



Mark V Table System Retrofit Kit

500 to Pro System

Introduction

NOTE

Refer to the Parts List in the Owners Manual for part numbers, parts explosions, and descriptions of parts.

The Mark V Table System Retrofit Kit was designed to offer the user increased wood-working capabilities. The added benefits of this kit include:

Worktable (P/N 518421) - The worktable has additional table surface, is grooved to reduce drag and friction, has positive trunnion stops at 45° right and 90° left and has double locking front and rear trunnions. There are T-slots in the Table for Miter Gauge.

Extension Tabletop (P/N 518498) - The extension tabletop has additional table surface and is grooved to reduce drag and friction.

Carriage (P/N 514328) - The carriage has a quarter turn lock and table height adjustment crank. Also, included with your carriage is the Stop Ring, 516667.

Lower Saw Guard (P/N 514358) - The lower saw guard is usable with the 12" sanding disc, Dado and Molding Heads, as well as all 10" circular saw blades. Also, you can hook up your shop vacuum for dust free sanding and sawing operations.

Upper Saw Guard (P/N 514366) - The upper saw guard is mounted on a riving knife that is permanently aligned and remains only 1/8" away from the blade. The riving knife and

anti-kickback cams provide improved kick-back protection without marring your wood.

Rip Fence (P/N 518418) - The rip fence has separate front and rear locks to properly secure the fence during horizontal boring and sanding operations. The fence also has t-slots for mouting accessories.

Miter Gauge and Quick Clamp (P/N 514554 & P/N 555125) - The new miter gauge bar is configured for use in the new tabletop T-slots, giving more stability during operations. The new Quick-Clamp assembly is easily and quickly adjusted.

Tool Rest Arm and Post (P/N 514492) - The tool rest arm has two mounting positions to provide increased rigidity for large diameter workpieces, as well as quick release levers for easy, tool free adjustments.

ALSO, included are:

- 845444 - MKV 520 Owner's Manual
 - 770108 - Setup and Alignment Video
 - 555130 - 1-1/4" Saw Arbor
 - 514493 - Disc Sander Hub
 - 521097 - Setup Gauge
 - 521106 - Fence Straddler
 - 51368603 - 5/32" Allen wrench
 - 51368605 - 3/32" Allen wrench
 - 51368608 - 5/16" Allen wrench
 - Headstock Labels
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Disassembly

To prepare the Mark V for the Table System Retrofit Kit, the Mark V must be partially disassembled, removing the parts that this kit will replace.

WARNING

Turn off and unplug the Mark V, before you start any disassembly procedure.

Tools/Materials required:

- Medium slot screwdriver
 - Large slot screwdriver
 - Adjustable jaw wrench
 - Small locking jaw pliers
 - Board-3/4" x 6" x 16"
 - Paste-wax
 - Mineral spirits
 - Clean shop rag.
1. Remove all Accessories and all sawing, sanding, drilling, boring and turning accessories that are on your Mark V.
 2. Remove the Saw Guards. Raise the worktable and move the headstock away. Remove the upper and lower saw guards.
 3. Remove the Way Tube Tie Bar. With the 5/32" Allen wrench, loosen the two set-screws on the underside of the way tube tie bar. Then pull the tie bar off the tubes.

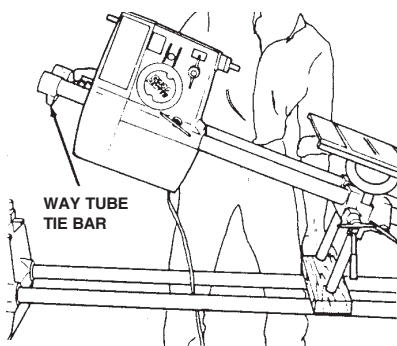


Figure 1

4. Prop the Way Tubes up at an angle. Select a piece of wood at least 3/4" thick, 4" wide, 16" long. Move the carriage to the right, about 8" from the base mount, and lock it in place. Lower the table so that the support tubes protrude 5"-6" from the bottom of the carriage.

Loosen the headrest lock and raise the Mark V slightly. Place the wood scrap so that it lies on the bench tubes, under the table support tubes. Carefully move the Mark V so that the table support tubes set on the wood. This will hold the way tubes up at an angle, so that the way tube tie bar is approximately 12" above the headrest. See Figure 1.

5. Remove Labels from the Headstock. Remove the three labels from the headstock. Use mineral spirits to remove any residue.
6. Remove the Headstock. Loosen the headstock lock and slide the headstock to the left. It will slip easy off the ends of the way tubes. But be careful: The headstock is heavy. Get a helper if you need one.
7. Remove the Worktable. Remove the scrap block of wood and carefully lower the way tubes until they rest on the headrest. Loosen the table height lock and put the table straight up until the support tubes disengage from the carriage.
8. Remove the Carriage. Loosen the carriage lock and slide the carriage all the way to the left. Lift the way tubes off of the headrest and slide the carriage off & the way tubes.

Assembly

1. Reverse the Table Height Adjustment Crank.

2. Mount the Carriage onto the Way Tubes.

Align the wedge locks so that the "cut-out" is flush with the mounting holes. See Figure 2 inset. Lifting the way tubes with one arm under both tubes. Slide the carriage assembly onto the tubes, as shown in Figure 2. Rest the way tubes on the headrest. Slide the carriage towards the base mount and lock it down within 8" from the end.

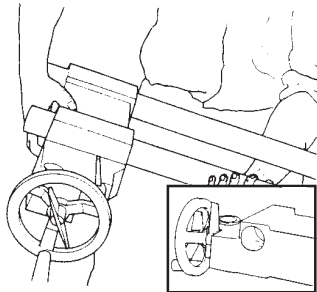


Figure 2

- 3. Mount the Worktable.** To mount the table, make sure the table height lock is loose. Place the support tubes in the carriage hoes, making sure that the racks (teeth) on the tubes face the right (away from the headstock). Gently rock the table front-to-back until the racks engage the pinions and the tubes drop smoothly down into the holes. Sometimes it helps to slowly turn the table height crank clockwise while you rock the table. This will position the support tubes at exactly the same height and get the racks started properly in the pinions.

- 4. Mount the Headstock.** Lower the table so that the support tubes protrude 5"-6" from the bottom of the carriage.

Place the same piece of wood used before on the bench tubes, under the table support tubes. Raise the way tubes and slide the rubber spacer onto the rear way tube.

Align the wedge locks in the headstock and slide the headstock onto the way

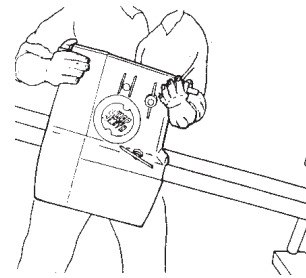


Figure 3

tubes. Be careful: the headstock is heavy, get a helper if you need one. See Figure 3.

- 5. Attaching the Way Tube Tie Bar** - Slide the way tube tie bar on the way tubes. Using the 5/32" Allen wrench, secure the way tube tie bar to the way tubes. Lower the way tubes and lock the tie bar tightly into place.

- 6. Attach the three Labels to the Headstock,** as shown in Figure 4.

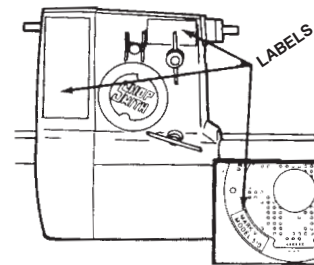


Figure 4

- 7. Mount the Lower Saw Guard on the Quill.** Place the lower saw guard on the quill so that the stop screw below the collar on the saw guard butts up against the stop ring on the quill. Align the ridge on top of the headstock with the slot in the lower guard clamp. With a 5/32" Allen wrench, tighten the screw on the front side of the lower saw guard clamp. Then open up the lower guard by loosening the two lock knobs (front and back) and sliding the right side to the right.

8. **Remove the Saw Blade from the Arbor.** Hold the arbor flats in a vise and loosen the arbor nut clockwise with the arbor wrench.

WARNING

Be careful not to cut your hands on the saw teeth.

9. **Mount the Saw Blade on the Arbor.** Remove the arbor nut by turning it clockwise—the thread is left-hand so the nut will tighten as the saw blade turns. Hold the arbor with the threaded part pointing to the left. Slip the saw blade over the threads so that the teeth point toward you. Then replace the nut and fingertighten by turning counterclockwise.

Place the saw blade and arbor in your vise with the nut pointing down. Tighten the arbor nut with the arbor wrench that came with your machine.

10. **Raise the table** high enough to clear the saw blade and slide the carriage left until the rubber spacer, on the way tube, hits the headstock to automatically position the blade near the center of the table insert. Lower the table over the blade, until blade protrudes 1" above the table.

NOTE

If the table lowers easily then stops, you possible have the right side of lower saw guard positioned too far from blade and the tie bar under the table is sitting on it.

11. **Install the Upper Saw Guard.** Slide the upper saw guard through the table insert into its mounting clamp. Tighten the camp knob firmly.

NOTE

It is easiest to handle the upper guard by grasping it by the top of the riving knife with the guard in the "Up" position.

Clean and Wax

Clean and wax the components of the Mark V Table System Retrofit Kit according to the instructions in the Initial Setup section of the Owners Manual.

Extension Tabletop

1. **Remove the Extension Table from the Base.** Remove the four bolts securing the extension table to the base using an adjustable or 9/16" wrench.
2. **Mount the Extension Table to the Base.** Attach the extension table to the base using the nuts, washers, and studs under the table with the four bolts, using an adjustable or 9/16" wrench. Do not tighten until you have made your final alignment and adjustments.

Miter Gauge

1. **Disassemble the Miter Gauge.** Using a 5/32" Allen wrench, remove the hold-down assembly from the miter gauge, see Figure 5. Loosen the grip stud with an Allen wrench through the hole in the stud. Remove the screw in rear of the safety grip. Then remove the safety grip

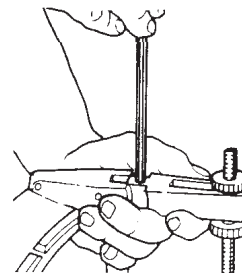


Figure 5

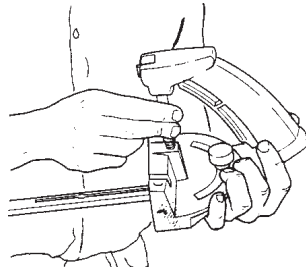


Figure 6

and locking knob from the miter gauge base, see Figure 6. Using a medium slot screwdriver, remove the two screws holding the indicator mount to the miter gauge bar, as shown in Figure 7. Using a large slot screwdriver remove the screw from the base of the miter gauge bar holding the protractor, see Figure 8. Save all washers.

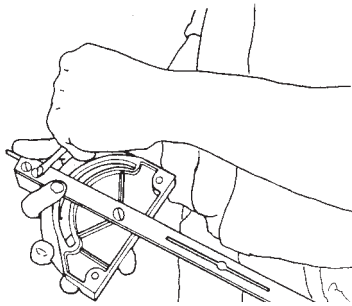


Figure 7

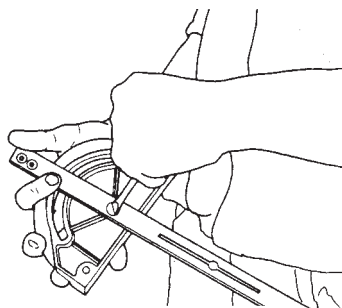


Figure 8

2. **Assemble the Miter Gauge.** Place one thin washer over the miter stud and one thin washer over the pivot screw hole. Place the protractor onto the miter gauge bar and secure it with the large flathead screw you removed. Tighten the screw then loosen it enough to allow movement. See Figure 9. Place two washers over the miter stud and screw the locking

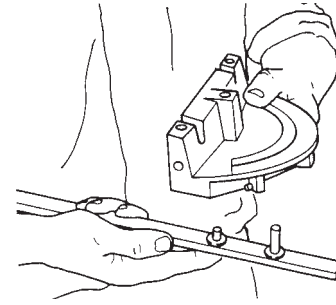


Figure 9

knob on. Attach the indicator mount to the miter gauge bar with two screws through the base of the bar. Attach the safety grip to the miter gauge by screwing the grip stud into the protractor. Place the screw into the safety grip base. Attach the new Quick-Clamp assembly by sliding it onto the safety grip and tightening the setscrew.

Sanding Disc Hub

1. **Remove the Sanding Disc Hub.** Using the 3/32" Allen wrench, remove the four Flathead screws holding the hub to the disc. If your disc has a sanding sheet attached, you must first remove it.

NOTE

If your sanding disc does not have a removable hub, you will have to purchase a new sanding disc for use with your new table system.

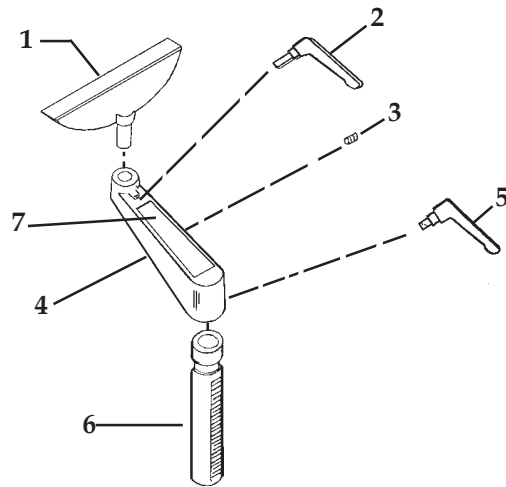
2. **Assemble the Sanding Disc and Hub.** Using the 3/32" Allen wrench, attach the sanding disc hub to the disc with the four new Flathead screws. Tighten securely.

WARNING

Using the old screws or not tightening the new screws properly will result in the disc coming loose from the hub and causing an injury.

Tool Rest Arm and Post

- Disassemble the Tool Rest.** Using a 5/32" Allen wrench, remove the setscrew holding the toolrest arm to the toolrest post. Remove the toolrest post. Remove the toolrest from the tool rest arm by removing the setscrew securing it.
- Assemble the Tool Rest.** Insert the toolrest post into the tool rest arm. Locate the lever handle with the shortest threaded end and thread it into the lower (near the large bottom hole) threaded side hole in the tool rest arm. Then insert the tool rest into the upper end of the arm and Align the long threaded end of the second handle with the top threaded hole in the tool rest arm. Position the handle far to the left against the casting and rotate it to the right to start the threads in the hole. Finally, after the threads engage insert the long end of the Allen Wrench in the socket in the back end of the lever handle. Push the Allen wrench securely into the socket while pulling the handle in the opposite direction. While holding the handle in this position turn the Allen wrench to thread the lever knob's shaft into the hole.



Parts List			
1	503749	Tool Rest.....	1
2	521689	Long Handle	1
3	102582	Set Screw	1
4	517773	Tool Rest Arm	1
5	521688	Short Handle	1
6	514416	Tool Rest Post	1
7	521603	Warning Label	1



Do not attempt to use the Mark V until you have completed the Alignment and Adjustment instructions.

Safety



READ, UNDERSTAND AND FOLLOW ALL the information in the Owners Manual whenever you operate, set up, align, adjust, repair and maintain your Shopsmith Mark V with the Table System Retrofit Kit.

NOTE

In order to position either handle out of harms way simply pull out on the handle and rotate it until it is out of the way of both the lathe chisel and rotating stock.

NOTE

If you have any questions, please call our Customer Service Department Toll Free 800-762-7555 or visit our website www.shopsmith.com

Alignment and Adjustment

Before operating the Mark V, you'll need to align and adjust the new parts. Refer to the Alignment and Adjustment section of the Owners Manual. Follow the instructions that are indicated for Model 520.

