Replacing The Mark V Motor

Tools needed:

Large - flat screw driver
Small - flat screw driver
9/16" socket & wrench
Adjustable wrench
Pliers
Large - Phillips screw driver
Small - Phillips screw driver
C - ring pliers
5/32" Allen wrench
30 weight non-detergent oil
Spring retainer board
Put a 1" diameter hole in the center of a 16" x 3/4" x 2-1/2" board.
Spring post
Put a finishing nail in the end of a 5/8" diameter 20" long dowel so that it sticks out the end 1/4" and make a recess in other end.
News paper or heavy cardboard

1. Turn off an unplug the Mark V

2. Attach the sanding disk to the main spindle and rotate it toward you as you turn the control handle to fast. DO NOT force. This will take the tension off of the motor drive belt so that you can remove it from the motor pulley.

3. Remove the belt cover and secure out of your way to your left with tape or string. Slide the headstock and carriage to the right (towards the base mount) as far as they will go. Secure the headstock and carriage locks.

4. Remove the drive belt from the motor pulley by gently sliding off one side of the belt and rotating the motor shaft so that belt will ride off entirely.

5. Remove the nameplate assembly to expose the access hole located on opposite of the control handle. NOTE: depending on the age of your unit this can be done by popping off with a flat head screw driver or by removing the screw located at the bottom of the nameplate cover. Some older units did not have access holes and you may have to lower the motor pan assembly down on the bench tubes to have enough room to work on unit.

6. Fully extend the quill and lock into place. This will give you enough room to access the backside of power switch.

7. Disconnect the wires from the on/off switch. Remember the wire color location for reinstallation later.

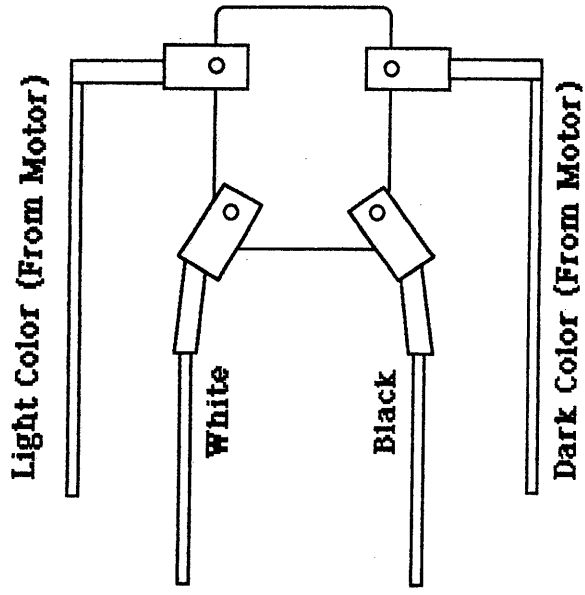
Please locate procedure below which switch best describes the type of switch in your unit...

- Toggle type switch (A), special nut surrounding the outside of your toggle switch. Remove wires from the terminal connectors on back of switch.

- Toggle type switch (B), with 9/16" hex nut. Remove wires from the terminal connectors on back of switch.

- Red key type switch. Remove wires from the terminal connectors. DO NOT pull wires out of backside of switch.

Back of Switch



8. Put your Mark V to the vertical drill press position and secure.

9. Place the main work table in the underside of you carriage making sure that the work surface is facing up. Protect the work surface with several sections of newspaper or heavy cardboard. The work surface of your table should now be on the side of the unit closest to the motor pan assembly.

10. Remove the motor pan screws and carefully lower the motor pan assembly down on your protected work surface. Have someone help you hold the motor pan assembly so that it will not fall and cause damage or possible injury.

11. Remove the motor from the motor pan by removing the 4 screws located in the bottom of the motor pan assembly. Unscrew the ground wire, usually green, from the motor. Measure and record the length of the cord inside the motor pan.

12. With a helper use the spring retainer board and compress compensating spring with board to remove the retaining ring from motor shaft with c - pliers. Examine the end of your motor shaft. If there is a hole in the end, place the spring post with the nail end down. If not place the recess end down. The spring post is used to help guide the spring on and off the motor shaft.

    If your unit has a threaded nut/washer and not a retaining ring, remove nut turning clockwise.

    Important: you must keep continual pressure on the spring board to hold spring after ring/nut is removed. Back off the pressure slowly so the spring will not fly out but stay on the spring post.

13. Remove the floating sheave from the motor shaft when the spring tension is completely relieved.

14. Turn the motor shaft until the set screw (102581) in the back of fan sheave, that locks on key, is exposed and loosen. Slide the fan sheave off the motor shaft and remove the key and spacer.

Continue To Replace The Motor Cord, If Not Skip To 21.

15. Before you attempt to install your new cord, you must determine weather your old cord has a molded on strain relief or a separate strain relief. To do this, inspect the strain relief to see if it is completely round or has two flat sides. If it is round, you should grip the strain relief with pliers and pull out of motor pan. If it has flat sides, squeeze both flat sides with pliers and pull out.

16. If you old strain relief was round you will need to modify the cord hole in the motor pan by enlarging the hole to a 9/16" diameter and deburr.

17. Before mounting the strain relief into the motor pan, thread the length of cord measured earlier into the motor pan. With the cord hanging down through the motor pan, place the new strain relief around the cord and squeeze into the motor pan hole. You may have to use pliers to accomplish this totally.

18. Reconnect the ground wire to the motor. Lubricate the motor shaft with oil and reverse steps 14 through 1. Be sure to put the lead wires from the motor between the headstock lock rod and casting to avoid interference.