



# VACUUM ATTACHMENT WITH EXTENSION

556257 (Mark V 505, 510, 520 - Mark 7)

556265 (Mark V 500)

## INTRODUCTION

The Vacuum Extension is used with the Drum Sander Vacuum Attachment (514499). It is used to extend the dust collection cavity to provide more room below the table for the 6" Drum Sander used with 2" Sanding Sleeves.

## Safety

### WARNING

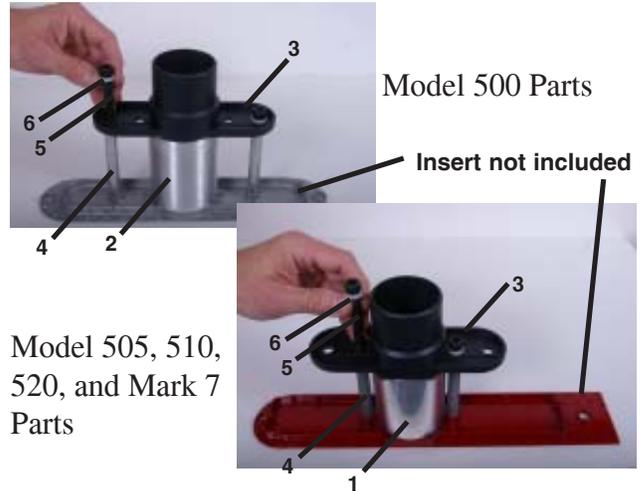
- ✓ **Read, Understand and Follow all instruction in the Mark V manuals before using this accessory.**
- ✓ **Make sure the machine is turned off and unplugged before installing the Drum Sander.**
- ✓ **Always use proper Safety Equipment and Procedures when operating machines.**
- ✓ **Be sure to tighten all setscrews securely before using.**

## TOOLS REQUIRED

- 5/16" Allen Wrench
- 5/32" Allen Wrench
- Pliers (Model-500 only)
- Half-Round File (Model-500 only)
- 27/64" Drill Bit (Models 505, 510, 520)

## MOUNTING THE VACUUM EXTENSION

The following instructions cover mounting the Vacuum Extension on both types of Shopsmith Drum Sanding Table Inserts. In order to follow the proper instructions you



## PARTS LIST

Ref	Part No.	Item Description	Qty
1	522904	Vacuum Extension .....	1
2	522916	Vacuum Extension (Model 500) ....	1
3	514499	Vacuum Attachment .....	1
4	522913	Support Tube .....	2
5	522910	3/8-16 x 4" Soc.Hd.Cap Scr .....	2
6	515434	Washer .....	2
*	845647	Owners Manual .....	1

### NOTE

**514499 - not included in the Vacuum Extension Packages (556268 or 556269).**

must know which model Shopsmith machine you have.

- The Shopsmith Mark-V, Model-500 Drum Sander Table Insert is unpainted. It is 12-7/8" long and is rounded on both ends.
- The Shopsmith Mark-V, Models-505, 510, 520 and the new Mark-7 Drum Sander Table Insert. This Table Insert is painted Red. It is 14-7/8" long and is round on one end and square on the other.

**NOTE**

Skip the Disassembly steps if you are assembling the Drum Sander Dust Chute with Vacuum Extension for the first time to your Drum sanding Table Insert.

*Model 500 Vacuum Attachment Disassembly*

1. Use a 5/16" Allen Wrench to remove the two Socket Head Cap Screws that hold the Vacuum Attachment to your Table Insert, as shown in Figure 500-1.



Figure 500-1

*Model 500 Vacuum Extension and Attachment Assembly*

**NOTE**

The Drum Sander Dust Chute with extension is attached with hardware threaded into the pre-tapped holes in the table insert. If you have been using this insert without dust collection, you may find these threads are clogged with dust and debris. Because of this, the hardware may be difficult to install. The best way to clean the threads is with a 3/8-16 thread tap. They can be purchased from your local hardware store. An adjustable wrench can be used to run this into the threaded holes of the insert.

1. Position the Drum Sanding Table Insert up-side-down in front of you on a bench.

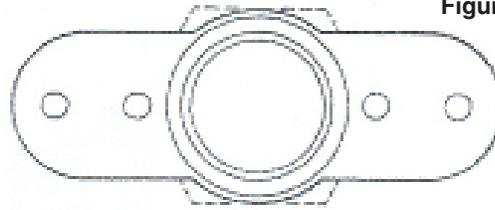


Figure 500-2a



Figure 500-2

2. Remove the flange around the center hole of the Vacuum Attachment. Grasp the corner of each flange with a pair of pliers and bend the flange toward the top, flat side of the Vacuum Attachment. See Figure 500-2 and 500-2a. Use a file to smooth any rough edges left behind.
3. Set the Vacuum Extension over the center hole of the Table Insert, in between the threaded boss to either side of the round insert opening, as shown in Figure 500-3.



Figure 500-3

4. Place the Drum Sander Vacuum Attachment on top of the Vacuum Extension. Align the inner holes in the Vacuum Attachment with the threaded holes of the Table Insert. See Figure 500-4.



Figure 500-4

- Position each Spacer Tube over the threaded hole in the insert and under the Vacuum Attachment. Align each Spacer Tube with both the inner holes in the Vacuum Attachment and the threaded holes in the Table insert, as shown in Figure 500-5.



Figure 500-5

- Slip one washer on each 4" Long Socket Head cap Screw.
- Hold the washer against the head of each screw and slip them carefully through the Vacuum Attachment, through the Support Tube and thread them into the Table insert, as shown in Figure 500-6.



Figure 500-6

- Use the 5/16" Allen wrench to securely tighten the Cap Screws in place. When completed, the screws and spacer tubes will be tight against the Vacuum Attachment. The Vacuum Extension will be captured between the underside of the Table Insert and the Dust Chute.

### *Model 505, 510, 520 & Mark 7 Disassembly*

- Use a 5/16" Allen Wrench to remove the two Socket Head Cap Screws that hold the

Vacuum Attachment to your Table Insert, see Figure 510-1



Figure 510-1

*Model 505, 510, 520 & Mark 7 Assembly*

### NOTE

**The Drum Sander Dust Chute with extension is attached with hardware threaded into the pre-tapped holes in the table insert. If you have been using this insert without dust collection, you may find these threads are clogged with dust and debris. Because of this, the hardware may be difficult to install. The best way to clean the threads is with a 3/8-16 thread tap. These taps can be purchased from your local hardware store and a simple adjustable wrench can be used to run this into the threaded holes of the insert.**

- Position the Drum Sanding Table Insert up-side-down in front of you on a bench.
- Note that one end of the Vacuum Extension has flats on opposite sides. Position these flats inside the side ribs of the insert, parallel to the long side of the insert, as shown in Figure 510-2.



Figure 510-2

- Set the Vacuum Extension over the center hole of the Table Insert, in between the threaded boss to either side of the round insert opening, see Figure 510-3



Figure 510-3

- Place the Drum Sander Vacuum Attachment on top of the Vacuum Extension. Align the inner holes in the Vacuum Attachment with the threaded holes of the Table Inert, see Figure 510-4.



Figure 510-4

- Position each Spacer Tube over the threaded hole in the insert and under the Vacuum Attachment. Align each Spacer Tube with both the inner holes in the Vacuum Attachment and the threaded holes in the Table insert, see Figure 510-5.



Figure 510-5

- Slip one washer on each 4" Long Socket Head cap Screw.
- Hold the washer against the head of each screw and slip them carefully through the Vacuum Attachment, through the Support Tube and thread them into the Table insert, as shown in Figure 510-6.



Figure 510-6

- Use the 5/16" Allen wrench to securely tighten the Cap Screws in place. When completed, the screws and spacer tubes will be tight against the Vacuum Attachment. The Vacuum Extension will be slightly loose but fully captured between the underside of the Table Insert. The Vacuum Extension is made slightly shorter than the Support Tubes so tightening the cap screws does not bend the table insert.

### *USING THE DRUM SANDER INSERT WITH THE VACUUM EXTENSION*

#### Installation



**Install the Drum Sanding Insert with the Vacuum Extension only with the machine in the vertical position.**

**If you install this in the table before it rotated to the 90-degree position, the Vacuum Extension will hit the tie bar under**

the table and prevent the table from turning to the 90-degree position.

**Always secure the Table Insert to the Worktable with the two insert mounting screws used for all Table Inserts.**

### Model 500

1. Loosen and remove the two flat head Allen screws that hold the insert in the Worktable. Lift the current Table Insert from the insert opening in the Worktable.

### NOTE

Look in the center of the insert opening of the Worktable. You will see this area is curved to match the circumference of the round insert opening. There may be excessive flash on these curved edges. If so, the Vacuum Extension will not fit through the insert opening. Use a half-round file to remove the excess flash in this area.

2. Position the Worktable 5-3/8" from the end of the Quill Spindle, see Figure 500-7. Make sure the Quill is fully retracted in the Headstock.



Figure 500-7

### NOTE

**This 5-3/8" distance is critical for easy installation.**

Placing the Worktable here will also allow you to reach all three grits on the drum without repositioning the table.

If you are using your old Drum Sander Dust Chute and the Elbow is glued into the Dust Chute, first position the Table 10" from the Quill. Then install the Insert Assembly. After it is installed, position the Table 5-3/8" from the end of the Quill Spindle.

3. Pick up the Table Insert assembly and hold it aligned with the insert opening. Position the round hole of the Table Insert assembly up, over the quill, as shown in Figure 500-8. Then slip the bottom of the Vacuum Attachment into the insert opening while lowering it through the Worktable. See Figure 500-9. Secure the insert in place with the two flat head Allen screws removed earlier.



Figure 500-8



Figure 500-9

4. Place the bottom end of the 6" Sanding Drum into the round insert opening far enough for the top end to be installed on to the Quill Spindle, See Figure 500-10.



Figure 500-10

- Align the mounting hole in the hub of the Sanding Drum with the quill Spindle and slip it on to the Quill spindle, see figure 500-11.



Figure 500-11

- Align the Drum Sander setscrew with the flat on the Spindle and tighten this set-screw securely with the 5/32" Allen wrench, as shown in Figure 500-12.



Figure 500-12

### Model 505, 510, 520 and Mark 7

- Loosen and remove the two flat head Allen screws that hold the insert in the Work Table. Lift the current Table Insert from the insert opening in the Work Table.



Figure 510-7

- Position the Work Table 5-3/8" from the end of the Quill Spindle. See Figure 510-7. Make sure the Quill is fully retracted in the Headstock.

### NOTE

**This 5-3/8" distance is critical for easy installation.**

**Placing the Worktable here will also allow you to reach all three grits on the drum without repositioning the table.**

**If you are using your old Drum Sander Dust Chute and the Elbow is glued into the Dust Chute, first position the Table 10" from the Quil. Then install the Insert Assembly. After it is installed, position the Table 5-3/8" from the end of the Quill Spindle.**

- Pick up the Table Insert assembly and hold it aligned with the insert opening in the table. Position the round hole of the Table Insert assembly up, over the quill, as shown in Figure 510-8. Slip the bottom of the Vacuum Attachment into the insert opening while lowering it through the



Figure 510-8

Worktable, see Figure 500-9. Secure the insert in place with the two flat head Allen screws removed earlier.



Figure 510-11

6. Align the Drum Sander setscrew with the flat on the Spindle and tighten this set-screw securely with the 5/32" Allen wrench, as shown in Figure 510-12.



Figure 510-9

4. Place the bottom end of the 6" Sanding Drum into the round insert opening far enough for the top end to be installed on to the Quill Spindle, see Figure 510-10.



Figure 510-12



Figure 510-10

5. Align the mounting hole in the hub of the Sanding Drum with the quill Spindle and slip it on to the Quill spindle, as shown in Figure 510-11.

### NOTE

If you have any questions about your Shopsmith 6" Drum Sander, please call our Customer Service Department TOLL-FREE at 1-800-762-7555, drop us an e-mail at [techsupport@shopsmith.com](mailto:techsupport@shopsmith.com), visit our website at [www.shopsmith.com](http://www.shopsmith.com).



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