

Switching out the X for the Y motor



14140 NE 200th St.
Woodinville, WA 98072
1.425.398.8282
www.ioline.com

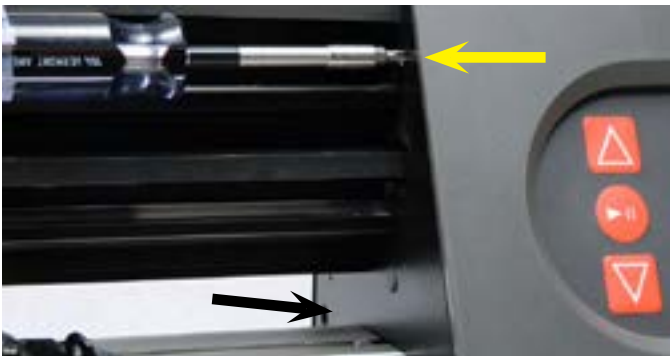
Procedure P/N 111231 REV 0



Step 1: Tools needed: 1/16" Allen Hex L shaped or straight with handle and a Phillips screwdriver.



Step 2: Turn off the power and unplug the power cord and the communication cable.



Step 3: Remove both screws from the right cover (arrows). You can now tilt the CPII over on its back.



Step 4: With the CPII tilted, remove the silver screw (arrow). You can now remove the cover to expose the Y motor



Step 5: With the CPII still tilted back, remove all 7 screws that hold the bottom cover. Remove the bottom cover from the machine and place to the side. This will expose the X motor.



Step 6: Remove the 3 screws that secure the X motor to the end plate.



Step 7: With the 3 screws removed, the X motor is loose enough to remove the X belt as shown. NOTE: Leave the X belt as shown. No need to remove it totally.



Step 8: Unclip both the white (power) and the black (communication) connectors (red arrows). You can now pull the X motor (with the pulley still attached) away from the end plate. NOTE: You will be removing the pulley soon.



Step 9: Before removing the Y motor, disconnect both the communication (white) and the power (black) connectors.



Step 11: Remove all 3 screws from the motor while holding on to the pulley as shown. Slide the motor down from the shaft and place on the table.



Step 13: Both motors and pulleys are marked. **IMPORTANT: Even though the motors are the same, THE PULLEYS ARE NOT THE SAME. The Y PULLEY MUST stay with the motor that you are switching and placing on the Y transmission.**



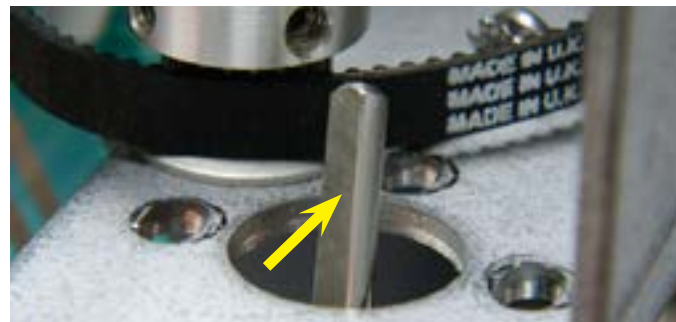
Step 15: Slide the Y pulley onto the shaft of the motor that was taken from the inside of the CPII (X motor) as shown.



Step 10: With the 1/16" Allen wrench, unscrew (counter clockwise) both of the set screws on the pulley. **NOTE: Do NOT unscrew the set screws all the way, 1 full turn should suffice. The pulley will NOT slip through the hole in the bracket.**



Step 12: The pulley that is shown is from the Y motor. This pulley must stay with the Y transmission bracket. **IMPORTANT: To avoid confusion, mark the pulley and the motor with an X. See step 13.**

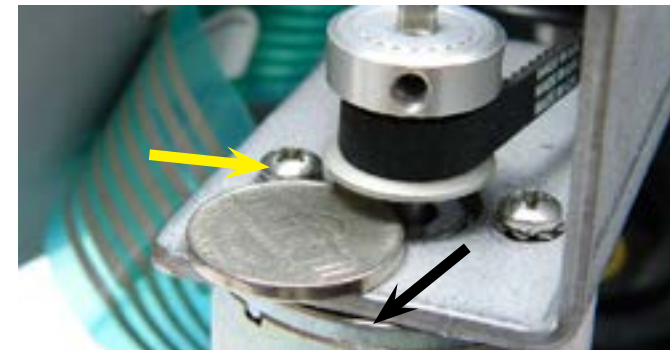


Step 14: The arrow points the flat surface of the shaft. **IMPORTANT: One of the set screws MUST be screwed onto the flat part of the shaft (arrow).**



Step 16: Slightly tighten the set screw onto the flat part of the shaft. No need to fully tighten at this time.

NOTE:
 You can use a nickle to adjust the distance between the bottom of the pulley and the top of the bracket.



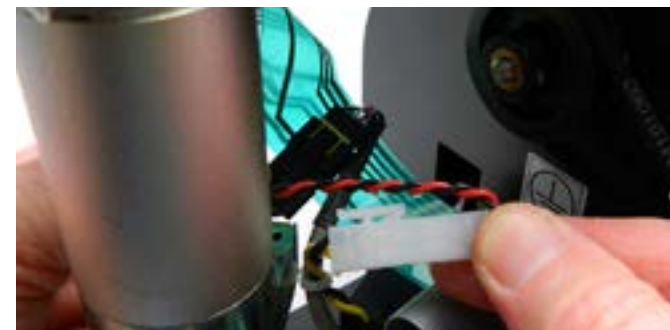
Step 17: Place all 3 screws (yellow arrow) into the motor until the motor is secure to the base (black arrow). **NOTE: Do not over tighten at this time. You will need to slide the motor back towards you to tighten the belt.**



Step 19: Turn the pulley until you have the 2nd set screw in view. You can now tighten (clockwise) the 2nd set screw.



Step 21: This view shows how the pulley, the 3 screws and the Y belt should appear.



Step 23: Re-connect both the white power clip and the black communication clip. You should hear an audible clicking sound when properly connected.



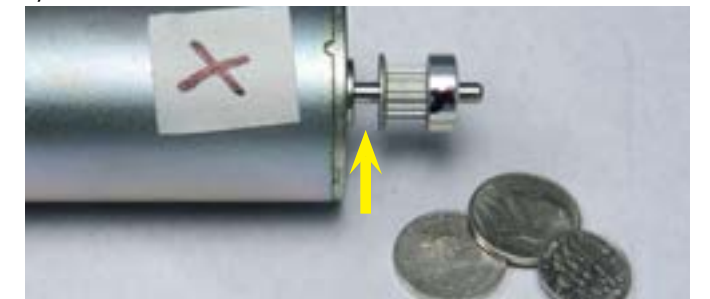
Step 18: With the motor screws (3) slightly tighten, and the nickle in place, press down on the pulley (arrow) until the pulley touches the base as shown. You can now fully tighten (clockwise) the 1st set screw.



Step 20: You now must tighten the small Y belt. To do this, (with all 3 screws not fully tightened yet), wrap your fingers around the motor and your thumb against the bracket as shown, pull the motor towards you until the belt is taught. Now tighten all 3 screws.



Step 22: To test the tension of the belt, press in on the belt at this location. It should not press in more than 1/8th of an inch.



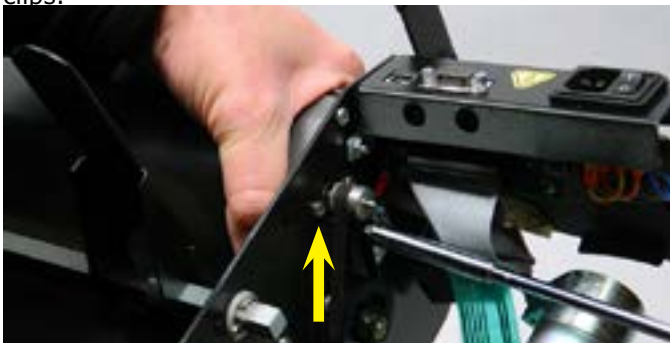
Step 24: You can place the X pulley on before you place it in the CPII. The distance from the top of the motor to the bottom of the pulley is approximately .200 (2/10) of an inch. You can use 2 nickels and 1 dime for the measurement. Once done, tighten both set screws.



Step 25: Place the X motor in the CPIO as shown. The pulley will slide into the opening. You can, at this time, re-connect both the power and the communication clips.



Step 26: Place the Y belt around the motor pulley (silver) and the large black plastic pulley. Place the 3 screws through the end plate and into the motor as shown. Don't tighten at this point. You still need to pull the motor tight to increase the tension of the belt.



Step 27: With the CPIO lying on its front, you can, with 1 hand, pull the motor (arrow) to put the correct tension on the belt. Once the correct tension is achieved (this is done by feel) go ahead and tighten all 3 screws. As in step 22, you can press in on the belt. The belt should not flex more than 1/8".



Step 28: To test, plug in the power cord and turn on. If done correctly, The carriage should move to the end plates, and the shaft should rotate.



Step 29: When tested successfully, place the bottom pan back on with the 7 screws



Step 30: You can now place back on the right end cover. You are now ready to resume....**FINISHED**