

# TOOLKRAFT

## 6" Belt and Disc Sander MODEL 4340

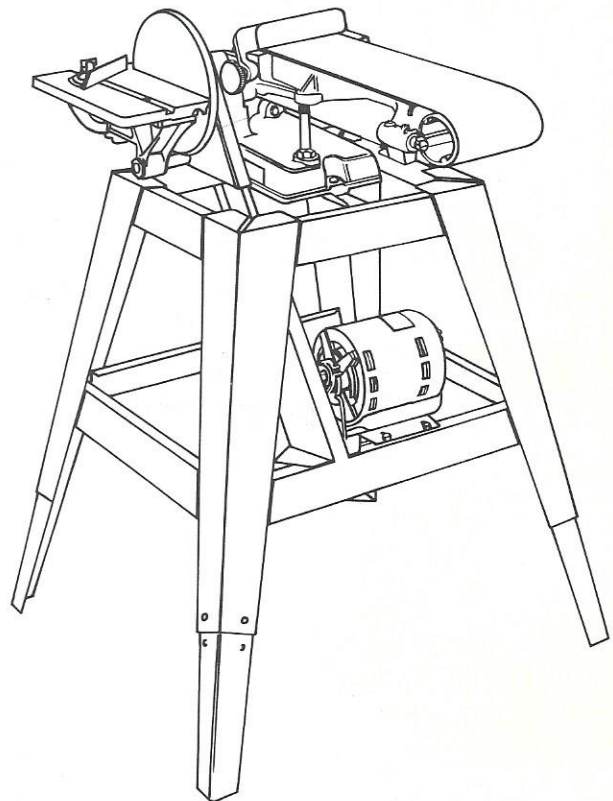
### OWNERS MANUAL

#### MODEL 4341 KIT SHOWN

BELT AND DISC SANDER	MODEL 4340
STAND	NO. 1900
½ H.P. MOTOR	NO. 1903
48" V-BELT	NO. 1928
2½" MOTOR PULLEY	NO. 1918
ON-OFF SWITCH	NO. 1913
V-BELT GUARDS	

#### SPECIFICATIONS

BELT WIDTH	6" (152.4 mm)
BELT LENGTH	48" (1219.2 mm)
BELT TABLE LENGTH	16½" (419.1 mm)
BELT TABLE WIDTH	6½" (165.1 mm)
SANDING DISC	9" (228.6 mm)
DISC TABLE	6¼" × 12" (158.7 mm × 304.8 mm)
DRUM DIAMETER	3" (76.2 mm)
DRUM BEARING	BALL



#### CAUTION!!!

READ YOUR OWNER'S MANUAL THROUGH COMPLETELY AND CAREFULLY BEFORE ATTEMPTING TO SET-UP OR OPERATE YOUR NEW TOOLKRAFT BELT AND DISC SANDER. SEE INSIDE COVER FOR SAFETY RULES.

Your new Toolkraft Belt and Disc Sander is a well built, carefully inspected and versatile machine, capable of giving you many years of dependable service. It comes complete in one carton with a minimum of final assembly and set-up required by you. When unpacking be sure to check all packages and packing material before discarding. Now, read on and we at Toolkraft wish you many safe and enjoyable hours of operation on your new Belt and Disc Sander.

NOTICE: On the side of your Belt and Disc Sander you will find the data plate containing the Model Number and Serial Number of your unit. Record these numbers in the spaces provided here and retain them for your records.

Model #

Serial #

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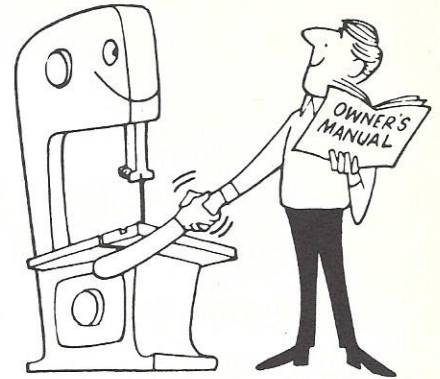


# New SAFETY RULES for Stationary Power Tools

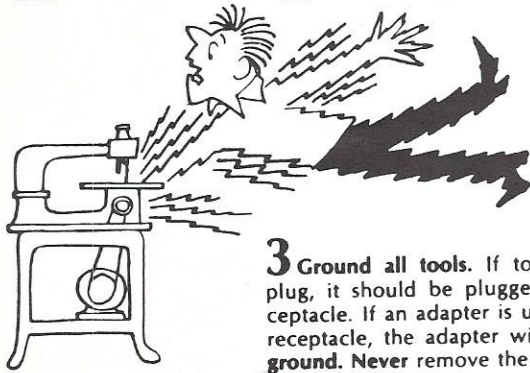
Follow them for best results and full benefit from shop machines

Every good craftsman respects the tools with which he works. He knows they represent years of constantly improved design. He also knows that they are dangerous if misused.

This is the theme of a new safe-use program developed by the Power Tool Institute, Inc., for stationary power tools. The Institute has put together a list of safety rules, based on approved practices in industrial and home shops, to accompany a set of new standards for stationary power tools that members of the Institute manufacture.

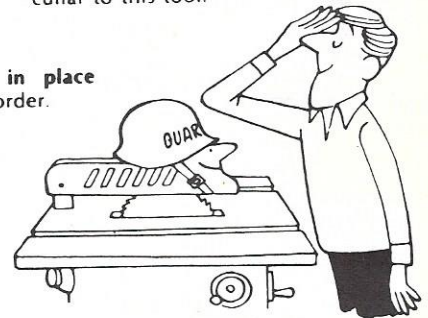


**1 Know your power tool.** Read the owner's manual carefully. Learn its applications and limitations, as well as the specific potential hazards peculiar to this tool.

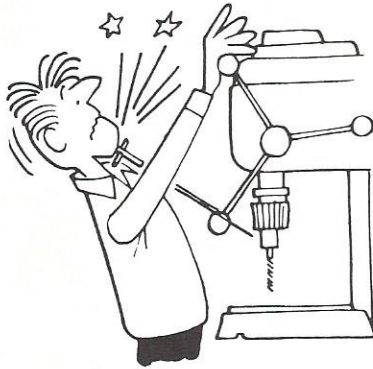


**3 Ground all tools.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter wire must be attached to a **known ground**. Never remove the third prong.

**2 Keep guards in place and in working order.**



**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.

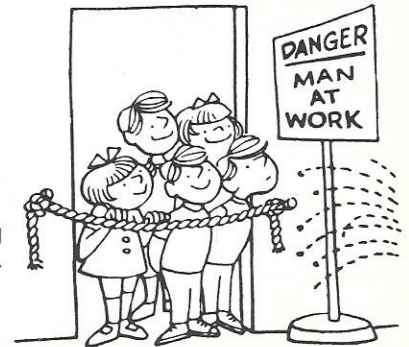


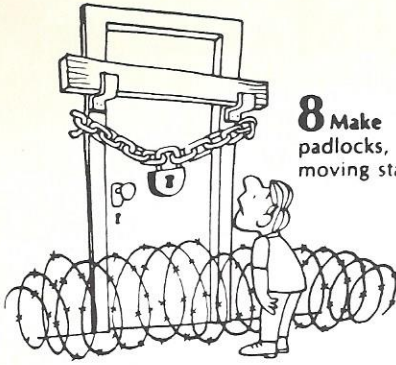
**5 Keep work area clean.** Cluttered areas and benches invite accidents.



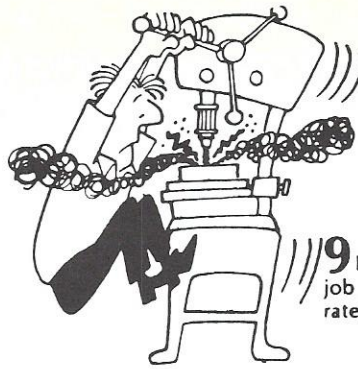
**6 Avoid dangerous environment.** Don't use power tools in damp or wet locations or expose them to rain. Keep your work area well lighted.

**7 Keep children away.** All visitors should be kept a safe distance from work area.

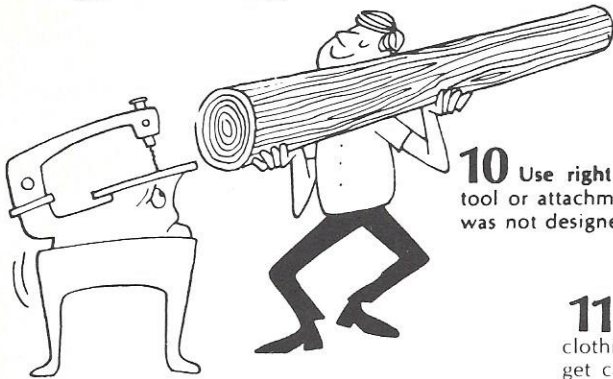




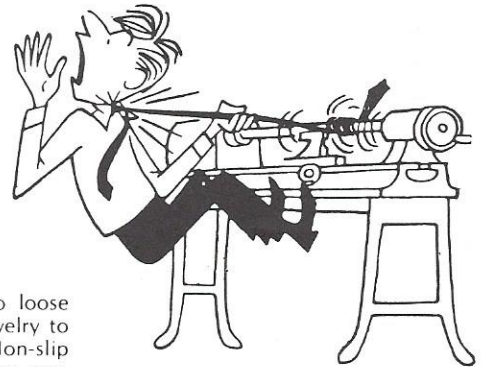
**8** Make workshop kidproof—with padlocks, master switches, or by removing starter keys.



**9** Don't force tool. It will do the job better and be 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. No loose clothing, gloves, neckties or jewelry to get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.



**12** Use safety glasses. Also use face or dust mask if cutting operation is dusty.

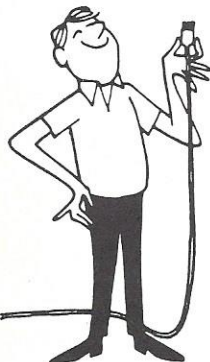


**13** Secure work. Use clamps or a vise to hold work, when practical. It's safer than using your hand and it frees both hands to operate tool.

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



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



**16** Disconnect tools before servicing and when changing accessories such as blades, bits, cutters.

**17** Use recommended accessories. Consult owner's manual for recommended accessories. Use of improper accessories may be hazardous.



**18** Avoid accidental starting. Make sure switch is off before plugging in cord.

# Specific Safety Instructions for Sanders

**WARNING:** For your own safety, do not connect power cord or attempt to operate your Belt and Disc Sander until the following steps have been satisfactorily completed.

## A. Assembly and installation as described in this manual

## B. Examination and operating familiarity with on-off switch and other operating parts

## C. Review and understanding of the safety instructions and operating procedures which follow

### STABILITY

1. If there is a tendency for the belt and disc sander to tip or move during certain operations such as when finishing long, heavy boards, the sander should be bolted down.

### WORK AREA AND MACHINE POSITION

1. Position your belt and disc sander so neither the operator nor an observer is ever standing in line with the abrasive belt or disc.

2. The work area should have adequate overhead non-glare light and adequate surrounding workspace.

3. This machine is designed and intended for indoor use only.

### PERSONAL CLOTHING AND PROTECTIVE EQUIPMENT

1. Do not wear gloves while operating the sander. Loose flowing garments, jewelry (rings, watches, etc.) and neckties must never be worn. Roll long sleeves to above the elbows.

2. ALWAYS WEAR SAFETY GOGGLES that comply with ANSZ87 1-1968, to protect eyes. Also wear a face shield if operation is dusty. During extended periods of operation wear ear plugs or muffs.

### OPERATIONAL INSTRUCTIONS

1. Always avoid awkward hand positions, where a sudden slip could cause a hand to move into the abrasive belt or disc.

2. Use the proper size and type of sanding belt and disc for each operation.

3. Turn machine OFF before removing scrap pieces from table. Never turn the sander ON before clearing the tables or work surfaces of all objects (tools, wood scraps, etc.) except for the workpiece and related feed or support devices for the operation planned.

4. Be certain the abrasive belt runs in the right direction before beginning work. Always have the tracking and tension adjustments set correctly so the belt will not run off the drums.

5. Hold work firmly when finishing on the abrasive belt and against the worktable when finishing against the disc.

6. Feed material gradually. Do not force the machine to remove material faster than it is designed to.

7. Do not attempt to sand pieces too small to safely hold by hand.

8. When finishing a large workpiece, make sure it is properly supported at table height.

9. Never climb on the belt and disc sander.

10. Never leave the machine work area with the power on, before the machine has come to a complete stop, and you have removed the switch locking key. (Keyed switch provided with kit). It is advisable to always unplug the machine from power source when leaving.

11. If any part of the belt and disc sander should break or be damaged, or any electrical component fail to perform properly, or if any part is missing, immediately shut off power switch, remove cord from power supply and replace damaged or missing part before resuming operation.

12. Do not allow regularity and familiarity to interfere with your concern for safe and enjoyable operation.

**FIRE CAUTION:** This machine is not designed for heavy deburring operations. However, when finishing ferrous metals, sparks will be generated and could cause a fire. To prevent this possibility remove dust collecting apparatus. Also remove all traces of wood dust that may have accumulated in and around the machine.

## DANGER For Your Own Safety

**1. READ AND UNDERSTAND OWNER'S MANUAL BEFORE OPERATING MACHINE.**

**2. ALWAYS WEAR SAFETY GOGGLES AND DUST MASK.**

**3. ALWAYS SUPPORT WORKPIECE WITH "BACKSTOP" OR WORKTABLE.**

**WARNING:** The 3" machine pulley and the 2½" motor pulley (kit only) furnished, will run the disc and belt at the proper sanding speed. They are furnished to be used with a 1725 R.P.M. motor. Never substitute or interchange these pulleys to increase speed . . . it could be hazardous.

**WARNING:** Do not allow familiarity (gained from frequent use of your saw) to become commonplace. Always remember that a careless fraction of a second is sufficient to inflict severe injury.

# Motor and Electrical Requirements

## MOTOR

This machine is designed for use with a 1725 R.P.M. motor only. Do not use any motor that runs at a higher R.P.M. speed than 1725 R.P.M.

For efficient stock removal and proper operation use a motor of at least 1/2 H.P. Do not use a motor of lower horsepower or dragging and stalling could develop.

Recommended Motor: Minimum — 1/2 H.P., 1725 R.P.M., 115 Volt, 60 HZ, sleeve bearing.

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

### CHECK MOTOR ROTATION

**WARNING:** FOR YOUR OWN SAFETY, BE CERTAIN THAT POWER CORD IS NOT CONNECTED TO POWER SOURCE OUTLET WHEN CHANGING MOTOR ROTATION.

The motor shaft on which you mount the motor pulley must rotate COUNTERCLOCKWISE when viewed from the shaft end. If it does not, change the direction of the motor in accordance to the instructions provided with the motor. See Instructions Page 8.

### MOTOR PULLEY

If you did not purchase the Belt and Disc sanding kit complete with motor and stand, you will need to purchase a motor pulley. Use only a 2 1/2" diameter motor pulley with a 1725 R.P.M. motor of at least 1/2 H.P. See accessory section Page 20.

## GROUNDING INSTRUCTIONS

**THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT OPERATOR FROM POSSIBLE ELECTRICAL SHOCK.**

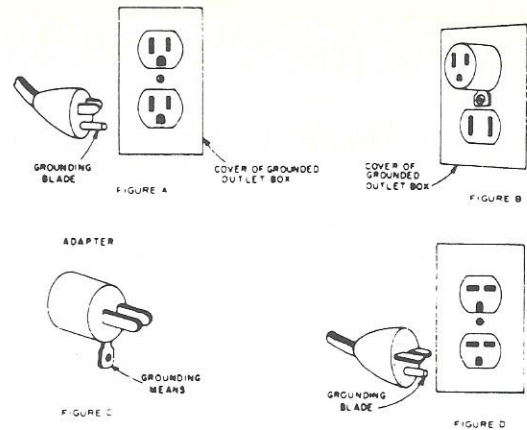
Plug power cord into a 110-120V properly grounded type outlet protected by a 15-amp. time delay or Circuit-Saver fuse or circuit breaker.

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

**WARNING:** 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.

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

This power tool with motor and cord set is equipped with a three-prong plug. It should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter wire must be attached to a known ground. NEVER remove the third



Use of an adapter is not applicable in Canada.

prong. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal. If your unit is for use on less than 150 volts, it has a plug like Figure "A".

An adapter, Figure "B", is available for connecting Figure "A" plugs to two-prong receptacles. The green grounding wire extending from the adapter must be connected to a permanent ground such as to a properly grounded outlet box. No adapter is available for Figure "C" plugs.

Use of an adapter is not applicable in Canada.

Use only three-wire extension cords which have three-prong grounding type plugs and three-hole receptacles which accept the tool's plug.

**Replace or repair damaged or worn cord immediately.**

## WIRE SIZES

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 to determine the minimum wire size (A.W.G.) extension cord. Use only three-wire extension cords which have three-prong grounding type plugs and three-hole receptacles which accept the tools plug.

Length of the Conductor	Wire Size Required (American Wire Gauge Number)
	120 Volt Line
Up to 100 feet	No. 12
100 feet to 200 feet	No. 8
200 feet to 400 feet	No. 6

**NOTE:** For circuits of greater length, the wire size must be increased proportionately in order to deliver ample voltage to the motor.

# Unpacking

Your Belt and Disc Sander is complete in one carton. When unpacking be sure to separate all parts from the packing material and check each item with the list of loose parts before discarding shipping material. Make certain all items are there.

If any parts are missing, DO NOT attempt to assemble the machine, connect power cord to power source, or operate the machine in any way until all missing parts are obtained and installed correctly.

There is a protective coating on all the unpainted machined surfaces of the sander. Remove this coating with a soft cloth dampened with any type of household grease or spot remover. **CAUTION: NEVER USE GASOLINE, NAPHTHA, OR OTHER HIGHLY VOLATILE SOLVENTS.** After cleaning, to protect the unpainted surfaces apply a coat of good paste wax. DO NOT APPLY WAX TO BELT TABLE.

**CAUTION:** For your own safety never connect machine to power outlet until the assembly is completed and you have read and understand the safety and operational instructions.

## LIST OF LOOSE PARTS

PART NO.	DESCRIPTION	QUANTITY
340-8 & 340-2	Belt table Assembly with Bracket	1
340-1	Base	1
335-27	Disc table	1
335-23	Sanding Disc	1
340-4	Fence	1
340-11	Upper Pulley Guard	1
32A12-157	Miter Gauge	1
335-47	Support Rod	1
335-30	Disc table trunnion	1

### Hardware Bag includes:

(to fasten table and support Bracket to Base)

XS-72	Screw-Hex HD 5/16 - 18 x 1 1/2	2
XW-451	Washer-Lock 5/16	2

(to fasten Fence to Table)

28-4	Knob and Stand	1
XW-421	Washer — Plain 1/4	1

311-48	trunnion — Front	1
311-49	trunnion — Rear	1
XS-29	Screw-Hex HD 1/4 - 20 x 3/8	4
XW-407	Washer-Lock 1/4	4
XM-1201	Knob	1
XW-421	Washer — Plain 1/4	1

(to mount Pulley Guard to Base)

XS-86	Screw-RD HD 1/4 - 20 x 3/8	2
XW-407	Washer-Lock 1/4	2
XW-421	Washer — Plain 1/4	2

(to attach Fence)

28-4	Knob	1
XW-421	Washer — Plain 1/4	1

(to mount table Support Screw)

XS-411	Bolt-Hex HD 5/8 - 11 x 3 3/4	1
XN-374	Nut-Hex 5/8 - 11	2

(to mount Lower Pulley Guard to stand on 4341 model only)

XS-86	Screw-RD HD 1/4 - 20 x 3/8	2
XW-407	Lock Washer 1/4	2
XN-213	Nut 1/4 - 20	2

### Model 4341 Kit also includes:

1900	Stand	1
1903	1/2 H.P. Motor	1
1928	48" V-Belt	1
1918	2 1/2" Motor Pulley	1
335-192	Lower Pulley Guard	1
1913	On-Off Switch	1

## TOOLS NEEDED

Screw Driver  
 3/8" Wrench or a Spin-tight  
 7/16" Wrench  
 1/2" Wrench  
 Framing Square  
 Tape Measure

# Assembly

## Step 1: ASSEMBLE TABLE SUPPORT BOLT TO BASE

a. Place one of the two 5/8" hex head nuts onto the large 5/8" - 11 table support bolt approximately one inch down the bolt shaft.

b. Insert bolt through hole in top of base and hold in place by installing second nut underneath the base. Tighten finger tight... adjustment to be made later.

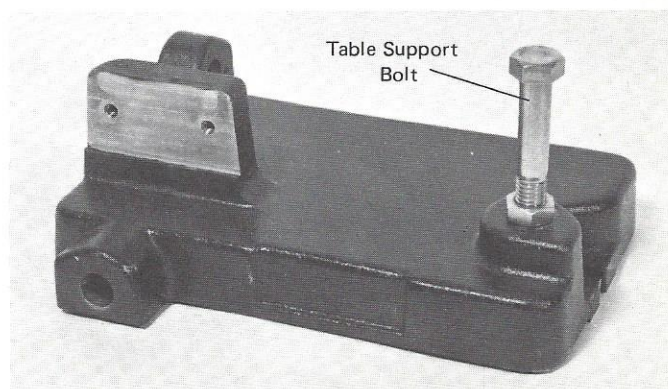


Figure 1

**Step 2: ATTACH BELT TABLE TO BASE** — Insert two 5/16" - 18 bolts with lockwashers through the table support bracket and into the two tapped holes in the horn of the base. Do not tighten securely at this time.

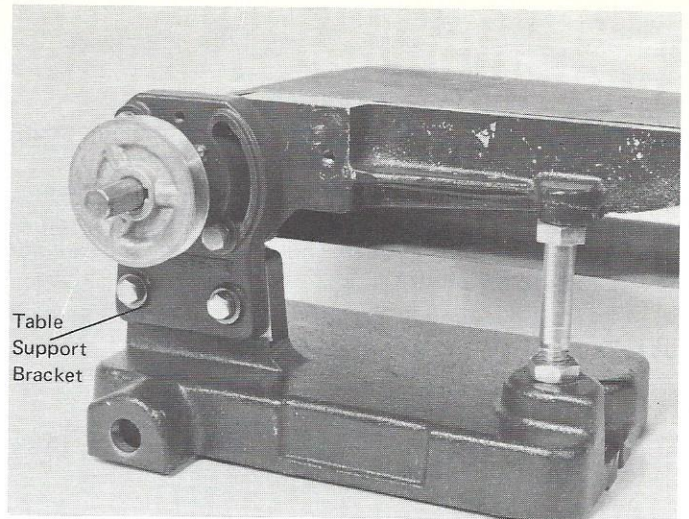


Figure 2

**Step 3: TABLE LEVELING**

a. With a rule measure the distance from the floor to the top of the belt table — both front and rear. If your table is level, the distance will be equal at both points.

b. If the distance is not equal adjust the height of the table support bolt so the table becomes level. Secure this position by tightening the nut underneath the base while holding under nut in place.

c. Tighten securely both mounting bolts in the table support bracket.

NOTE: A level may be also used to make this adjustment.

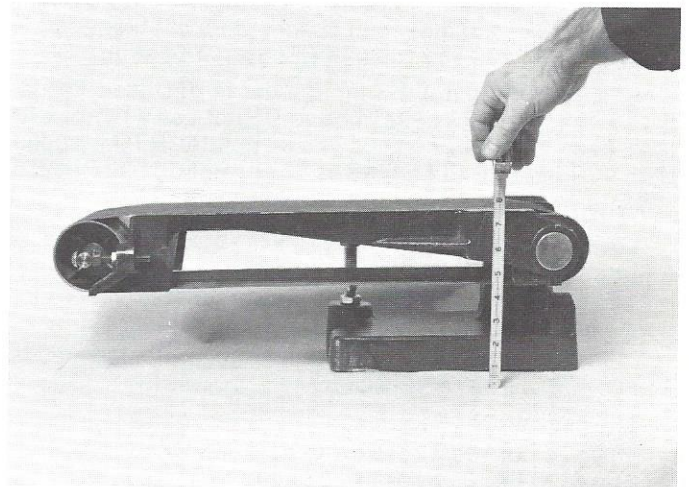


Figure 3

**Step 4: ATTACH WORK TABLE SUPPORT ROD**

a. Insert rod through hole in side of base as shown. Bring the rod flush to the inside wall underneath the base.

b. Insert a 5/16" - 18 locking bolt through the side hole to secure the rod. Tighten finger tight.

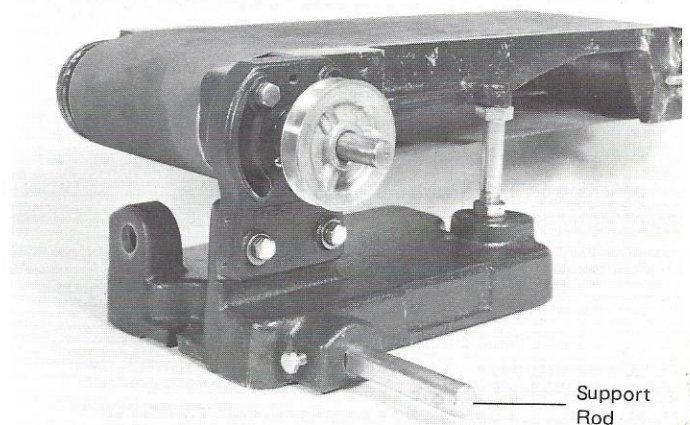


Figure 4

**Step 5: ATTACH BELT AND DISC SANDER TO RECOMMENDED FLOOR STAND** — If you have purchased the complete kit with stand or have purchased a stand separately, now is the time to mount the sander.

a. Follow instructions supplied with stand for stand assembly then continue as follows:

b. Place 6" Belt & Disc Sander across upper brace. Place a (5/16" - 18 x 1 1/4") bolt with flat washer through top of sander through center cross bracket. Add both lockwasher and nut. Tighten securely.

c. Use same size bolt, washers, and nut to attach front of base to cross bracket. Tighten securely.

**Step 6: ATTACH MOTOR TO STAND**

**NOTE:** Instructions refer to Toolkraft No. 1903 1/2 H.P. motor. Other motors are wired in similar fashion.

**RECOMMENDED MOTOR:** If you have not purchased the Belt and Sander Kit, be certain to obtain a motor which conforms to these minimum specifications. Minimum: 1/2 H.P., 1725 R.P.M., 115 volts, 60HZ, Sleeve Bearing.

**CAUTION:** The Belt and Disc Sander is designed for use with a 1/2 H.P. 1725 R.P.M. motor. Do not use a motor with less than 1/2 rated Horsepower or greater R.P.M. speed. SEE MOTOR AND ELECTRICAL REQUIREMENTS, PAGE 5.

**A. Wiring Motor:**

1. Remove the terminal cover located on side of motor.

2. Connect green ground wire of motor cord to ground screw as shown.

3. Connect both power wires to motor terminals, BEFORE CONNECTING TO POWER SOURCE.

**B. Check Motor Rotation:**

The motor must rotate COUNTERCLOCKWISE when viewed from the Pulley end.

1. Place the motor on a workbench or on the floor.

2. Stand clear of the motor and plug (SEE GROUNDING INSTRUCTIONS, PAGE 5). Notice the rotation of the pulley. If it is not turning COUNTERCLOCKWISE, REMOVE the plug from the power outlet, and change the rotation of the motor according to the instructions furnished with the motor.

**WARNING:** BE ABSOLUTELY CERTAIN YOU HAVE DISCONNECTED PLUG FROM POWER SOURCE BEFORE CONTINUING ASSEMBLY OR CHANGING MOTOR ROTATION.

C. Attach 2 1/2" motor pulley to motor shaft. Do not tighten Allen locking screw.

D. Place v-belt around machine pulley. As you are about to attach motor to stand, place v-belt around motor pulley.

E. Attach motor to outer cross brace and mounting bracket as shown using two 5/16" - 18 x 3/4" bolts, washers and nuts provided.

F. Attach opposite side of motor mount to support bracket with two more 5/16 - 18 x 3/4" bolts, washers, lockwashers and nuts.

G. *Tension:* Adjust angle of v-belt by sliding motor pulley along shaft. When straight, tighten locking set screw in pulley.

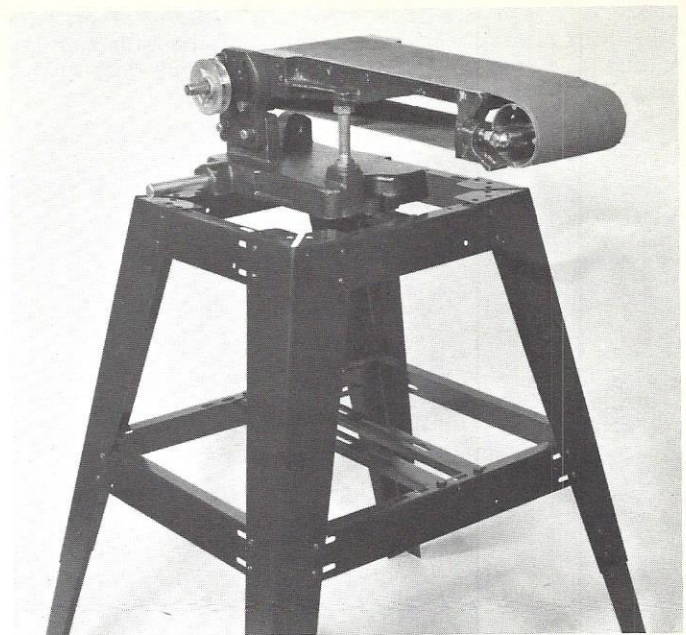


Figure 5

**INSTRUCTIONS FOR MOUNTING & WIRING MOTOR**

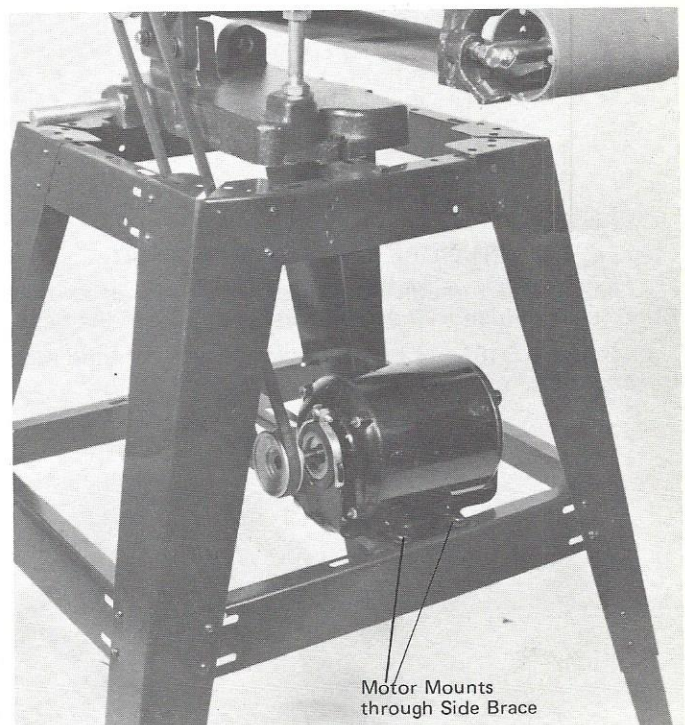
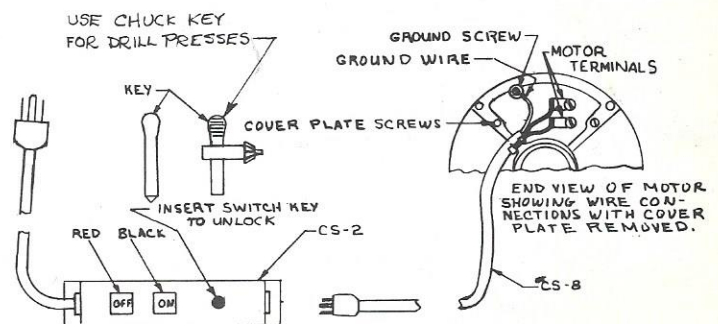


Figure 6



**Step 7:** MOUNT PUSH-BUTTON, LOCKING ON-OFF SWITCH BOX TO STAND, IF YOU HAVE PURCHASED THE BELT AND DISC SANDER COMPLETE WITH MOTOR AND STAND.

a. Use two 10 - 32 bolts with washers and nut (supplied with stand) and mount switch box to upper stand brace of your choice.

b. Plug male of motor cord into female receptacle of switch. BE CERTAIN MOTOR CORD DOES NOT INTERFERE WITH MOVEMENT OF V-BELT.

c. **WARNING:** DO NOT PLUG SWITCH BOX INTO POWER OUTLET UNTIL ASSEMBLY IS COMPLETE.

Operating Switch: 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 silver key into switch.
2. To turn machine on, push black button.
3. To turn OFF, push RED off button. Never leave the machine unattended until it has come to a complete stop.
4. To lock switch remove key.

**WARNING:** FOR YOUR OWN SAFETY, ALWAYS LOCK SWITCH IN OFF POSITION WHEN MACHINE IS NOT IN USE. REMOVE KEY AND KEEP IT IN A SAFE PLACE. ALSO, IN EVENT OF POWER FAILURE TURN MACHINE OFF AND REMOVE KEY. THIS WILL PREVENT THE MACHINE FROM STARTING WHEN POWER IS RESTORED.

**Step 8:** ATTACH STOP FENCE — Insert the fence locking knob through the slot in the fence, and tighten into the tapped hole in the side of the Belt Table.

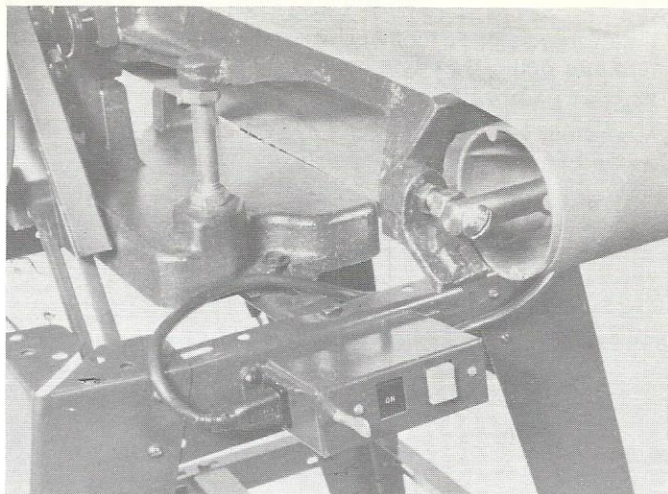


Figure 7

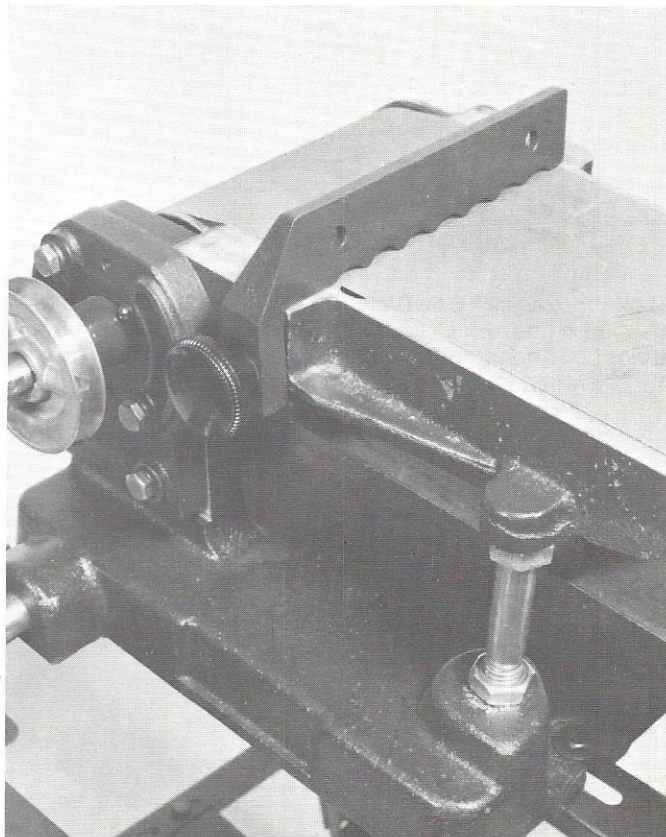


Figure 8

**Step 9: ATTACH UPPER V-BELT GUARD** — Using two 1/4 - 20 screws with lockwasher and plain washer, attach the upper belt guard to base.

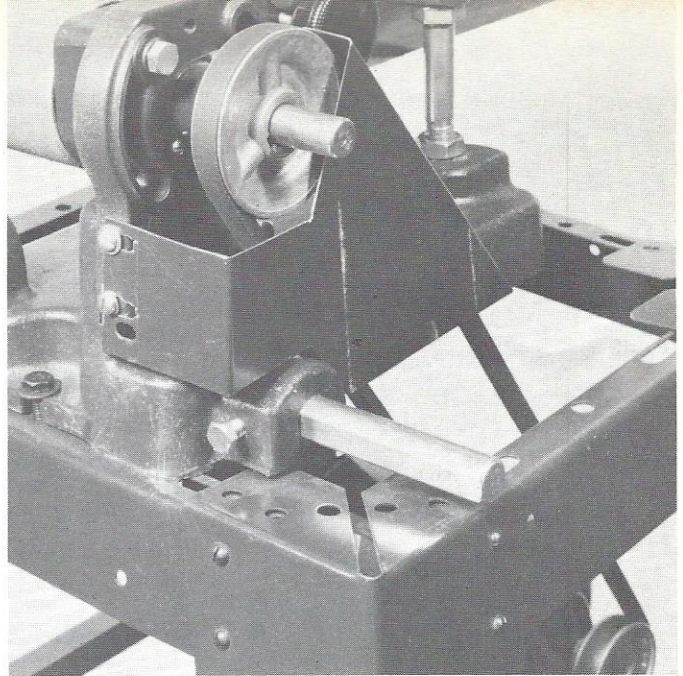


Figure 9

**Step 10: ATTACH LOWER V-BELT GUARD** — If you have purchased the Sander Kit complete with motor and stand, you have been supplied a lower belt and pulley guard. Attach the guard to the stand as shown using 1/4" - 20 x 5/8" bolts, lockwashers and nuts supplied.

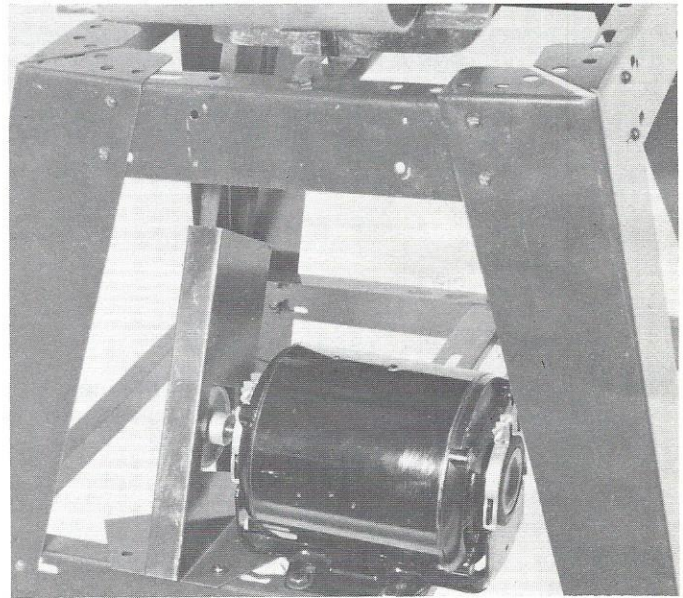
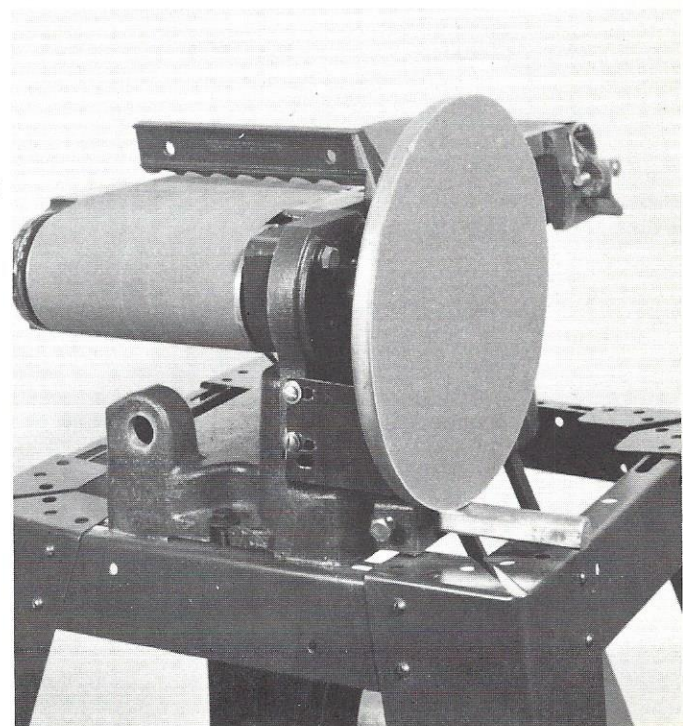


Figure 10

**Step 11: MOUNT SANDING DISC** — Slide the 9" sanding disc onto the drive shaft. Push to rear of shaft until it almost but does not touch pulley. Tighten set screw with Allen wrench provided.

Figure 11



### Step 12: ASSEMBLE WORK TABLE

- a. Place both front and rear trunnion brackets with roll pins into holes of table trunnion as shown.
- b. Using  $\frac{1}{4}$  - 20 x  $\frac{3}{8}$ " bolts and lockwashers assemble both trunnion brackets to bottom of work table. (NOTE: Front trunnion mounts to end of table with step.)
- c. Install locking knob through slot in front trunnion bracket into tapped hole in trunnion. Use two washers — one on each side of bracket.
- d. Fasten tilt pointer with screw to front of trunnion using washer and nut. Do not tighten securely.

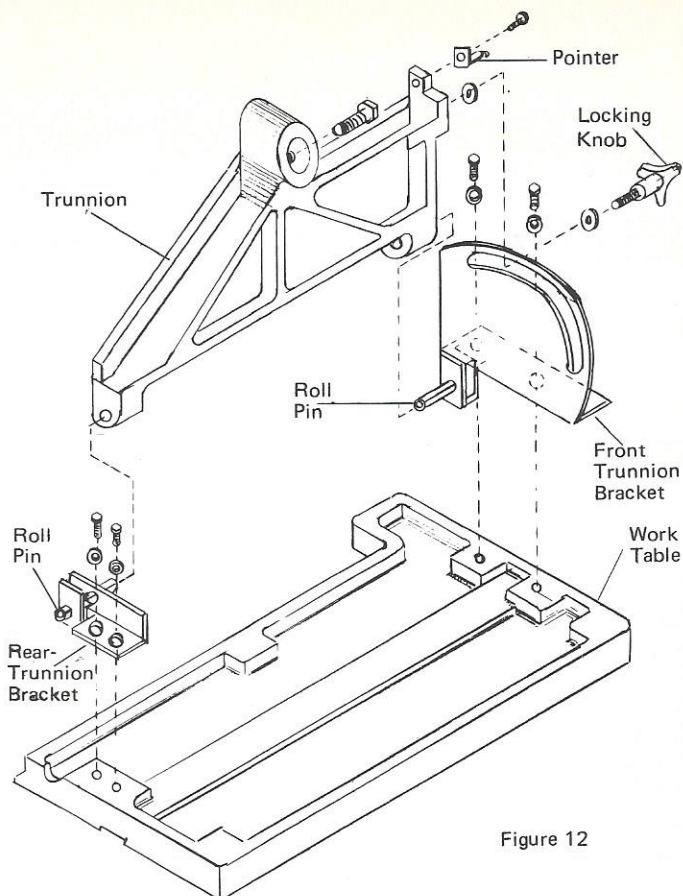


Figure 12

### Step 13: ATTACH WORK TABLE TO SANDER

- a. Slide work table onto support rod until the table just clears the sanding disc. Before tightening locking bolt, rotate disc by hand to be sure it rotates freely.
- b. Set table parallel to floor.

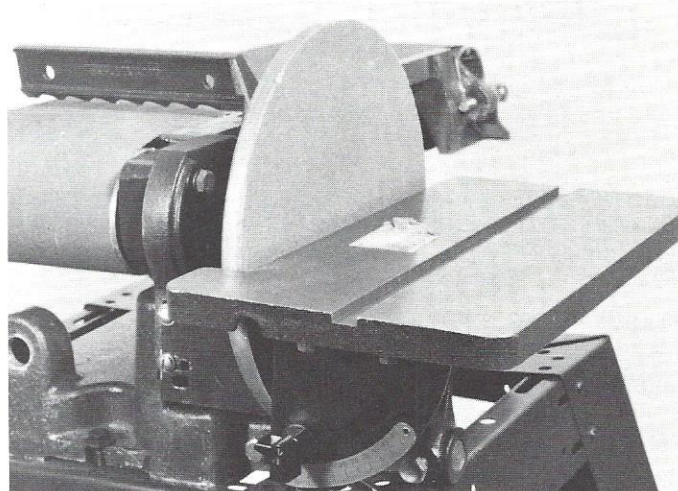


Figure 13

### Step 14: ADJUST WORK TABLE PARALLEL TO DISC —

Check that the distance from the disc to the table is equal at both ends of disc. If not, adjust as follows:

- a. Loosen slightly the four mounting bolts which hold the trunnion brackets to the table. (Underneath)
- b. Shift table on brackets until parallel to disc.
- c. Tighten mounting bolts securely.

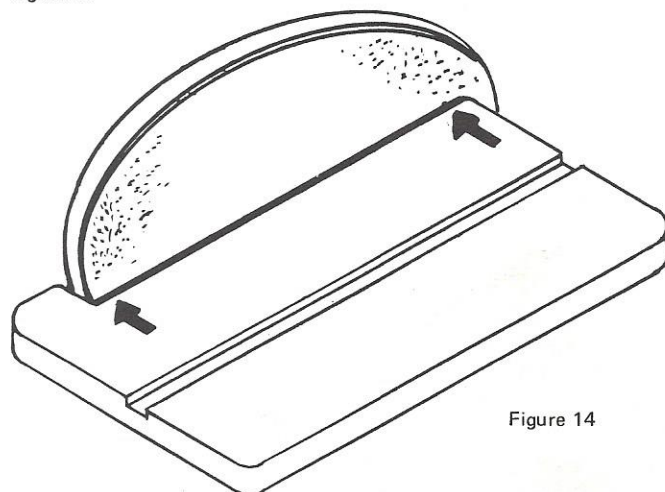


Figure 14

### Step 15: ADJUSTABLE SQUARE

- a. Place a square onto work table with edge against sanding disc.
- b. Loosen locking knob and adjust table square to disc. Tighten locking knob to hold in position.
- c. Set arrow indicator to "0" and tighten screw.

**NOTE:** Tension and Tracking adjustments are made at the factory before packing. It is recommended, however, that you check both adjustments before operating your belt and disc sander. Proceed to TENSION and TRACKING sections for instructions.

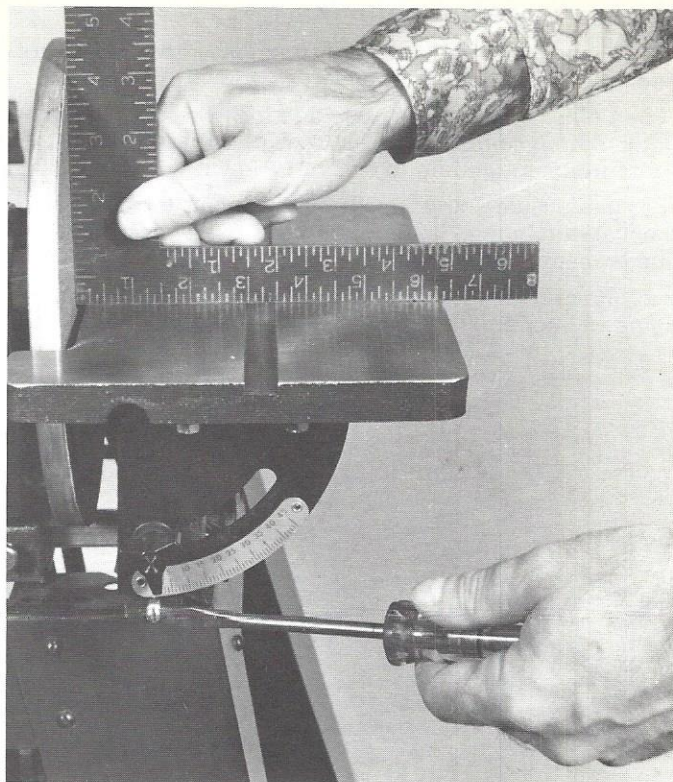


Figure 15

## Adjustments

**CAUTION:** BE CERTAIN TO DISCONNECT PLUG FROM POWER OUTLET BEFORE MAKING ANY ADJUSTMENTS OR REMOVING AND INSTALLING AN ABRASIVE BELT OR DISC.

### 1. REPLACING BELT

a. Loosen the lock nuts on both adjusting screws. Turning the adjusting screws will cause the idler drum to move in or out. When the idler drum is moved outward it puts tension on the belt.

b. Turn the adjusting screws clockwise until the belt is loose enough to slide off.

**NOTE:** On the smooth side of the belt you will find a "directional arrow." The belt must run in the direction of this arrow so the splice does not come apart. The belt must rotate in the direction of the belt stop fence.

### 2. TENSION

a. Turn belt adjusting screws counterclockwise to stretch and apply tension to the belt.

b. Apply tension evenly on both sides of idler drum until belt appears snug but not tight. You should be able to deflect the unsupported backside of belt approximately  $\frac{3}{4}$ ".

c. Hold the disc with your left hand to keep it from turning and push the belt in the direction of the rear drive drum. If belt slips over both pulleys turn both adjusting screws simultaneously a small amount to apply a little more tension.

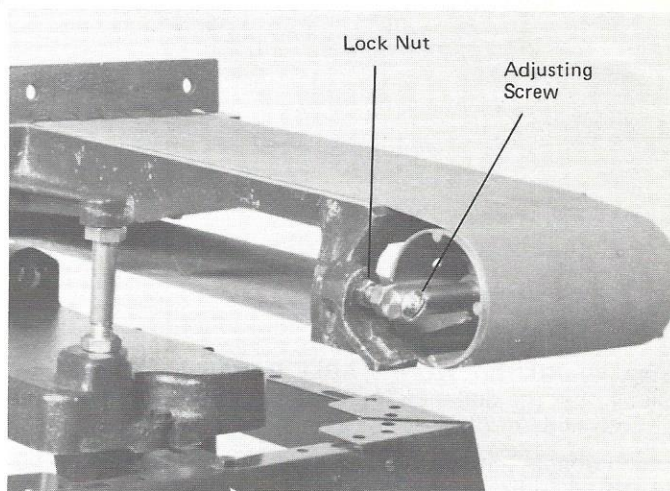


Figure 16

d. Adjust tension so the belt does not slip very easily when pushing it while holding disc.

e. Tighten locking nuts.

f. Plug in power cord. Insert locking key and push switch "ON". Let machine run for about five seconds and then turn off. Notice if the belt, when running, moved to the right or left. If it did not move to the right or left, it is TRACKING properly. If it did move, perform the tracking adjustments.

### 3. TRACKING

*If belt moves off to right:*

- Place screwdriver in adjusting screw on right as you face the machine.
- Turn power switch on and turn right adjusting screw counterclockwise. This will move the belt to the left.
- The belt is tracking properly when it is centered on the drive drum.

*If belt moves off to left:*

- Place screwdriver on adjusting screw on left as you face the machine.
- Turn power switch on and turn left adjusting screw counterclockwise. This will move the belt to the right.
- The belt is tracking properly when it is centered on the drive drum. NOTE: If you have difficulty tracking the belt, apply more tension.

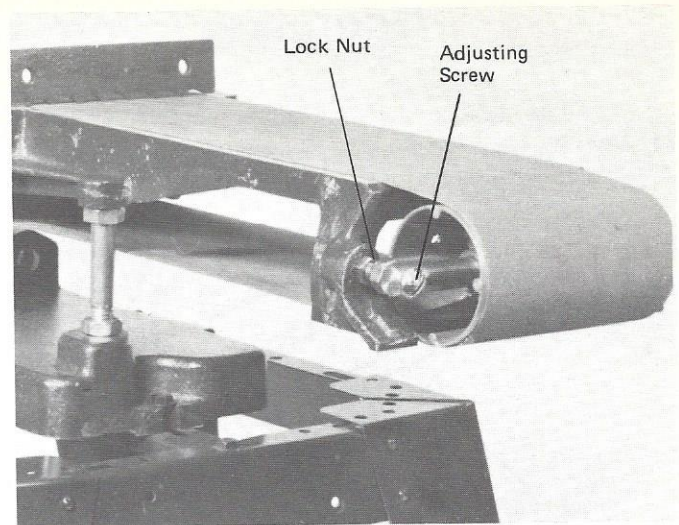


Figure 17

## Placing Belt Table Vertical

Some operations are best performed with belt in vertical position. (See operations.)

To set belt table vertical proceed as follows:

- Remove stop fence from belt table.
- Loosen slightly the two table locking bolts holding the table to the table bracket.
- Tilt table upwards until it stops in full upright position, perpendicular to the floor.

**CAUTION:** This machine is not designed for operation with the belt in any position other than the 90° horizontal or vertical. Intermittent angular positions could pose a hazard as sufficient leverage could result in the table slipping towards the horizontal position.

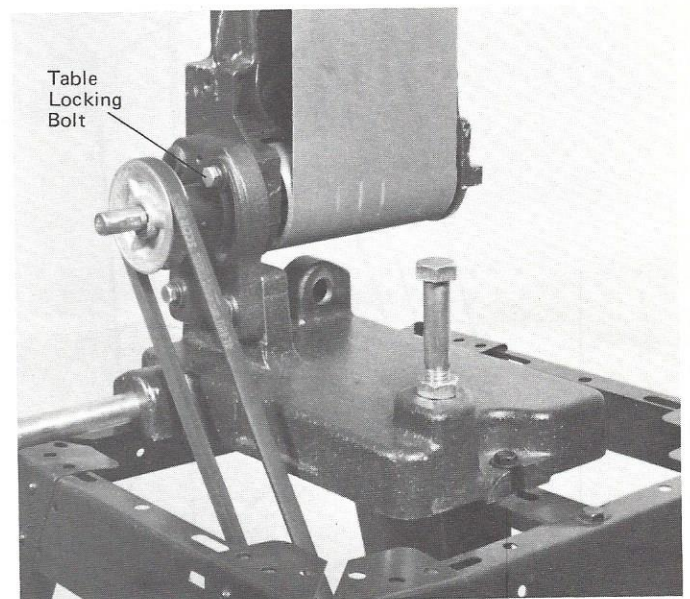


Figure 18

### SWITCHING WORK TABLE POSITION FOR USE WITH BELT

- Loosen work table locking bolt and remove table from disc by sliding off support rod.
- Loosen rod locking bolt and remove rod.
- Insert rod into machined hole beneath upright belt table. Bring rod flush to back side of casting. Be certain flat on shaft faces locking bolt hole. Secure by inserting locking bolt.
- Slide work table onto support rod and lock in place.

**REPLACING DISC** — To change a disc, peel off the worn disc and clean off metal disc with a scraper or putty knife.

Purchase some DISC ADHESIVE in either tube or spray from your local hardware dealer. Apply a generous coating to the metal disc while it is spinning. SHUT OFF MACHINE and press on the new disc firmly by hand.

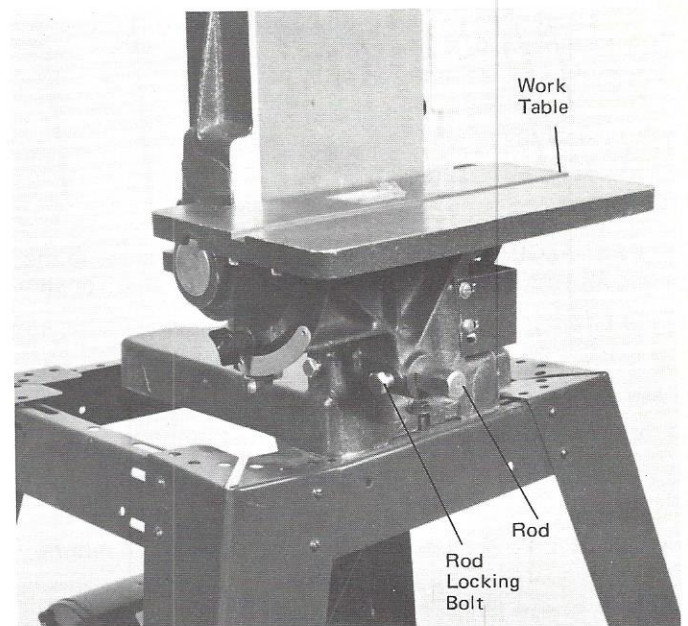


Figure 19

# Operating Controls and Principal Parts

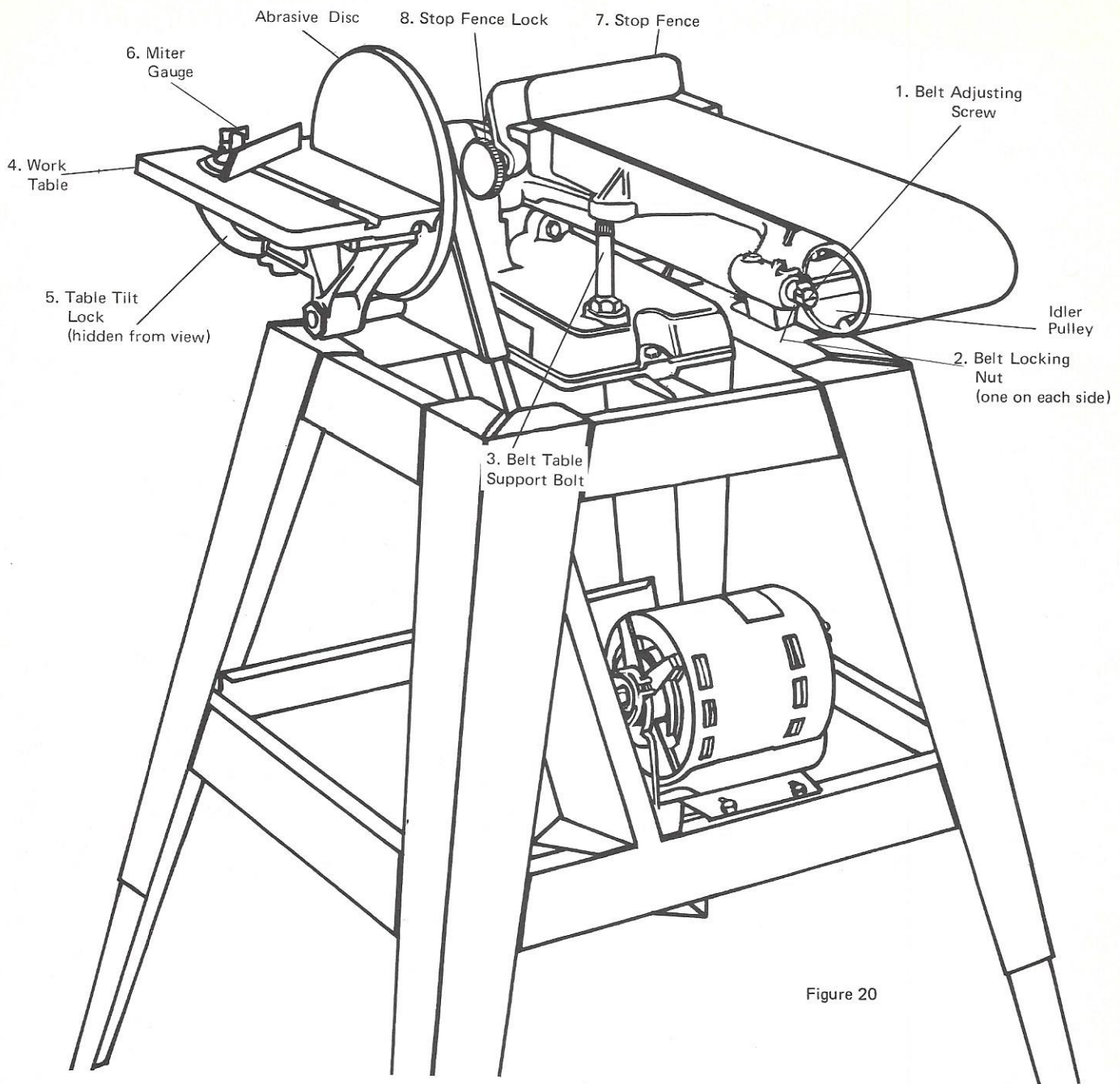


Figure 20

1. **BELT ADJUSTING SCREWS:** These screws cause the idler pulley to move in or out. Moving the pulley out applies tension. Moving the pulley in relieves tension. See Tension and Tracking Adjustments section, page 12.
2. **BELT LOCKING NUT:** After making tension and tracking adjustments, lock these nuts against screw to hold adjustment.
3. **BELT TABLE SUPPORT BOLT:** Adjust this support bolt to make table level. See Assembly, Step 3, Table Leveling, page 7.
4. **WORK TABLE:** Usable with both belt and disc. Tilts to 45°. Used for level sanding.
5. **TABLE TILT LOCK:** Locks work table in any angular position from 0 - 45°. Be sure to lock tight before performing operations.
6. **MITER GAUGE:** Used for precise finishing of miters.
7. **STOP FENCE:** Provided to be used when sanding on abrasive belt. Stops work from being pulled off end of belt. **ALWAYS USE STOP FENCE WHEN POSSIBLE.**
8. **STOP FENCE LOCK:** Locks stop fence in angular position. Be sure to lock tight before beginning sanding operation.

# Operations

**WARNING:** FOR YOUR OWN SAFETY, FOLLOW THE ASSEMBLY INSTRUCTIONS PROVIDED IN THIS MANUAL CAREFULLY BEFORE ATTEMPTING TO PERFORM ANY SANDING OPERATIONS. ALSO, READ AND UNDERSTAND THE SAFETY INSTRUCTIONS BEFORE OPERATING BELT AND DISC SANDER.

**STRAIGHT SANDING** — Hold the work firmly with both hands, keeping fingers away from the belt.

Straight pieces shorter than the belt table are sanded by holding the work piece lightly against the belt. Move it back and forth across the belt, keeping the end butted against the stop fence. This fence prevents the work piece from slipping off the table. **USE EXTRA CAUTION WHEN SANDING THIN PIECES.** When finishing long pieces remove stop fence. Start the work at one end and gradually push it to the other end. Feed it slowly across the width at the same time.

Apply only enough pressure to allow the belt to remove material. If belt stalls and belt pulleys slip while applying moderate pressure, the belt requires more tension. See section Belt Tension, page 12.

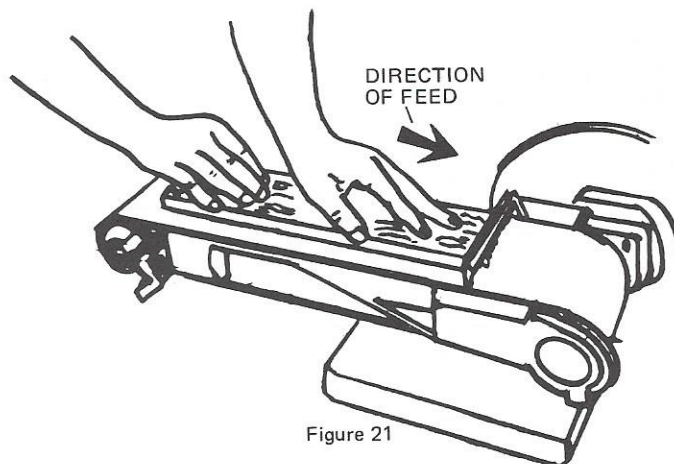


Figure 21

## CONTOUR SANDING

**Inside Contours:** Inside contours larger than  $1\frac{3}{4}$ " radius can be sanded on the drums at either end of the machine. Hold the work firmly, press the start of the contour lightly against the drum on one side and move the work slowly across the drum while moving up the contour against the drum.

**Outside Contours:** Outside curves can be sanded on the belt table, or the unsupported backside of the belt with table in vertical position.

Hold the work firmly. Begin the curve lightly against one side and feed it across the belt towards the other side while moving up the contour of the work piece.

Outside contours on the end of a workpiece can be sanded against the sanding disc. Feed the work lightly against the disc and move it back and forth from the center of the disc to the outside edge.

**NOTE:** DISC SANDING SHOULD BE DONE ON THE SIDE OF THE DISC WHICH REVOLVES DOWNWARD.

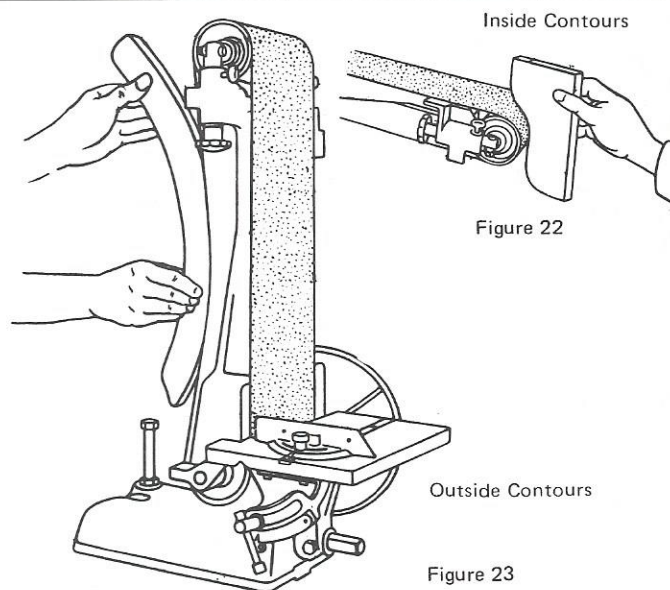


Figure 22

Outside Contours

Figure 23

**DISC SANDING** — Disc sanding should be done on the side of the disc which revolves downward. Applying the workpiece to the "UPSIDE" of the disc could cause it to fly up (kick-back) which could be hazardous.

**USING THE MITER GAUGE** — The miter gauge is very useful in squaring, chamfering, and finish angle sanding.

**When performing disc sanding operations, Use side of Disc which revolves downward.**

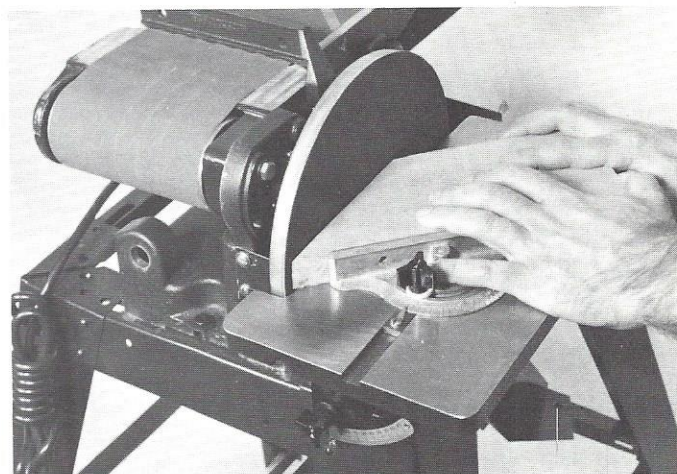


Figure 24

**BEVEL EDGE SANDING** — Bevel edge sanding can be accomplished by setting the work table to the desired angle and feeding the work piece lightly across the disc.

#### HINTS TO BETTER SANDING

1. Read and understand this manual thoroughly. Follow correct assembly procedures, recommended motor, pulley, and R.P.M. requirements. Give careful consideration to safety rules.
2. Hold the work firmly so that it will not be pulled from your hands.
3. Sand with the direction of the grain where possible.
4. Have different grit belts and discs available — Use rough sanding abrasives for heavy stock removal and repeat with finer grits for finer finish, consult section Types of Belt and Disc Abrasives.
5. Select the proper abrasive for the job. Do not use a woodworking belt for heavy metal work or vice versa. Consult section Types of Belt and Disc Abrasives.
6. Move the work — holding it too long in one spot will heat up the belt and the work piece. Sometimes it can heat

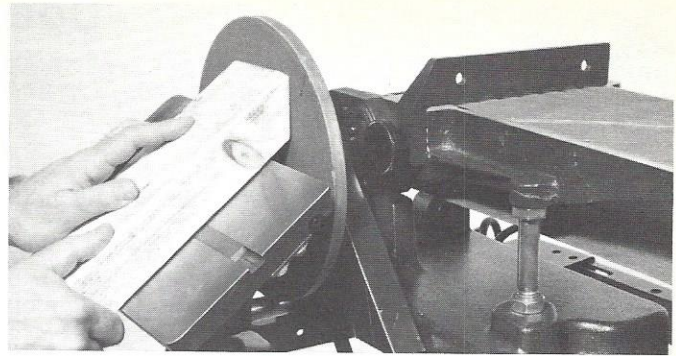


Figure 25

up enough to shorten belt life and burn the work.

7. Feed the work with light pressure. Let the grit cut and remove the stock. A heavy feed will sometimes load up the belt with dust and decrease its outing efficiency.

Heavy feed also causes excess friction and drag which can result in motor fatigue, belt wear, possible kick-back, and overall poor results.

## Maintenance

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

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.

Keep machine clean and free from large accumulations of dust.

For motor maintenance, follow instructions furnished with motor.

A coat of automobile-type wax applied to the work table

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 wax and deposit it on the pulleys, causing the belt to slip.

**WARNING:** DO NOT ATTACH A VACUUM CLEANING DEVICE WHEN FINISHING IRON OR STEEL. THE SPARKS COULD IGNITE THE DEBRIS AND CAUSE A FIRE.

**LUBRICATION** — The drive pulley bearings are SEALED BALL BEARINGS they require no further lubrication.

The IDLER pulley bearings are oil-impregnated bronze type bearings. These bearings should be oiled every 2-3 months by placing a few drops of S.A.E. #30 oil on the shaft ends next to the bearings. The bearings will absorb the oil, hold it, and keep the shaft lubricated.

# TOOLKRAFT

"LIMITED" 5 YEAR WARRANTY

All current model TOOLKRAFT power tools are warranted to the original purchaser thereof to be free from defects in material used in their manufacture or workmanship for a period of five years from the date of initial retail purchase. This warranty does not cover any parts which have been subjected to misuse, abuse, alteration, overload, accident or normal wear of moving parts. Any machine or part thereof (except motors and speed controls) that is returned to us, together with a sales slip or other proof of date of initial retail purchase, postage prepaid, will be repaired or replaced without cost if the unit is found defective. Such repairs or replacement will be made within a reasonable time (not exceeding 60 days following receipt by Toolkraft Corporation).

**MOTOR WARRANTY:** All built-in motors are subject to the same conditions as machines, but are warranted to the original purchaser thereof only one year from the date of initial retail purchase. During this period, any TOOLKRAFT motor found to be defective will be replaced or repaired at no charge.

See below for Motortool Exchange Policy. Always refer to model and serial number.

**SOLID STATE CONTROLS:** Original equipment solid state controls are subject to the limitations listed above and are warranted to the original purchaser thereof to be free of defects in material or workmanship for a period of one year from the date of initial retail purchase. The exchange program for these controls is listed below.

Only Toolkraft Corporation is authorized to perform warranty service to Toolkraft products.

This warranty gives you specific legal rights. You also have implied warranty rights. In the event you have a problem with warranty service or performance, you may be able to go to Small Claims Court, a State Court or a Federal District Court.

#### TOOLKRAFT EXCHANGE PROGRAM FOR BUILT-IN MOTORS AND SOLID STATE CONTROL BOARDS

If service is necessary anytime after one year you may:

1. Return motor or speed control board for repair estimate.
2. Return your motor with check or money order for \$29.90 plus \$1.50 postage and request for a replacement motor. Drill-Router motor and gear train assembly exchange — \$49.95 plus \$1.50 postage.
3. Return your solid state control with check or money order for \$24.90 and your request for a replacement control board.

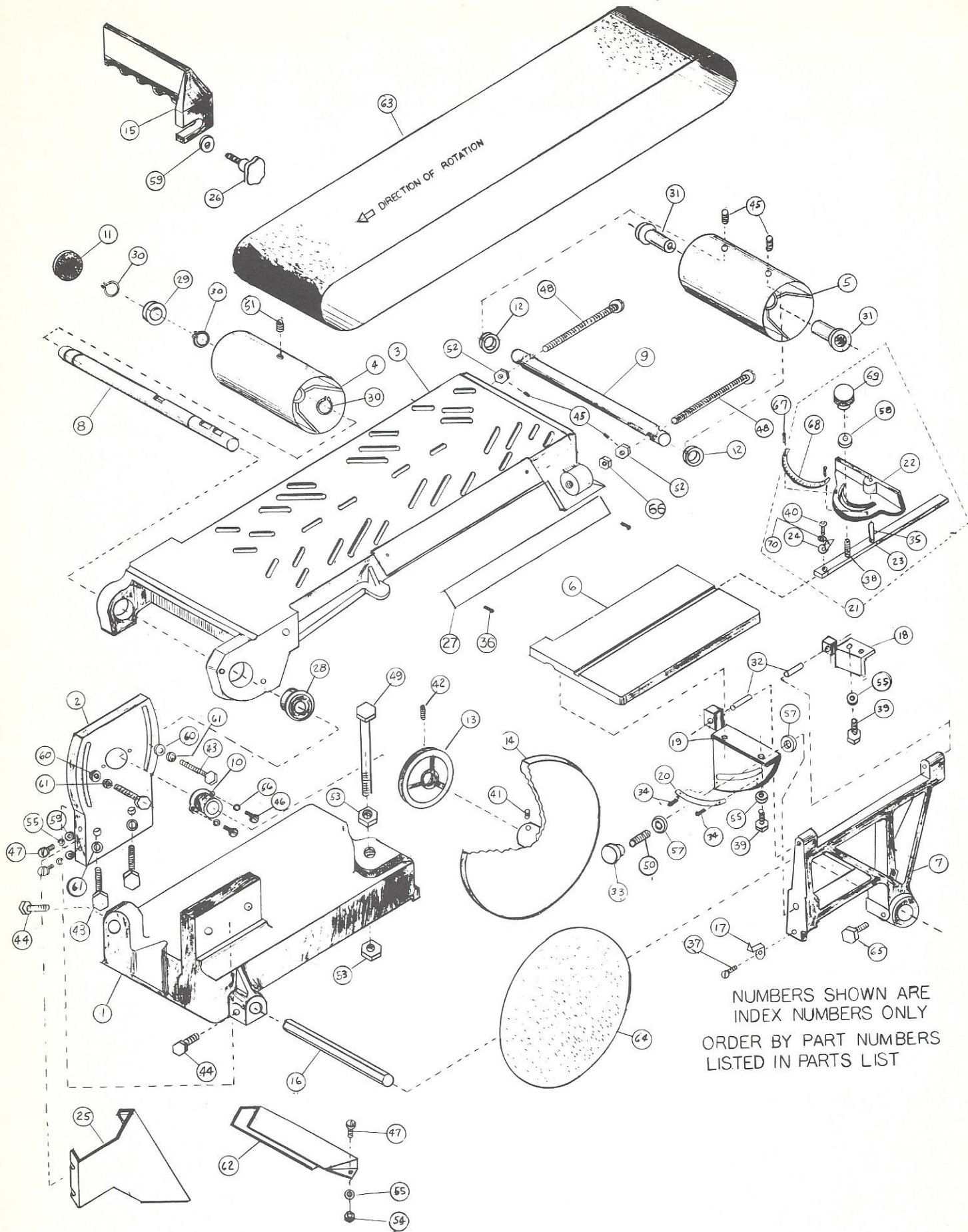
Send motor or control board to:  
**TOOLKRAFT CORPORATION,**

700 Plainfield Street  
Chicopee, Massachusetts 01013

Attention: Customer Service Department  
Dept. XTB



# TOOLKRAFT 6" BELT AND DISC SANDER, MODEL 4340



NUMBERS SHOWN ARE  
INDEX NUMBERS ONLY  
ORDER BY PART NUMBERS  
LISTED IN PARTS LIST

# PARTS LIST — TOOLKRAFT MODEL 4340 BELT — DISC SANDER

INDEX NO.	PART NO.	DESCRIPTION	UNIT PER ASS'Y	PRICE EACH	INDEX NO.	PART NO.	DESCRIPTION	UNIT PER ASS'Y	PRICE EACH
1	340-1	Base	1	\$16.75	41	XS-58	Screw, Socket HD		
2	340-2	Bracket — Table Support	1	8.50	42	XS-59	Screw Socket HD	1	.50
3	340-8	Table — Belt	1	29.90					
4	340-10	Drum — Drive	1	8.50	43	XS-72	Screw HX HD	1	.50
5	335-11	Drum Driven W/Bearing	1	11.75					
6	335-27	Table — Disc	1	11.80	44	XS-70	Screw HX HD	4	.50
7	335-30	Support	1	10.25					
8	340-5	Shaft Drive	1	6.25	45	XS-173	Screw Socket Hubless	2	.50
9	340-6	Shaft Driven	1	5.00					
10	340-9	Cup-Cover Drive Shaft	1	1.50	46	XS-259	Screw RD HD 6 - 32 x	4	.50
11	350B-18	Plug-Button	1	.95					
12	350-7	Collar	2	1.25	47	XS-86	Screw Pan HD	2	.50
13	P-300-58	Pulley-Hubless	1	3.75					
14	335-23	Disc-Sanding	1	14.75	48	XS-397	Screw RD HD	4	.50
15	340-4	Fence Belt	1	5.25					
16	335-47	Rod Support	1	2.00	49	XS-411	Screw HX HD	2	.50
17	335-46	Pointer-Tilt	1	.75					
18	311-49	Trunnion-Rear	1	2.25	50	XS-454	Screw, Slotted Headless	1	.50
19	311-48	Trunnion-Front	1						
20	335-45	Scale-Tilt	1	.75	51	XS-482	Screw Socket Set	1	.50
21	32A12-157	Miter Gauge Assembly	1	12.00					
22	32-20	Head Miter	1	6.20	52	AI-144	Nut, Lock 3/8 - 16	2	.50
23	32A12-60	Bar Miter	1	4.25	53	XN-374	Nut, HEX Jam 5/8 - 11	2	.50
24	36B11-A1	Pointer	1	.50	54	XW-213	Nut, HEX 1/4 - 20	2	.50
25	340-11	Guard-Pulley Mach.	1	5.95	55	XW-407	Lockwasher — 1/4"	8	.50
26	28-4	Knob	1	1.75	56	XW-413	Lockwasher #6	2	.50
27	340-12	Plate, Mod & Set Number	1	.50	57	XW-421	Washer 1/4	1	.50
28	XB-625-R	Bearing, Ball W/Ring	1	4.75	58	XW-433	Washer Fiber	1	.50
29	XB-652	Bearing, Ball W/O Ring	1	4.75	59	XW-421	Washer 1/4	3	.50
30	XB-1236	Ring Retaining	3	3.50	60	XW-450	Washer Plain 5/16	2	.50
31	XB-637	Bearing, B2	2	1.75	61	XW-451	Lockwasher 5/16	4	.50
32	XM-896	Pin, Roll 1/4 x 1	2	.50	62	335-192	Pulley Guard (on 4341 only)	1	5.95
33	XM-1201	Knob, Tilt Lock	1	.50	63	Belt	(See Accessories, Page 20)	1	4.99
34	XM-951	Eyelet	2	.50	65	XS-123	Screw HX HD		
35	XM-911	Pin-Miter Pivot	1	.50					
36	XS-1	Screw Drive #2 Type U	2	.50	66	XN-325	Nut Jam 3/8 - 16	1	.50
37	XS-3	Screw RD HD			67	XS-1	Drive Screw P.K.	2	.50
		8 - 32 x 1/4	1	.50	68	32-21	Scale	1	1.25
38	XS-205	Screw - 1/4 - 20 x 1 1/4	1	.50	69	AI-108	Knob	1	.50
39	XS-29	Screw HX HD			70	XW-400	Washer #10	1	.50
		1/4 - 20 x 3/8	4	.50					
40	XS-17	Screw, RD HD							
		10 - 32 x 1/4	1	.50					

Prices Subject to Change without Notice.

## HOW TO ORDER PARTS

All parts listed can be ordered from the factory. Always be sure to submit the following when ordering parts:

1. Model Number and Serial Number of your machine.
2. Name and Part Number of Part or Parts you are ordering.
3. Include check or money order. We are sorry but C.O.D. orders cannot be accepted.

# Trouble Shooting

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

## GENERAL

Problem	Probable Cause	Solution
Machine slows down when finishing.	<ol style="list-style-type: none"> <li>1. V-Belt too loose</li> <li>2. Applying too much pressure to work piece.</li> <li>3. Too much tension on abrasive belt.</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase belt tension: See Assembly Section, page 12.</li> <li>2. Ease up on pressure.</li> <li>3. Adjust tension. See Assembly Section, Belt Tension, page 12.</li> </ol>
Abrasive Belt Slips	<ol style="list-style-type: none"> <li>1. Not enough tension.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tension. See Assembly Section, Belt Tension, page 12.</li> </ol>
Abrasive Belt runs off pulleys	<ol style="list-style-type: none"> <li>1. Improper Tracking</li> <li>2. Not enough tension.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tracking. See Assembly Section, Belt Tracking, page 13.</li> <li>2. Adjust tension. See Assembly Section, Belt Tension, page 12.</li> </ol>
Wood burns while finishing	<ol style="list-style-type: none"> <li>1. Abrasive disc or belt is glazed with sap.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace disc or belt. See page 14.</li> </ol>

## MOTOR

CAUTION: ALWAYS UNPLUG UNIT WHEN CHECKING ELECTRICAL CONNECTIONS

Problem	Probable Cause	Solution
Motor will not run	<ol style="list-style-type: none"> <li>1. Circuit breaker (fuse) open</li> <li>2. Low voltage</li> <li>3. On-off switch</li> <li>4. Loose or broken connection in motor compartment or switch terminals</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset circuit breaker or replace fuse</li> <li>2. Check outlet for proper voltage</li> <li>3. Bypass on-off switch and have service technician connect motor direct to power source</li> <li>4. Check all connections in motor compartment and switch</li> </ol>
Motor will not run and/or circuit breakers (fuses) "blow"	<ol style="list-style-type: none"> <li>1. Power line overloaded with lights, appliances and other motors</li> <li>2. Short circuit in line cord or plug</li> <li>3. Short circuit in junction box or loose connections</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce line load</li> <li>2. Inspect cord and plug for damaged insulation or shorted wires</li> <li>3. Check all connections in motor compartment and switch</li> </ol>
Motor starts slowly, fails to develop full power or speed and/or stalls easily	<ol style="list-style-type: none"> <li>1. Power line overloaded with lights, appliances and other motors</li> <li>2. Voltage too low</li> <li>3. Undersize wire circuit (extension cord) too long</li> <li>4. Incorrect circuit breaker (fuse) in line</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce line load</li> <li>2. Check and correct if necessary any low line voltage condition</li> <li>3. Increase wire size and/or length of wiring, page 5.</li> <li>4. Replace fuses or circuit breakers with proper capacity units</li> </ol>
Motor overheated	<ol style="list-style-type: none"> <li>1. Motor overloaded, (may be undersize for particular operation)</li> <li>2. Improper cooling due to restricted air circulation through motor usually caused by buildup of sawdust, etc.</li> <li>3. Units with certain types of bearings require occasional oiling</li> </ol>	<ol style="list-style-type: none"> <li>1. Correct overload condition. Do not exceed listed capacities of machine. See page 5.</li> <li>2. Clean out sawdust to provide air circulation through motor</li> <li>3. Check both ends of motor for oil holes, apply a few drops of oil</li> </ol>

# Accessories

A complete line of Toolkraft accessories is available to increase the versatility of your machine.  
Find them at your local Toolkraft selling dealer.

**MOTOR** — If you have not purchased the Belt and Disc Sander Kit, you will need to purchase a motor, cord set, motor pulley and V-Belt to operate your machine.

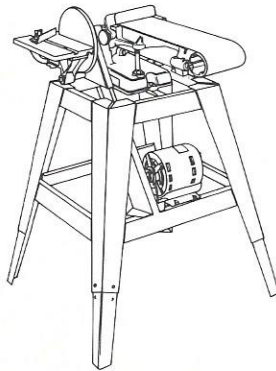
The Toolkraft Belt and Disc Sander Model 4340 requires a motor minimum 1/2 H.P. with a 1725 R.P.M. speed. See motor requirements (page 5).

**Model No. 1903** 1/2 H.P., 1725 R.P.M.,  
115 volt, 60HZ, 5/8" shaft ..... \$69.99

**ALSO PURCHASE TO COMPLETE KIT:**

- No. 1913** Push-Button Locking Switch Kit ..... \$12.99
- No. 1918** 2 1/2 Motor Pulley 5/8" Bore ..... \$ 3.25
- No. 1917** 2 1/2 Motor Pulley 1/2" Bore (other motors) ..... \$ 3.25
- No. 1928** 48" V-Belt .. (if you purchase 1900 stand) ..... \$ 6.35

**STAND** — A sturdy steel stand is available. The stand not only increases mobility and provides rigid support, but also guarantees proper motor mounting and V-Belt tension.



**Model No. 1900** Stand ..... \$34.95

## TYPES OF BELT AND DISC ABRASIVES

Abrasive belts are available in many variations of abrasive, grit size, backings, coatings and bonds.

Abrasives are selected for the properties best suited to do a particular sanding job. The important properties of the abrasive are hardness, toughness, and shape. Hardness is the factor determining the ability of the abrasive to penetrate the surface of the work. Toughness refers to the abrasive's ability to stand up to wear without breaking down. Shape refers to the physical appearance of the abrasive crystals. Below is a chart showing the five principal abrasives, their hardness as compared to diamond which is rated 10, their toughness as based on the ability to stand up under a given pressure, and their shape.

	Hardness	Toughness	Shape
Flint .....	6.8 to 7.0	20%	Light Wedges
Garnet .....	7.5 to 8.5	60%	Light Wedges
Emery .....	8.5 to 9.0	80%	Round and Blocky
Aluminum Oxide .....	9.4	75%	Heavy Wedges
Silicon Carbide .....	9.6	55%	Sharp Wedges and Slivery

Silicon carbide or aluminum oxide grit will suffice for most sanding operations. The shape of the silicon carbide crystal is long and concave with very sharp cutting edges. It makes it a good cutter for soft yielding surfaces which would pull and tear on a less sharp crystal. It is a very hard

material but very brittle and tends to crush under heavy pressure. We can't therefore recommend it for use on soft metals (brass, bronze, lead, aluminum); finished surfaces (lacquers, enamels, putty glaze, baked japans); hard surface, low tensile strength materials (glass, stone, tile); and soft gummy materials (plastic, hard rubber, leather, etc.).

Aluminum oxide although not as sharp as silicon carbide is extremely tougher and almost as hard. For this reason it will wear much better than silicon carbide. It is the most popular general use belt today in metal working shops. Also because of its toughness it will withstand the shock of impact much better than garnet or silicon carbide in wood working machine applications.

Grit refers to the actual size of the abrasive crystals. For most work the below listed grit sizes will suffice. However, very fine grits up to 600 are available in silicon carbide and up to 400 or (10/0) in aluminum oxide.

FINE	(150 4/0)	(120 3/0)	(100 2/0)
MEDIUM	(80 0)	(60 1/2)	(50 1)
COARSE	(40 1 1/2)	(36 2)	(24 3)

The highest number is the finest grit and the lowest the most coarse.

Backings are available in either paper or cloth in varying thicknesses or combinations. For heavy, rough cutting or for cutting metal with sharp edges, a heavy cloth backing should be used. For light work or flexible belt sanding, a light backing should be used. Combination backings of paper and cloth are available for special applications. Paper belts and discs are less expensive, but do not stand up as well as cloth backed belts.

Coatings are either open or closed. An open coating is one where each crystal stands by itself with a spacing between. A closed coating is one where each crystal is against another one. Open coatings are suitable for flexible work or for soft gummy work which tends to clog a belt easily. A closed coating is best suited for material which is tough and hard.

The bond or adhesive which holds the grit to the cloth is available as a waterproof bond or a water soluble bond. A waterproof bond would be necessary for sanding parts which were wet.

After conducting numerous tests of different belts, TOOLKRAFT has selected an aluminum oxide grit, medium weight cloth back belt, in various grits as its standard for doing most home workshop jobs.

## TOOLKRAFT BELTS AND DISCS

### BELTS

- No. 1307 6" Abrs. Belt — Coarse ..... \$4.99
- No. 1308 6" Abrs. Belt — Medium ..... \$4.99
- No. 1309 6" Abrs. Belt — Fine ..... \$4.99

### DISCS

- No. 1310 9" Abrs. Disc Asst. (Pkg. 6) —  
2 Fine, 2 Med., 2 Coarse ..... \$4.99
- No. 1311 9" Abrs. Disc — Coarse (Pkg. 6) ..... \$4.99
- No. 1312 9" Abrs. Disc — Med. (Pkg. 6) ..... \$4.99
- No. 1313 9" Abrs. Disc — Fine (Pkg. 6) ..... \$4.99

Prices Subject to Change without Notice