

# **OPERATING INSTRUCTIONS AND PARTS LIST FOR**

## **BELT AND DISC SANDER 6 INCH**

### **MODEL NUMBER 103.0803**

This is the model number of your Sander. It will be found on a plate on the right side of the base. Always mention this model number when communicating with us regarding your Sander or when ordering parts.

This list is valuable. It will assure your being able to obtain proper parts service at all times. We suggest you keep it with other valuable papers.

**SEARS, ROEBUCK and CO.**

# OPERATING INSTRUCTIONS FOR 6 INCH BELT AND DISC SANDER MODEL 103.0803

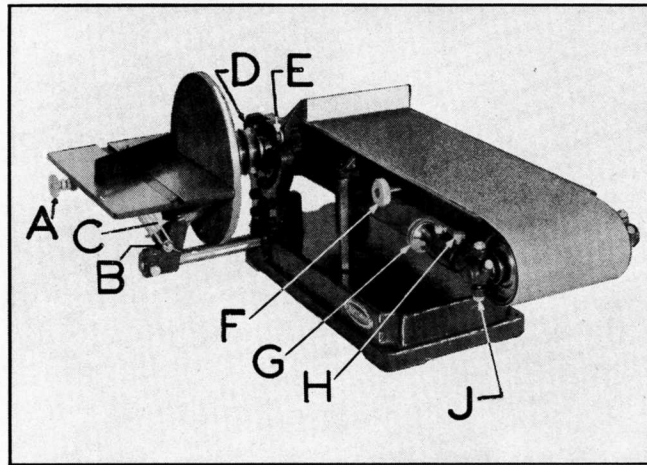


Fig. 1

## INSTALLATION

This sander has been designed so that it may be driven from behind or below the belt table. The direction of rotation of the sanding belt must be from the idler pulley to the drive pulley across the top of the machine.

Bolt the sander securely to its stand. This is important because of the considerable pull exerted by the motor when the sander is operated at maximum capacity.

## LUBRICATION

Do not run this sander until oil reservoirs on all bearings have been filled with a good grade of machine oil similar to S.A.E. No. 20. To fill oil reservoirs easily and completely, use an oil can with a small spout, or a pressure oil can in order to displace air in reservoirs.

Always keep oil reservoirs filled with oil.

This tool is equipped with new type bronze bearings which meter filtered oil to the moving parts. These bearings have invisible pores that become saturated with oil. The heat generated by the turning of the shaft causes the lubricant in the reservoir to automatically flow through these bronze bearings, thus lubricating the moving shaft. When the shaft is at rest, the oil is absorbed by the bearing.

Do not drill holes through the bearings to feed oil to the shaft, as it is not necessary.

## CONTROLS

A micrometer adjustment of the work table is obtained with the knurled knob. (A in Fig. 1). The wing nuts (B) lock the work table support arms at the angle chosen. The screw (C) in the work table support is adjustable and supports the work table when set at 45°. The bolts (D) lock the belt table at any angle up to 90°. After setting the fence square with the belt table clamp with the bolt (E). The knurled lock stud assembly (F) holds the tension which is set with the

lever on the opposite side. The knobs (G) adjust the tension independently on the bearings on either side of the idler pulley. The bolts (H) lock the tensioning screws when the belt has been made to track properly. The screws (J) are adjustable to keep the idler pulley shaft parallel with the drive shaft.

## ADJUSTMENTS

### Belt Tension

When replacing the sanding belt loosen the lock stud (E in Fig. 2) and move the tensioner lever to position (A). This will pull the idler pulley in to position (B). Slip on the belt and move lever to position (C). This will force idler pulley to position (D) thus tightening the belt. The belt should be set at just enough tension to give the belt the slack shown in the lower half of Fig. 2.

**CAUTION: DO NOT RUN THE SANDER WITH TIGHT SANDING BELTS.**

If moving the lever does not give enough travel on the idler pulley, check the set screw in the idler pulley bracket beneath the belt table. Tighten the square head set screw on the tensioner rack with only  $\frac{1}{16}$ " of the rack extending out of the casting.

Any additional tension changes required can be obtained by moving the adjusting knobs (G in Fig. 1) the same distance on both sides.

### Adjustment of Belt

After the belt has been given the proper amount of tension, start the sander with the motor. The belt must track in the center of both the idler and drive pulleys. If belt tends to creep to either side loosen the lock screws (H in Fig. 1) and tighten the knob (G) on the side toward which the belt is moving. When belt tracks properly tighten both bolts (H).

### Belt Table

The belt table may be varied from its normal horizontal position to a vertical position by loosening the

# OPERATING INSTRUCTIONS (CONT.)

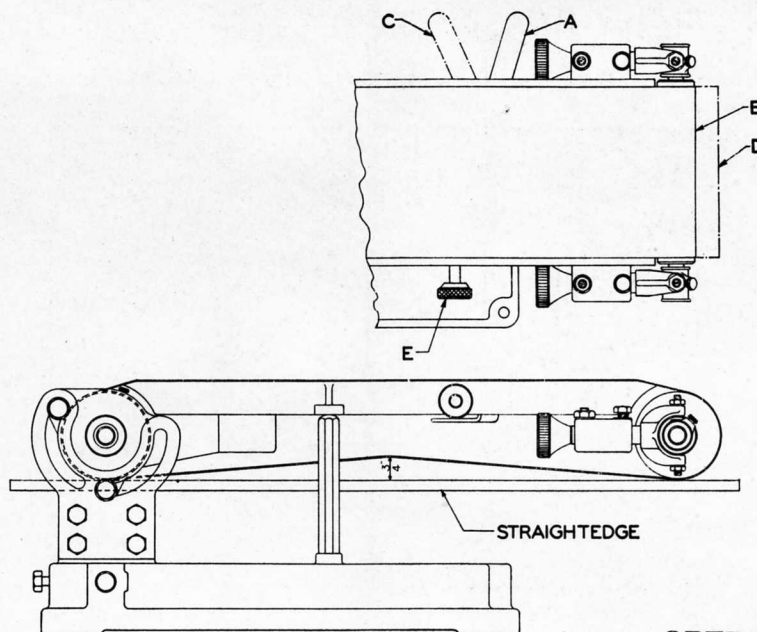


Fig. 2

## OPERATION

screws (D in Fig. 1). Both screws must be tightened with a wrench when the desired angle is reached.

### Work Table

The adjustable work table can be placed in two positions on the machine—in front of sanding disc or in front of the sanding belt when sanding belt is in a vertical position. It can also be used in the latter location as a rest when the sander is operated horizontally.

To adjust the table to make a right angle with the disc hold a try square with one leg against the disc and one leg on the table. Screw the knob (A in Fig. 1) in or out until the square rests evenly against both surfaces. Bring the inside nut on the stud against the table and then tighten the second nut securely against the inner nut.

To adjust the table at the lower stop unscrew the knob until the table rests on the work table support. Using a bevel set at 45° with one side against the disc and the other on the table, turn the square head set screw in the yoke support in or out until the two sides of the bevel rest on both surfaces. Then tighten the locking nut.

### Protractor

The adjustable pointer may be reset at any time that the protractor becomes out of adjustment. To correct the reading loosen the knurled knob, hold head and bar against a try square and retighten the knob. Then reset the pointer to the 90° mark.

### SPEED

The correct operating range for this sander is from 1200 to 1600 R.P.M. Use 2" diameter hubless pulleys to obtain this speed with a 1750 R.P.M. motor.

A 1750 R.P.M., 1/3 H.P. motor is recommended for ordinary work. A 1/2 H.P. motor is recommended for heavy duty on production operations.

The idler pulley on this sander is rubber covered and can be used for drum sanding as shown in Fig. 3. Long pieces may be finished on this sander by removing the fence and, if necessary, the disc.

The sanding of metals or plastics require aluminum oxide belts. The belt supplied on the tool is for use on wood.

It is preferable to sand with the grain. Cross grain sanding will show sanding marks. To produce a fine finish it is advisable to oscillate the material across the belt slowly. In this way marks in either direction, lengthwise or across, the grain, are reduced to a minimum.

The lower side of the belt may be used as a flexible belt sander, particularly with the table in a vertical position. For butt sanding on the belt use the fence as a stop. Both straight and compound angles

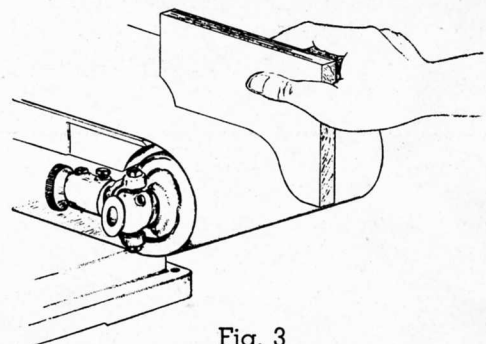


Fig. 3

may be sanded with the aid of the protractor and the angle adjustment of the work table.

To replace the abrasive on the disc remove the complete disc and soak in hot water. The paper can then be peeled off. Be sure metal disc is dry before cementing the new abrasive.

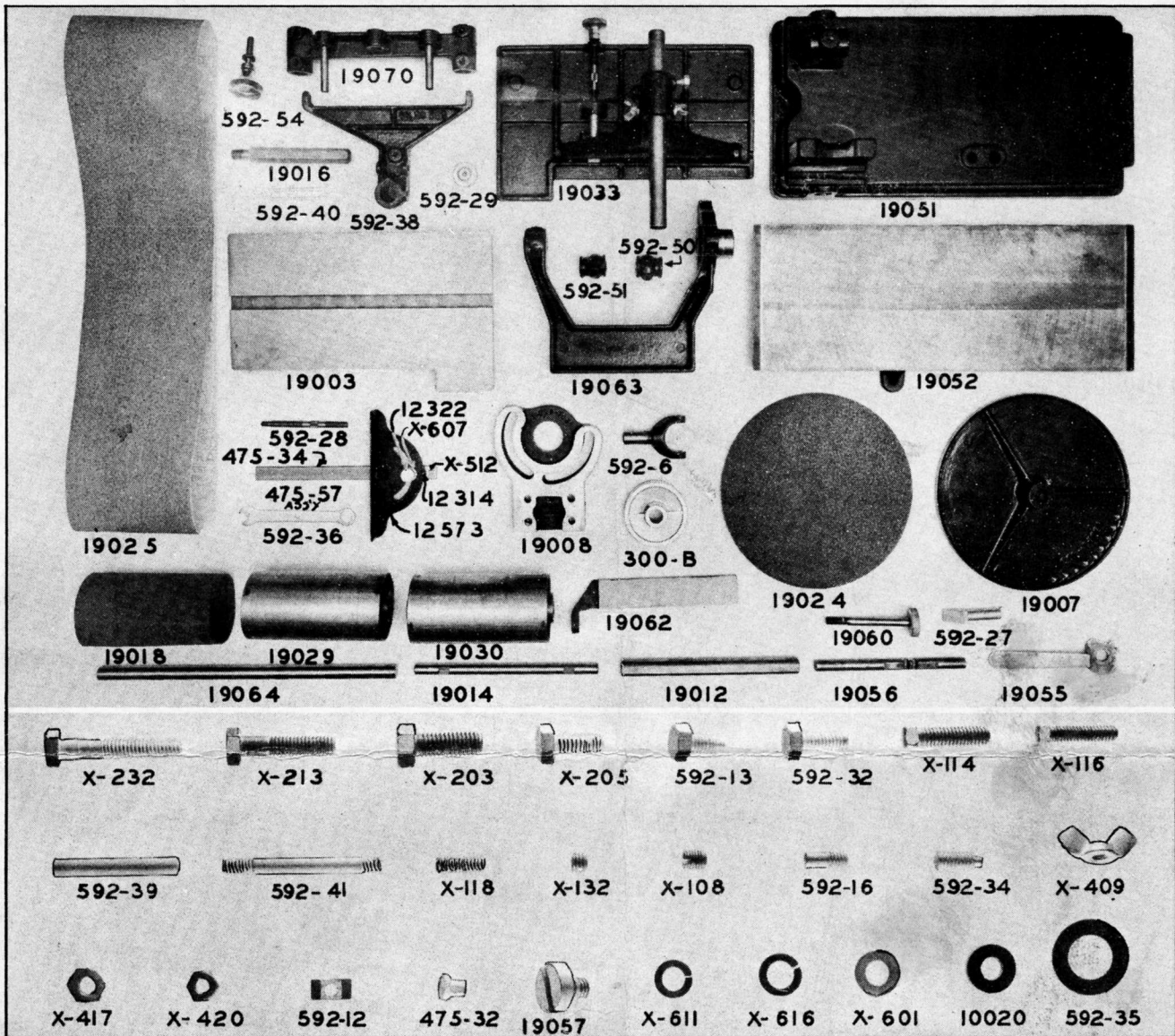
While a guard for the "V" belt is not supplied, due to the variety of possible installations, it is strongly recommended that suitable protection be provided by the operator.



## HOW TO ORDER PARTS FOR MODEL NUMBER 103.0803 BELT AND DISC SANDER

All parts listed here may be ordered through any Sears retail or mail order store. Parts are shipped prepaid. When ordering repair parts, always give the following information.

1. The Part Number in this list.
2. The Part Name and Price in this list.
3. The Model Number which is 103.0803 and will be found on a plate on the right side of the base.



Part No.	Name of Part	Selling Price
475-32	Oil Hole Plug	.15
475-34	Protractor Bar	.35
475-57	Protractor Assembly Complete	1.00
592-6	Pulley Support Yoke	.50
592-12	Yoke Screw Retainer	.25
592-13	Yoke Lock Screw	.25
592-16	Work Table Pivot Pin	.25
592-27	Work Table Adjusting Wedge	.25
592-28	Work Table Adjusting Screw	.25
592-29	Table Adjusting Screw Knob	.25
592-32	Work Table Arm Lock Screw, Work Table Bar Support Lock Screw	.15
592-34	Retainer Lock Screw	.15
592-35	Drive Shaft Washer	.15
592-36	Wrench	.25
592-38	Work Table Support	1.00
592-39	Support Arm Pin	.25
592-40	Work Table Support Arm	.25
592-41	Support Arm Lock Stud	.25
592-50	Idler Bearing Assembly (right hand)	.35
592-51	Idler Bearing Assembly (left hand)	.35
592-54	Yoke Adjusting Knob Assembly	.35
10020	Table Support Arm Clamp Bolt Washer	.25
12314	Protractor Bar Pointer	.15
12322	Protractor Lock Screws	.15
12573	Protractor Assembly	.40
19003	Work Table	2.50
19007	Sanding Disc	2.25
19008	Table Support Bracket	1.75
19012	Work Table Support Shaft	.50
19014	Idler Shaft	.40
19016	Table Support Post	.30

Part No.	Name of Part	Selling Price
19018	Pulley Tire	.65
19024	Sand Paper Disc 9", Purchase from Div. 9 in nearest retail store.	
19025	Sanding Belt 6"x48" Purchase from Div. 9 in nearest retail store.	4.75
19029	Drive Pulley Assembly	1.75
19030	Idler Pulley Assembly	1.75
19033	Work Table Assembly	4.90
19051	Base	4.75
19052	Belt Table	4.00
19055	Tensioner Lever	.25
19056	Tensioner Rack	.40
19057	Tensioner Lever Pivot Screw	.15
19060	Tensioner Lock Stud Assembly	.30
19062	Belt Table Fence	.60
19063	Table Support Arm and Bearing Assy.	2.70
19064	Drive Shaft	.75
19070	Idler Pulley Support Bracket Assy.	1.00
300B	V Pulley Single Groove 3" Dia. 5/8 Bore. Purchase from Div. 9 in nearest retail store.	
X-108	Sander Belt Pulley Set Screw, Sanding Disc Set Screw 5/16-24x3/8	.10
X-114	Rack Set Screw 5/16-18x1 1/2	.10
X-116	Work Table Stop Screw 1/4-20x1	.10
X-118	Bearing Hanger Screw 1/4-20x3/4	.10
X-132	Drive Pulley Set Screw 5/16-18x1/4	.10
X-203	Table Support Arm Bolt 3/8-16x1	.10
X-205	Belt Table Fence Bolt 5/16-18x3/4	.10

Part No.	Name of Part	Selling Price
X-213	Table Support Bracket Bolt, Table Support Arm Clamp Bolt 5/16-18x1 1/2	.10
X-232	Table Support Rod Lock Screw 5/16-18x1 1/2	.10
X-409	Support Arm Stud Wing Nut 1/4-20	.10
X-417	Table Adjusting Screw Knob Lock Nut, Idler Bearing Retainer Screw Lock Nut 5/16-18	.10
X-420	Stop Screw Lock Nut, Idler Bearing Hanger Screw Lock Nut 1/4-20	.10
X-512	Protractor Bar Pointer Screw 8-32x1/4	.10
X-601	Fence Bolt Washer 11/32 Plain Washer	.10
X-607	Protractor Lock Screw Washer, Table Support Arm Pin Washer 17/64 Plain Washer	.10
X-611	Table Support Bracket Lock Washer 11/32 Lock Washer	.10
X-616	Table Support Arm Lock Washer .390 Lock Washer	.10

We suggest you write your orders for repair parts like this sample.

Sears, Roebuck & Co.  
Enclosed find my check for \$4.25 for which please send me by parcel post the following parts for my Belt Sander, Model No. 103.0803.  
1 each No. 19052 Belt Table \$4.00  
1 each No. 592-13 Yoke Lock Screw .25

Yours truly, John Martin, Box 128, Richmond, Indiana \$4.25

This sheet is intended for instruction and Repair Parts only and is not a Packing Slip. The Parts shown and listed may include Accessories not necessarily part of this tool. All Prices are Subject to Change without Notice. All Parts are Shipped Prepaid.