

OPERATING PROCEDURE FOR:

Shop Fox Oscillating Spindle Sander



INTRODUCTION:

The oscillating spindle sander is used to sand the edges of boards. It can be used to smooth the edge or to remove material to bring the edge of the workpiece to a reference line. An example would be to rough saw to just outside the desired profile cut with a band saw and to then use the oscillating spindle sander to remove the excess material outside of the reference line. This sander is designed to be used on concave profiles. It can be used to sand convex profiles, but the belt or disk sander will do a much better job. The sander is equipped with a vertical drum that rotates and also moves (oscillates) up and down. An abrasive sanding sleeve is held in place on the outside of the drum. The support tables can be adjusted from 0 to 45 degrees and allows the sanded surface to be either beveled or square to the surface of the workpiece. However, the hood for the dust

collection system prevents the table from being tilted. It must be removed if bevel sanding is required. Bevel sanding is not recommended.

SAFETY RULES:

WARNING: Willful violations of these safety rules, disruptive actions or horseplay may result in loss of the privilege to use the tools and machinery in the workshop.

WARNING: The abrasives used on this sander are capable of removing skin, flesh and bones from your hand very quickly. Always ensure that the workpiece is gripped securely and keep your hands away from the abrasive surfaces.

As with all machines, there is a certain amount of hazard involved with the use of this sander. Use the machine with the respect and caution demanded where safety precautions are concerned. **You are responsible for following all safety rules and standard operating procedures.**

Read and understand the operating procedures for this machine before attempting operation.

Personal Protective Equipment. At a minimum eye protection, hearing protection and a NIOSH approved dust mask must be worn when operating this machine. Eye protection must be safety glasses with side shields or goggles, or safety glasses in combination with a face shield; all must meet ANSI Z87+. Remove tie and loose jewelry. Button sleeves or roll up sleeves above the elbow. Remove loose outer clothing and confine long hair. **Do not wear loose fitting gloves.** If gloves are worn, they must fit tightly to the hand.

Use the appropriate NIOSH approved respirator in dusty work conditions (N95, N100, P95 or P100). Wood dust has been listed as a known carcinogen by the U.S. government.

Guards. Ensure that the guard on the side of the sanding belt is in place.

Work Area. Keep the floor around the machine clean to minimize the danger of tripping or slipping. Make sure the dust collector is hooked up and operating.

Operator Position. Maintain a balanced stance and keep your body under control at all times, so that you do not fall or lean against the cutter or moving parts. Do not overreach or use excessive force to perform any machine operation.

Careless Acts. Give the work you are doing your undivided attention. Looking around, carrying on a conversation and “horseplay” are careless acts that can result in serious injury and loss of work shop privileges.

Disconnect machine before performing any service or maintenance. A machine under repair or when changing sanding sleeves or drums must be Locked Out following the Club Lockout Procedure until the maintenance is complete.

Maintain Tools In Top Condition. Do not operate the sander with a worn-out sanding sleeve, or a sleeve that is torn. A worn-out sleeve generates excessive heat and can cause the sleeve to come apart.

Hand Safety. Follow the 3” rule. Keep hands clear of the abrasive. Do not allow your hands to come within 3” of the abrasive belt or disk. Avoid awkward operations and hand positions where a sudden slip could cause your hand to contact the abrasive.

Material Condition. Reclaimed or pressure treated wood is not to be sanded on this machine. Sand only flat, straight stock. Do not attempt to sand twisted, warped, bowed or “in wind” stock. Do not attempt to sand long or wide boards unless adequate supports are used.

Stock Length. Small pieces should be held with a clamp or jig as necessary to keep your hands away from the abrasive.

DANGER! Support Tables: The support table must be used to support the workpiece. Do not try to hold the workpiece solely by using your hands.

WARNING! The smallest table insert that the sanding drum will clear must be used. You must minimize the size of the gap between the drum and the workpiece. An excessive gap can lead to loss of control and contact with the sanding drum.

Machine Adjustments.

- Adjustments to the position of the support table from horizontal must be made when the machine is not running.

Sanding Sleeves. Use only sanding sleeves approved by the Shop Leader. Do not use sanding sleeves that are worn-out or torn. Use a sanding sleeve grit that is appropriate for the amount of material that needs to be removed.

Machine Capacity. Do not try to force the sander to remove material faster than the power available from the drive motor. The use of light pressure and moving the part back and forth will maximize sanding sleeve life, help to minimize the chances of an accident and keep the force within the capacity of the drive motor.

Job Completion. If the operator leaves the machine area for any reason, the sander must be turned “off” and the drum must come to a complete stop before his departure. In addition, if the

operation is complete, the operator should clean the sander and the work area. Never clean the sander with the power “on” and never use the hands to clear sawdust and debris; use a brush.

If you are not thoroughly familiar with the operation of the sander, obtain advice from the Shop Leader.

Drugs, Alcohol, Medication. Do not operate this machine while under the influence of drugs, alcohol, or any medication. Do not operate this machine if you are tired, sick, or distracted.

Familiarize yourself with all caution and warning decals used on this machine.

Capacities:

Drum sizes	1/4” to 4”
Spindle rpm.....	1750
Spindle stroke.....	1-1/2”
Oscillation speed.....	72 SPM
Support table tilt	0° to 45°
Net weight.....	287 lbs
Horsepower.....	1.0 Hp, 1 phase, 120 volt

ADJUSTMENTS:

The support table has stops at 0 and 45°. If you are unsure if the sanding drum is perpendicular to the support table, use a large square to check it. If adjustment is needed, notify the Shop Leader.

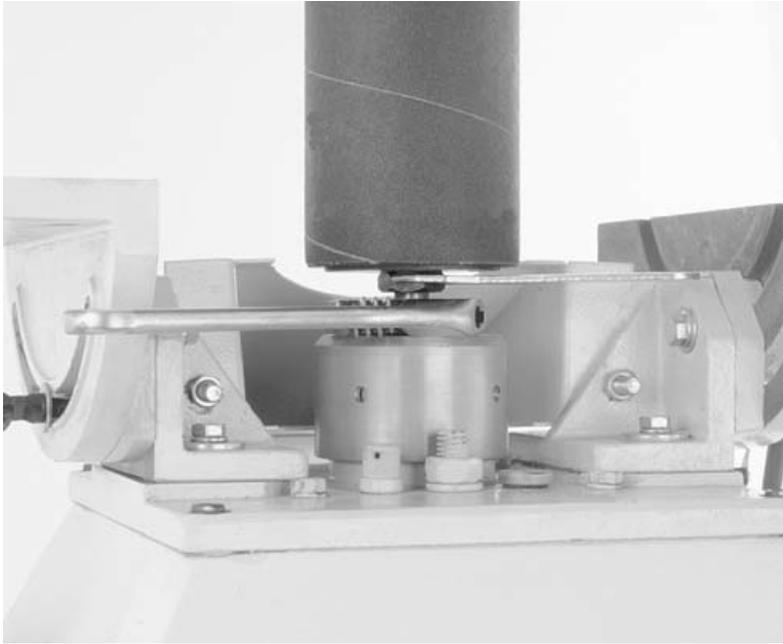
The table inserts should be flush with the surface of the support table. If you find that one is too high or low, notify the Shop Leader.

SANDING DRUMS and SLEEVES:

Abrasive choice: The combination of rotation and axial movement of the sanding drum provides a much smoother surface than can be obtained with rotational movement alone (such as using a sanding drum in a drill press). For most applications, a 100 or 120 grit sleeve will provide adequate smoothness that requires only light hand sanding. Fine grit sleeves tend to load up with sanding dust quickly and burn the work.

Changing the Sanding Drum:

1. Lockout the sander using the Club Lockout Procedure. Unplug the sander and maintain control of the plug.
2. Sanding drum removal: Hold the spindle nut with an adjustable wrench and turn the drum spindle nut with the Shop Fox supplied wrench. Note that the thread is left-hand; you need to rotate the spindle nut clockwise when viewed from the top.
3. Sanding drum installation: Hold the spindle nut with an adjustable wrench. Apply a little light oil to the drum attachment threads. Place the sanding drum shaft into the sander spindle. Rotate the drum counterclockwise by HAND to tighten.



Drum removal - Table removed for clarity only

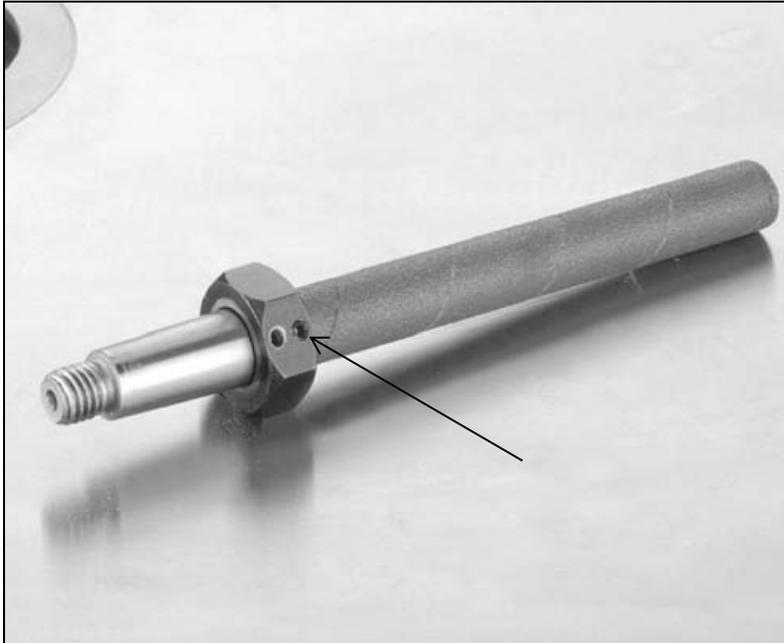


Drum installation - Hand tighten only

4. Replacing the sanding sleeve: The larger sanding drums have a rubber core that slips over the drum spindle and is held in place with a nut and washer. Tightening the nut causes the rubber core to expand and locks the sanding sleeve in place. To remove the sanding sleeve. Loosen the nut and pull up on the sanding sleeve. To install a new sanding sleeve, slip it down over the rubber core and tighten the nut no more than is necessary to hold the sanding sleeve in place.

CAUTION! If the rubber core is left compressed for extended periods, it tends to stay that way and makes sleeve removal difficult. After completing your sanding, loosen the nut and let the rubber core relax.

The smaller sanding drums have no rubber core and consist of only a steel shaft. The sanding sleeves are attached to these shafts with a set screw.



Sanding a board. Prior to sanding the board:

1. Make all adjustments described above.
2. Turn on the dust collector and open the blast gate at the sander.
3. Ensure that the dust collector is running.
4. Tighten the nut on the top of the sanding drum.



When you have completed the above:

The Oscillating Spindle Sander excels at finish sanding the edges of workpieces that have been cut on a band saw or jigsaw (saber saw) as shown in Figure 18. Keep in mind that your workpiece needs to be cut larger than the desired finished size. The sander will remove a minimum of 1/16" from the edges depending on the grit used. Make a habit of cutting about 1/16" outside the desired finish line to compensate for material the sander will remove.

The table inserts have an oblong hole that permits the work table to be tilted. Always position your workpiece on the insert where the distance from the sanding drum is minimized. Always move the workpiece against the rotation of the sander. Never sand the workpiece while holding it above the table surface. This could cause the workpiece to be slammed to the table or propelled into the air.

Only a small amount of pressure is needed to effectively sand the workpiece. Avoid the temptation of pressing harder in an attempt to remove material at a faster rate. If too much pressure is applied, excessive heat may be generated causing the workpiece to burn and the sanding sleeve to wear prematurely. The best sanding results will be achieved when small amounts of material are removed in several passes. This reduces heat buildup, ensures accurate results, and promotes long life from the sanding sleeves.

When finished sanding, turn off the machine and close the blast gate. After the machine has stopped, clean up the support table and the work area. Loosen the nut at the top of the sanding sleeve.