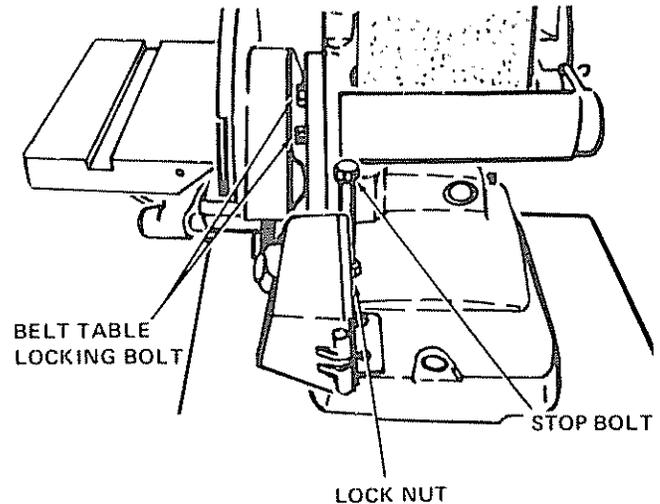


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5. **BELT TABLE LOCKING BOLTS** . . . lock the belt table in position.

To adjust to vertical position:

- a. Remove the backstop.
 - b. Loosen the two belt table locking bolts using the 1/2" wrench supplied with your machine.
 - c. Position belt table vertically and tighten the two bolts.
6. **BELT TABLE STOP** can be adjusted so that the belt table is level with the floor when in a horizontal position.

- a. Loosen the lock nut using a 3/4" wrench.
- b. Place a level on the belt table and using a 3/4" wrench, screw the stop bolt in or out until the table is level.



basic operation

SURFACE FINISHING ON THE BELT

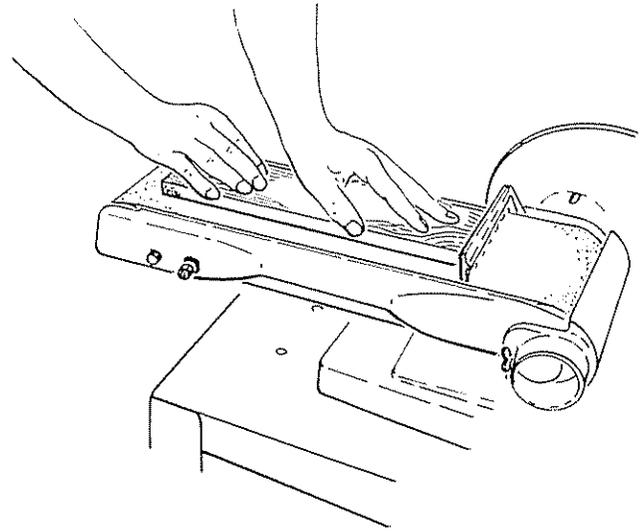
FLAT SURFACES

Hold the work piece firmly with both hands, keeping your fingers away from the belt

Keep the end butted against the backstop and move the work evenly across the belt. Use extra caution when finishing very thin pieces.

For finishing long pieces, remove the backstop

Apply only enough pressure to allow the belt to remove material. If the belt stalls and the belt pulleys slip while applying moderate pressure to the workpiece, the belt requires more tension.



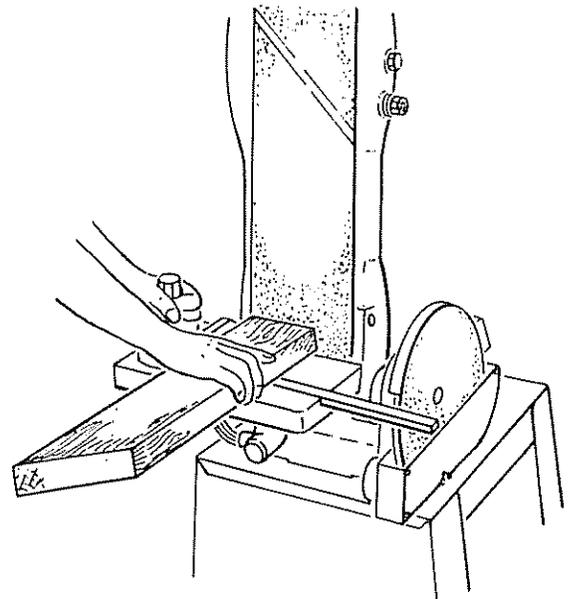
END FINISHING ON THE BELT

It is more convenient to finish the ends of long workpieces with the belt in a vertical position.

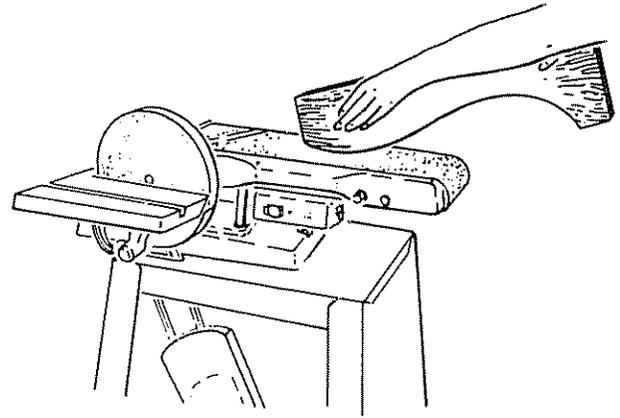
Move the work evenly across the belt. For accuracy, use a miter gauge.

The table may be tilted for beveled work.

See Getting To Know Your Finishing Machine section for adjusting the belt table and the work table.



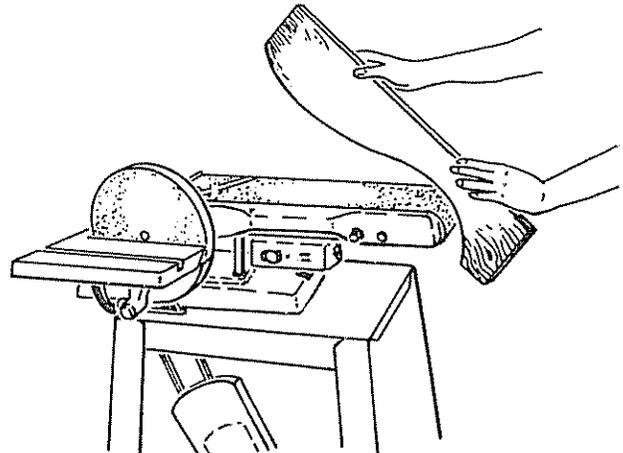
basic operation



FINISHING CURVED EDGES ON THE BELT

CURVED EDGES

Finish outside curves on the belt table and inside curves on the idler pulley.

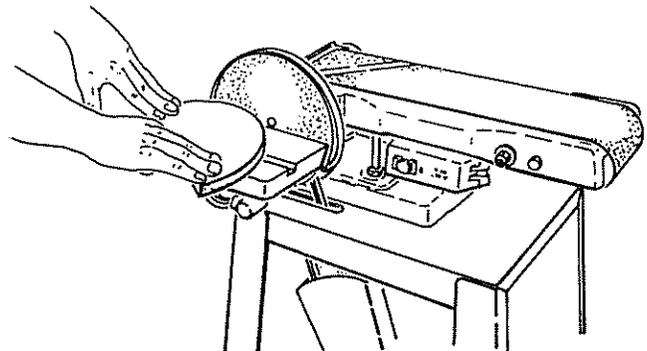
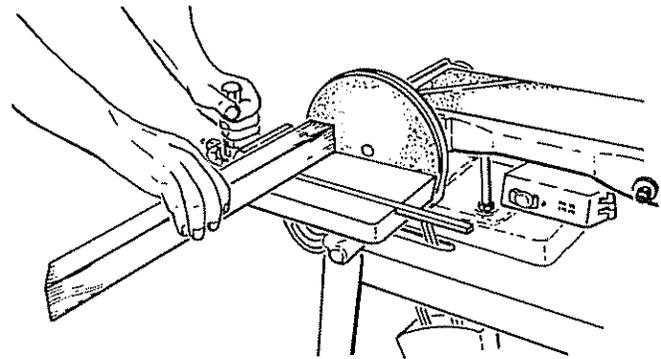


FINISHING SMALL END SURFACES AND CURVED EDGES ON THE DISC

Move the work across the "Down Side" of the face of the disc. For accuracy, use a miter gauge.

Applying the workpiece to the "Up Side" could cause it to fly up (kickback) which could be hazardous.

The table may be tilted for beveled work.



maintenance

WARNING: FOR YOUR OWN SAFETY, TURN SWITCH "OFF" AND REMOVE PLUG FROM POWER SOURCE OUTLET BEFORE ADJUSTING, MAINTAINING, OR LUBRICATING YOUR FINISHING MACHINE.

Keep your machine and your workshop clean. The dust traps around the disc and the belt are designed to deflect most of the fine dust. They should be connected to a Home-N-Shop Vac for most efficient dust removal.

WARNING: DO NOT ATTACH A HOME-N-SHOP VAC WHEN FINISHING IRON OR STEEL. THE SPARKS COULD IGNITE THE DEBRIS AND CAUSE A FIRE.

If power cord is worn or cut, or damaged in any way, have it replaced immediately.

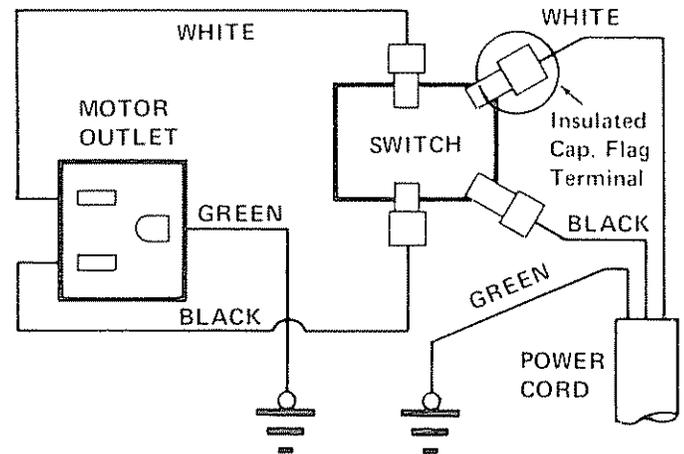
Frequently blow out any dust that may accumulate inside the motor.

For motor maintenance, follow instructions furnished with motor.

A coat of automobile-type wax applied to the worktable will help prevent rust and make it a little easier to feed the work while finishing.

Do not apply wax to the belt table because the belt could pick up the wax and deposit it on the pulleys, causing the belt to slip.

WIRING DIAGRAM



lubrication

The BALL BEARINGS in this machine are packed with grease at the factory. They require no further lubrication.

Periodically lubricate the cams and shafts in the idler pulley mechanism with Silicon Spray.

For motor lubrication, follow instructions furnished with motor.

trouble shooting

WARNING: FOR YOUR OWN SAFETY, TURN SWITCH "OFF" AND REMOVE PLUG FROM POWER SOURCE OUTLET BEFORE TROUBLE SHOOTING YOUR SANDER.

TROUBLE SHOOTING CHART

TROUBLE	PROBABLE CAUSE	REMEDY
Motor will not run.	<ol style="list-style-type: none"> Defective On-Off switch. Defective switch cord. Defective switch box receptacle. Motor protector open, (only if your motor is equipped with an overload protector). Other cause. 	<ol style="list-style-type: none"> Replace defective parts before using belt disc sander again. Consult Sears Service. Any attempt to repair this motor may create a HAZARD unless repair is done by a qualified service technician. Repair service is available at your nearest Sears Store.
Machine slows down when finishing.	<ol style="list-style-type: none"> V-Belt too loose. Applying too much pressure to workpiece. Too much tension on abrasive belt. 	<ol style="list-style-type: none"> Increase belt tension, see Assembly Section, "Motor Pulley Belt Guard and Motor Installation." Ease up on pressure. Adjust tension, see Assembly Section, "Installing and Adjusting Abrasive Belt."
Abrasive Belt Slips	<ol style="list-style-type: none"> Not enough tension. 	<ol style="list-style-type: none"> Adjust tension, see Assembly Section, "Installing and Adjusting Abrasive Belt."
Abrasive Belt runs off pulleys.	<ol style="list-style-type: none"> Not tracking properly. Not enough tension. 	<ol style="list-style-type: none"> Adjust tracking, see Assembly Section, "Installing and Adjusting Abrasive Belt." Adjust tension, see Assembly Section, "Installing and Adjusting Abrasive Belt."
Wood burns while finishing.	<ol style="list-style-type: none"> Abrasive disc or belt is glazed with sap. 	<ol style="list-style-type: none"> Replace disc or belt.

RECOMMENDED ACCESSORIES

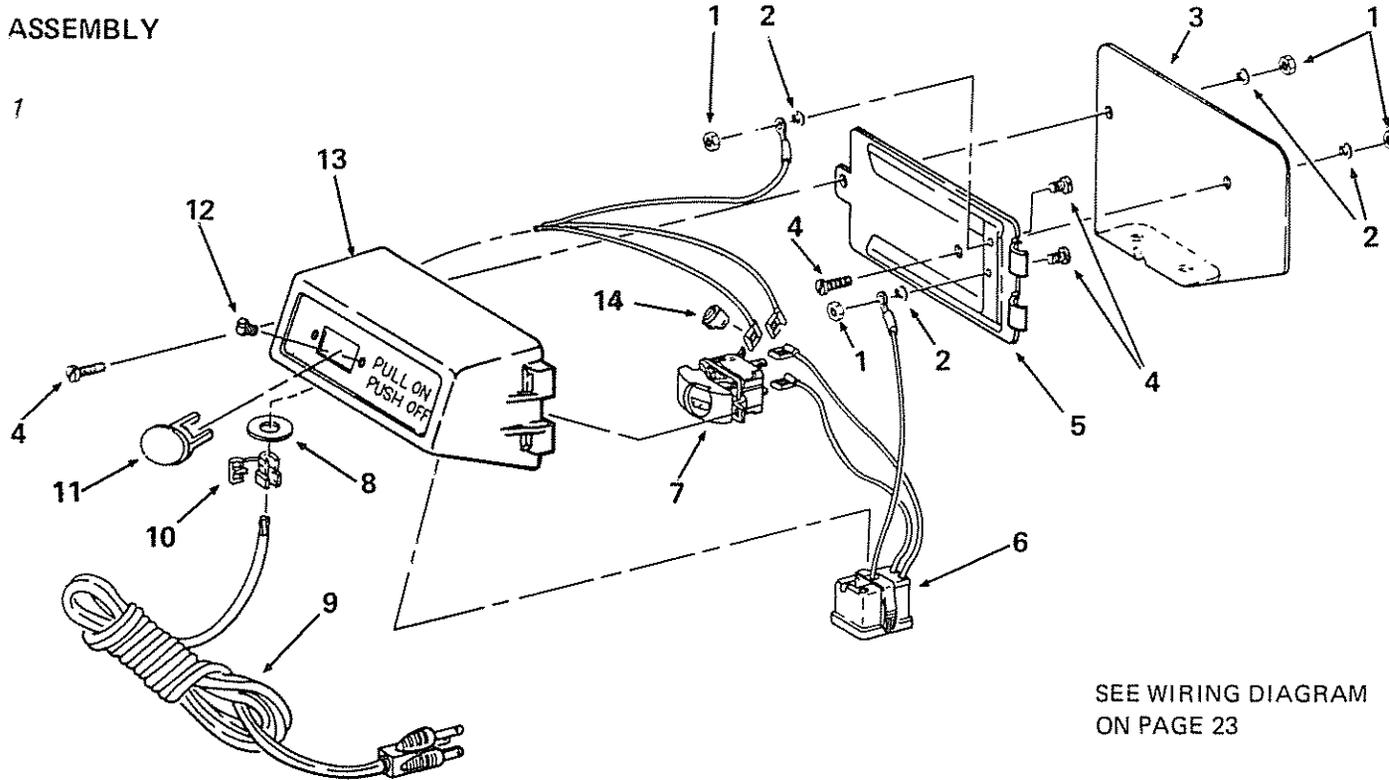
IN CANADA, SEE YOUR LOCAL SIMPSONS-SEARS STORE OR CATALOG FOR ACCESSORY SELECTION AND NUMBERS

ITEM	CAT. NO.
Floor Stand	9-22213
Miter Gauge	9-29929
Stick Disc Cement	9-2219
Abrasive Belts and Disc	SEE CATALOG
Steel Legs	9-22236
Stop Rods	9-29924
Power Tool Know How Handbooks	
Radial Saw	9-2917
Table Saw	9-2918

The above recommended accessories are current and were available at the time this manual was printed.

SWITCH BOX ASSEMBLY

Figure 1



SEE WIRING DIAGRAM
ON PAGE 23

PARTS LIST

Key No.	Part No.	Description
1	STD541110	*Nut Hex., 10-32
2	STD551210	*Lockwasher, 10, Int. Tooth
3	68011	Bracket Switch Mtg.
4	STD601103	*Pan Hd., Scr., 10-32 x 3/8
5	60269	Bracket Housing
6	62376	Outlet
7	60267	Switch, Locking
8	60317	Washer
9	60271	Cord with Plug

Key No.	Part No.	Description
10	37818	Relief, Strain
	*67023	Relief, Strain
11	60256	Key, Switch
12	60287	*Screw Nylon Pan Hd., 6-32 x 5/16
	*STD510603	*Screw Pan Hd., 6-32 x 3/8
13	60316	Box, Switch
	*67022	Box, Switch
14	63467	Cap Flag Terminal, Insulator

* Standard Hardware Item - May Be Purchased Locally.

• Canadian Model Only

NOTE: Shipping and handling charges for standard hardware items (identified by *) such as nuts, screws, washers, etc., make buying these items by mail uneconomical. To avoid shipping and handling charges, you may obtain most of these locally.

CRAFTSMAN BELT AND DISC SANDER
MODEL NO. 113.22521

repair parts

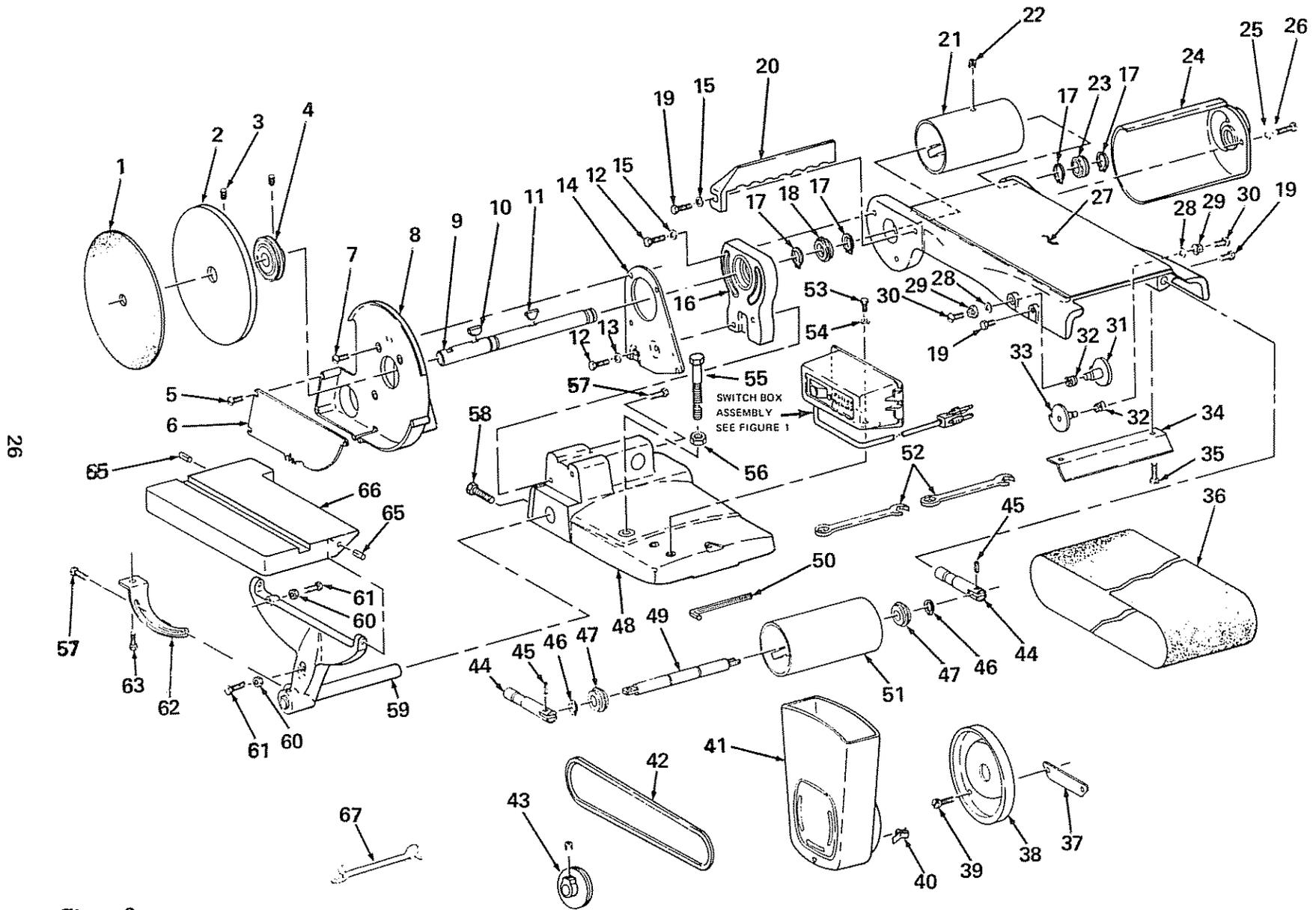


Figure 2

PARTS LIST
CRAFTSMAN BELT AND DISC SANDER MODEL NO. 113.22521
FIGURE 2 PARTS LIST

Key No.	Part No.	Description
1	38834	†Disc, 9 Inch Abrasive
2	68033	Disc, Sanding (w/Set Screw)
3	STD503103	*Screw, Socket Head Set, 5/16-18 x 5/16
4	30646	†Pulley (w/Set Screw) 2-1/2 dia. x 1/2, "V" Groove 5/8 bore, Keyed
5	STD600803	*Screw, Type 23, Pan No. 8-32 x 3/8
6	68003	Cover, Housing
7	133656	*Screw, Machine Flat Head No. 10-32 x 1-3/4
8	68004	Housing, Disc
9	68013	Shaft, Drive
10	STD580025	Key, Woodruff, No. 9
11	38812	Key, Woodruff
12	STD523115	*Screw, Hex Head 5/16-18 x 1-1/2
13	STD551131	*Lockwasher, 5/16
14	68005	Bracket, Mounting
15	STD551031	*Washer, 21/64 x 7/8 x 1/8
16	47218	Bracket, Table Support
17	37158	Ring, Retaining 5/8
18	STD315228	Bearing, Ball
19	STD523112	*Screw, Machine Hex Head 5/16-18 x 1-1/8
20	47222	Backstop
21	47190	Pulley, Drive (w/Set Screw)
22	STD502502	*Screw, Socket Head Set, 1/4-20 x 5/16
23	STD315228	Bearing Ball
24	68006	Trap, Dust
25	STD551210	*Lockwasher No. 10 Int. Tooth
26	STD511105	*Screw Mach. Pan Hd. 10-32 x 9/16
27	68014	Table, Belt
28	STD551037	*Washer, 3/8 x 3/4 x 1/16
29	68007	Nut, Cam
30	STD510605	*Screw, Machine Pan Slotted No. 6-32 x 7/16
31	68008	Cam, Left Hand
32	47815	Spring
33	68009	Cam, Right Hand
34	68010	Guard, Idler
35	STD510803	*Screw, Machine Pan Head No. 8-32 x 3/8

Key No.	Part No.	Description
36	47813	†Belt, Sanding
37	60254	Bracket, Support
38	60253	Support, Belt Guard
39	STD601105	*Screw, Type 23 Pan Head No. 10-32 x 1/2
40	60255	"S" Clip
41	60252	Guard, Belt
42	STD304410	†V-Belt, 1/2 x 41"
43	62023	†Pulley, (w/Set Screw) 2" Dia. x 1/2 "V" Groove 5/8 Bore
44	47622	Shaft, Control
45	STD571807	Pin, Roll 3/16 x 5/8
46	38538	Ring, Retaining 5/8
47	38536	Bearing, Ball
48	68015	Base
49	47621	Shaft, Idler
50	60096	*Wrench Hex., 5/32
51	47414	Pulley, Idler
52	68017	Wrench
53	STD522505	*Screw, Machine Pan Head 1/4-20 x 1/2
54	STD551125	*Lockwasher, 1/4
55	100167	*Bolt, Hex. Head, 1/2-13 x 4-1/2
56	STD541250	*Nut, Hex., 1/2-13
57	STD523107	Bolt, High Strength, 5/16-18 x 3/4
58	STD523122	<u>Bolt, High Strength, 5/16-18 x 2-1/4</u>
59	68016	<u>Support Assembly, Base</u>
60	STD541025	*Nut, Hex., 1/4-20
61	STD522512	*Screw, Machine Hex. Head, 1/4-20 x 1-1/4
62	38738	Bracket, Table Lock
63	9414427	*Screw, Sems 5/16-18 x 1/2 Hex. Head
65	38539	Pin
66	47219	Table, Work
67	68036	Hanger, Cable
	68034	Owner's Manual (Not Illustrated)
	68035	Bag of Loose Parts (Not Illustrated)

* Standard Hardware Item – May Be Purchased Locally.

† Stock Item – May be secured through the Hardware Department of most Sears or Simpsons-Sears Retail Stores or Catalog Order Houses.



*owners
manual*

SERVICE

**MODEL NO.
113.22521**

**HOW TO ORDER
REPAIR PARTS**

BELT AND DISC SANDER

Now that you have purchased your Belt & Disc Sander should a need ever exist for repair parts or service, simply contact any Sears Service Center and most Sears, Roebuck and Co. stores. Be sure to provide all pertinent facts when you call or visit.

The model number of your Belt and Disc Sander will be found on a plate attached to your saw, at the right-hand side of the base.

**WHEN ORDERING REPAIR PARTS, ALWAYS
GIVE THE FOLLOWING INFORMATION:**

PART NUMBER	PART DESCRIPTION
MODEL NUMBER	NAME OF ITEM
113.22521	Belt And Disc Sander

All parts listed may be ordered from any Sears Service Center and most Sears stores. If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for handling.

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.