

This is a belt-changing guide for your WEN 6510 Oscillating Spindle Sander. This guide is best used in conjunction with the 6510 manual, included as a physical copy with your unit and available on the WEN website page for the 6510 ([link here](#)), under the Downloads tab.

If at any point you need assistance, have questions, or want to order parts, call WEN customer service at 1-800-232-1195, M-F, 8-5 Central Time, or email [techsupport@wenproducts.com](mailto:techsupport@wenproducts.com).

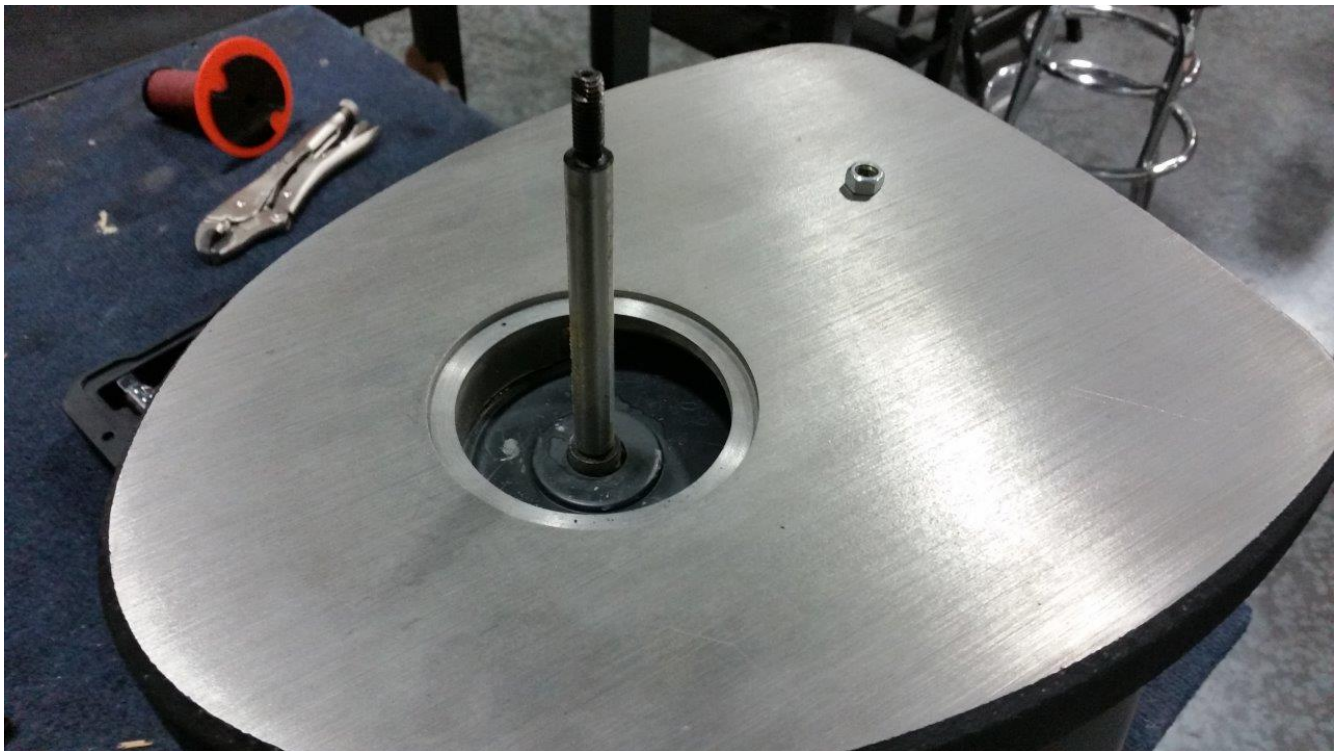
**Before beginning:**

You will need:

- A Phillips-head screwdriver with a long shank (you may want one with a magnetic tip)
- A 13mm crescent or socket wrench (or use the included wrench, item H on page 7 of manual)
- A pair of needle-nose pliers

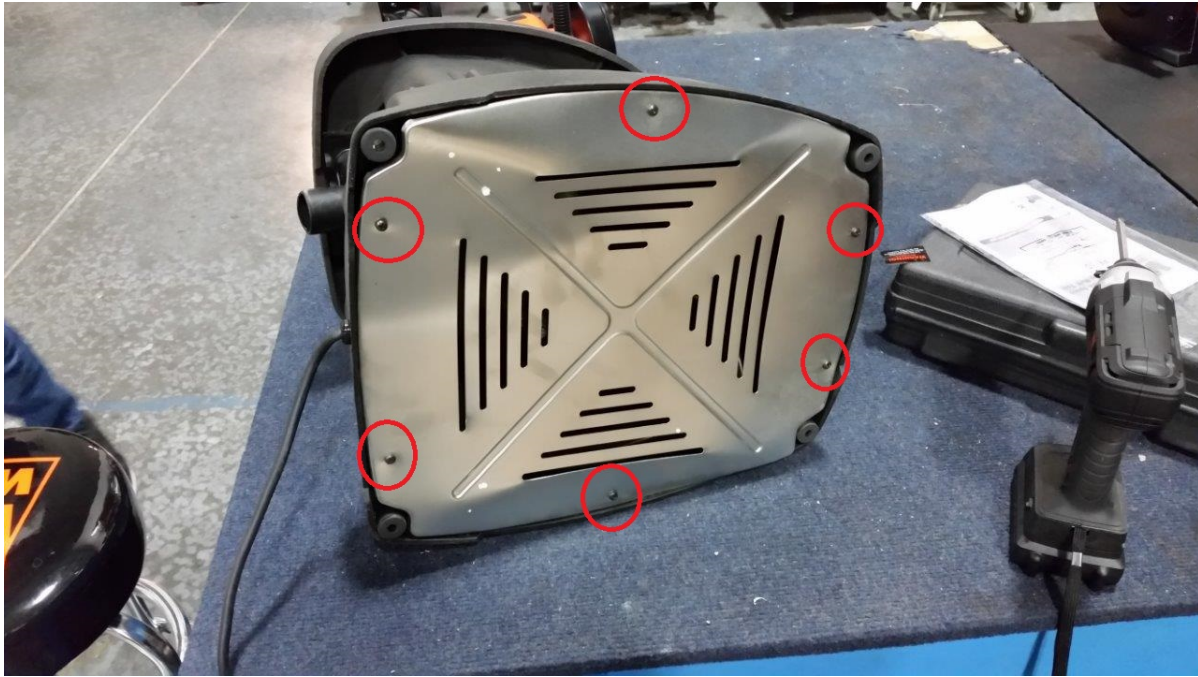
**1. ENSURE THAT THE UNIT IS TURNED “OFF” AND DISCONNECTED FROM ANY AND ALL POWER SOURCES.**

2. Following the appropriate directions in the manual, using the 13mm wrench, remove the spindle nut, as well as any sandpaper and drums that are attached to the spindle. Remove the spindle throat plate and base plate as well. Ensure that the unit looks like Fig. 1 below.



**Fig. 1.** Make sure anything attached to the spindle has been removed.

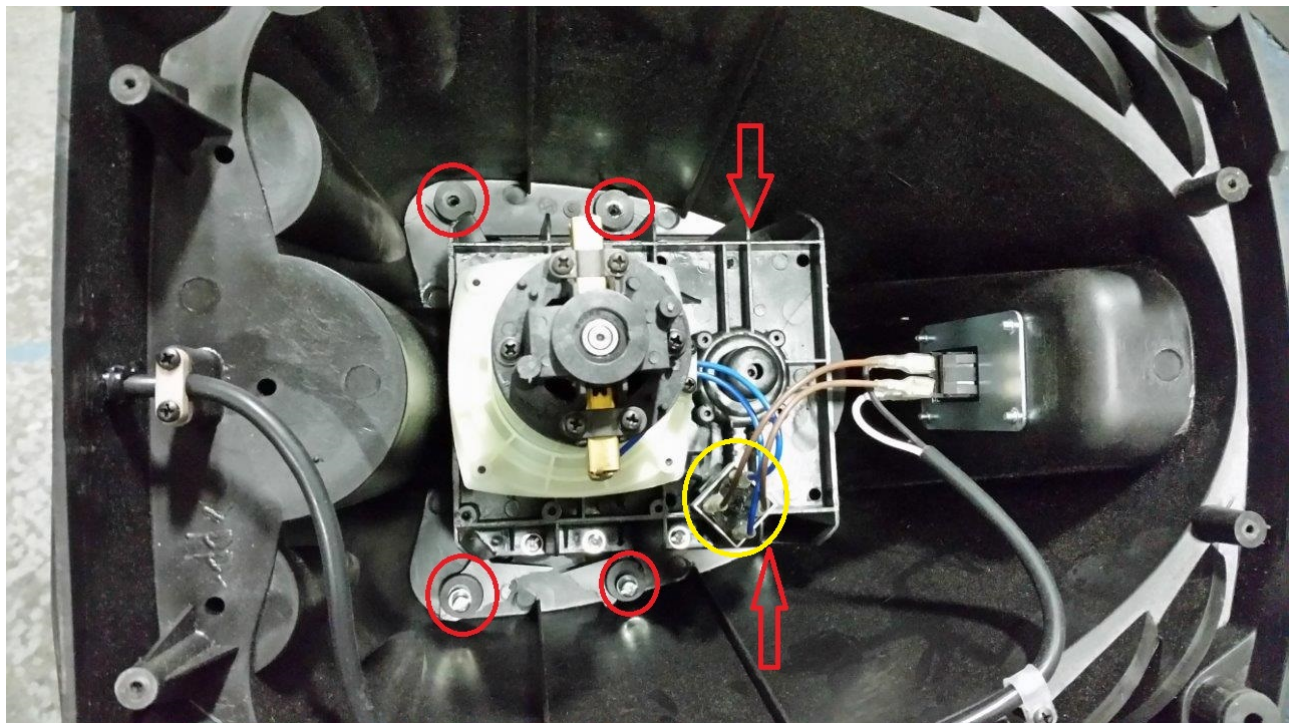
3. Turn the unit on its side, as in Fig. 2 below.



**Fig. 2.**

4. Using the screwdriver, unscrew the six (6) screws holding the silver base plate in place. Refer to the red circles in Fig. 2 above. Remove the plate.

5. Using the screwdriver, unscrew the six (6) screws holding the table and motor assembly to the body of the sander. Refer to Fig. 3 below. **NOTE:** You will also have to disconnect the 2 brown wires (see Fig. 3 below) from the motor connector plate. Take a picture so you can remember the proper connection points for these wires later, when reassembling the sander.



**Fig. 3.**

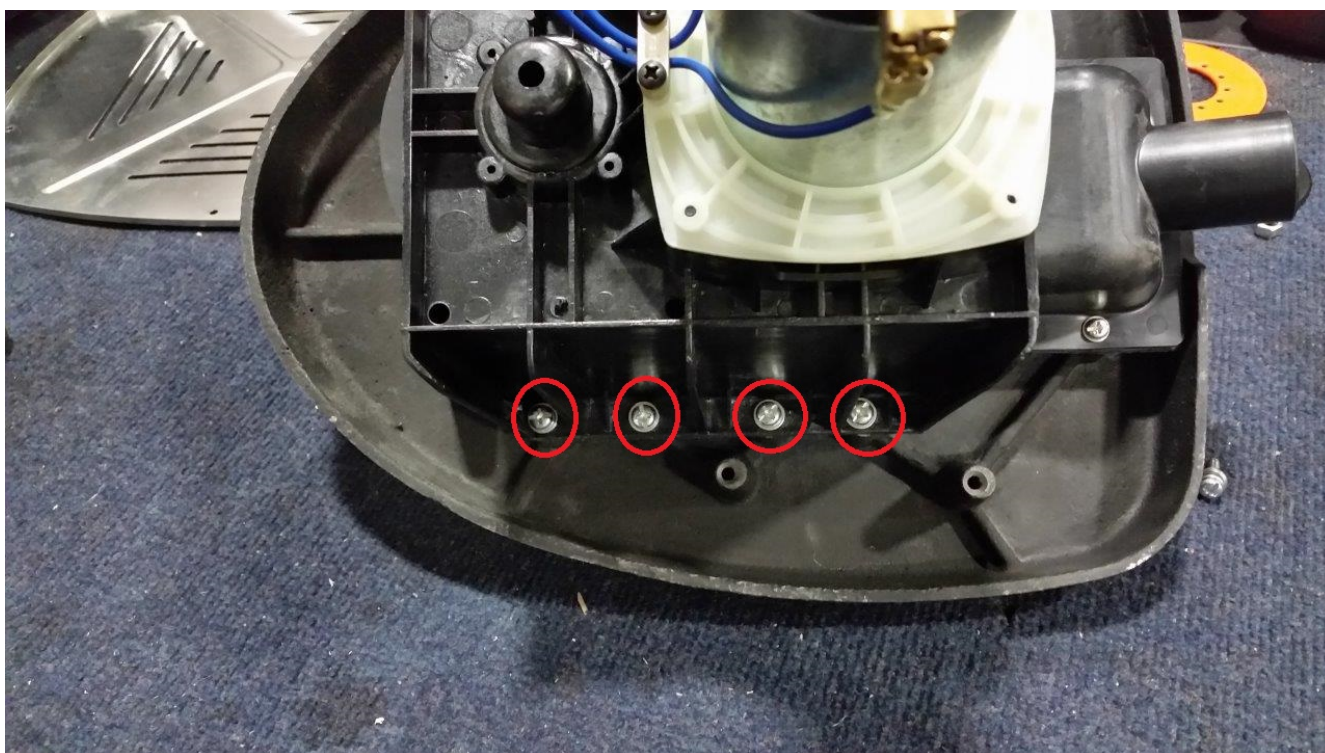


6. Remove the table and motor assembly from the body of the sander. Refer to Fig. 4 below.



**Fig. 4.**

6. Remove the eight (8) screws that hold the motor assembly onto the table. Refer to Figs. 5 & 6 below.



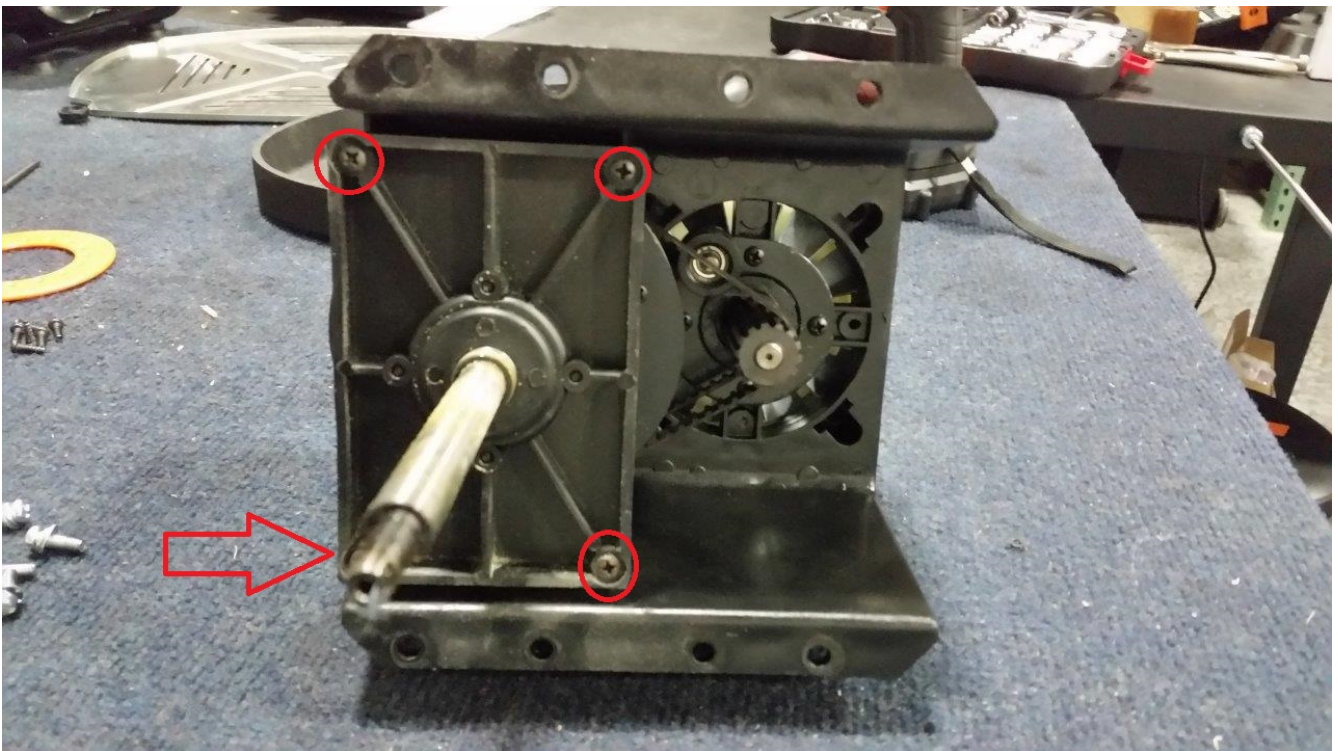
**Fig. 5.** There are four (4) more screws on the other side; remove those too.





**Fig. 6.** Remove the motor assembly from the table.

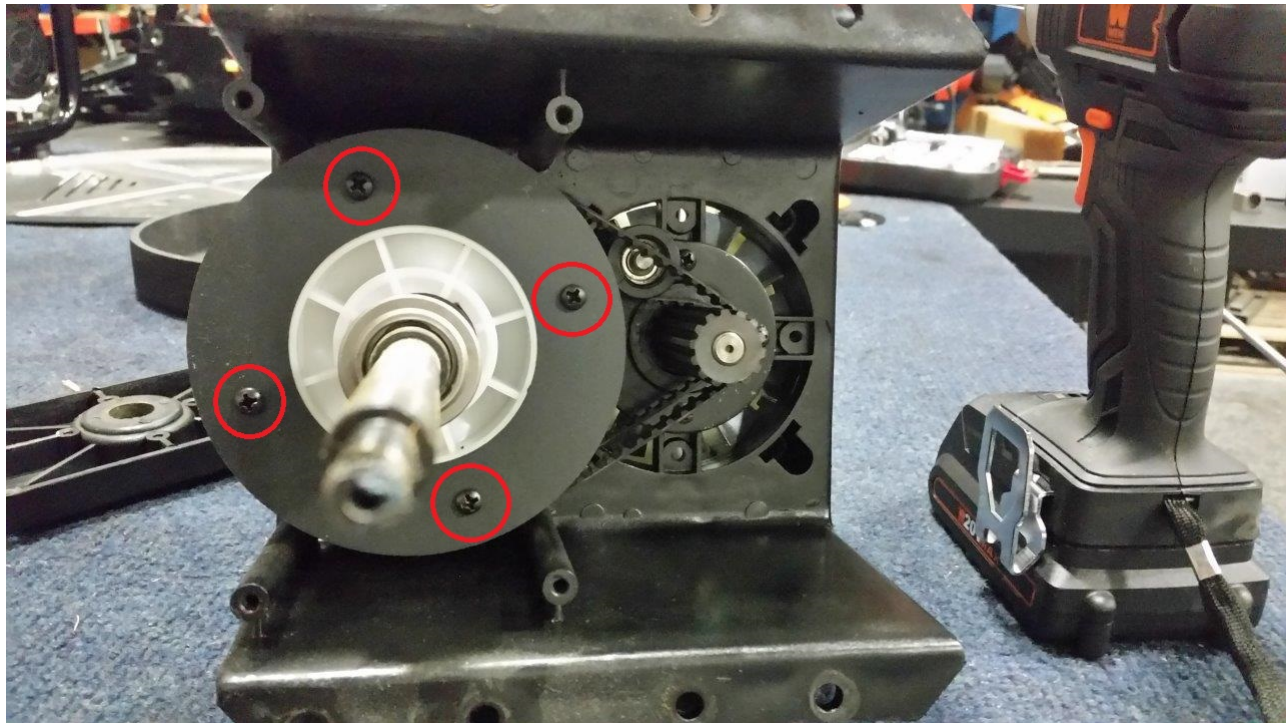
7. Remove the four (4) screws holding the stop plate onto the belt housing. Refer to Fig. 7 below.  
**CAUTION:** the spring below the plate may cause the plate to jump outwards. Be prepared for this.  
Remove the spring as well.



**Fig. 7.** Remove these four screws.



8. Remove the four (4) screws holding the plate onto the upper pulley. Refer to Fig. 8 below.



**Fig. 8.** Remove these four screws.

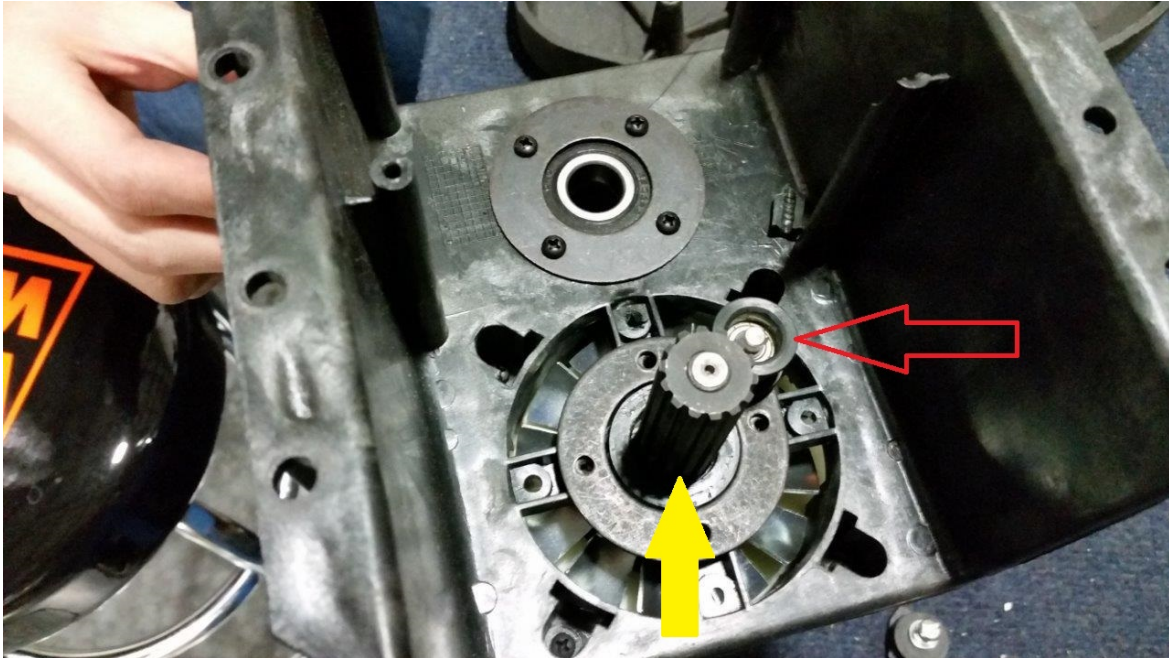
9. The pulley mechanisms should now be fully exposed, as in Fig. 9 below. Gently work the primary belt off the upper pulley. Then work the secondary belt off the lower pulley. For a video on how this is done, please refer to this link: <https://youtu.be/Zw2KuknmCZE> . **CAUTION:** be careful to not pinch yourself.



**Fig. 9.** Pulleys and belts are now exposed.



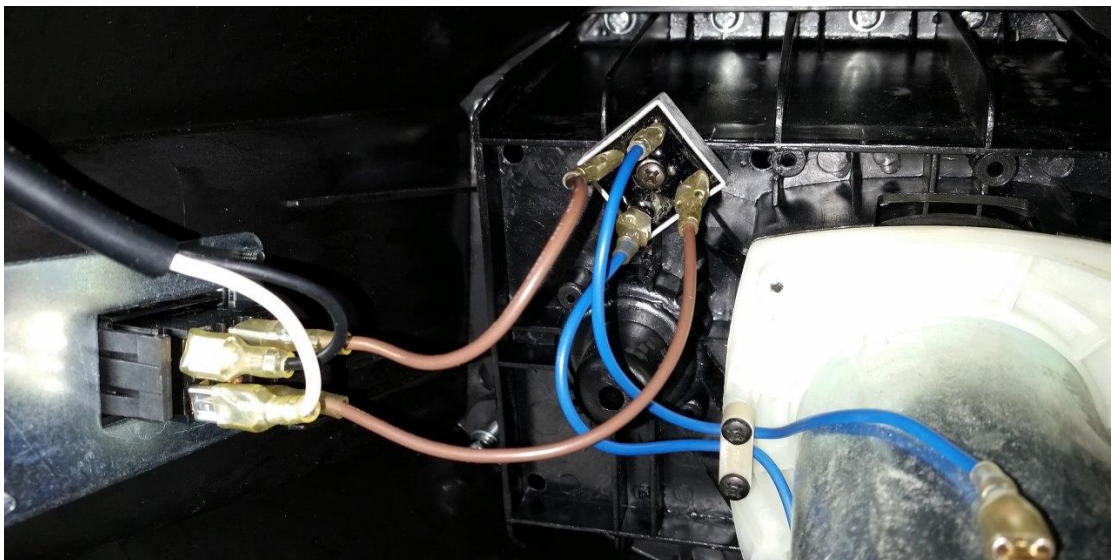
10. Looking at the aforementioned video if necessary, take the new belt(s) and place them over the appropriate pulley(s). Remember – the thinner belt goes over the lower pulley. Make sure that the lower belt also runs along the idler pulley, so as to keep proper tension on the belt.



**Fig. 10.** The idler pulley. The belt for the lower pulley should run with its flat surface against the inside surface of this pulley (to the left of the pulley, as shown in this photo).

11. Re-assemble the sander, following steps 9 – 1 in reverse order. Some tips:

- Ensure that the belts are level with the pulleys on the primary drive gear (yellow arrow, Fig. 10 above).
- Do not forget to plug in the brown wires, as in Fig. 3 above. Refer also to Fig. 11 below.
- Run the sander for a few moments without any spindle drum or sandpaper on it, to make sure that the new belt(s) get seated properly around the pulleys, and that the oscillating motion works properly.



**Fig. 11.** Wiring.