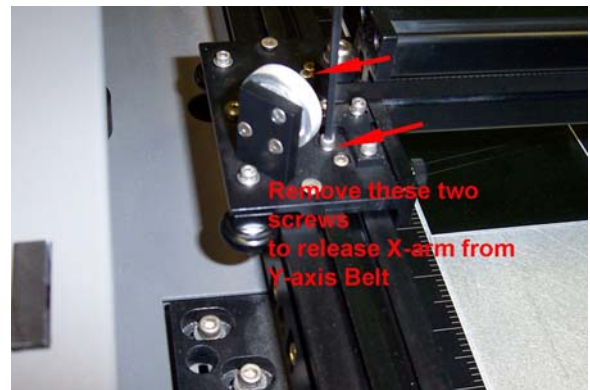
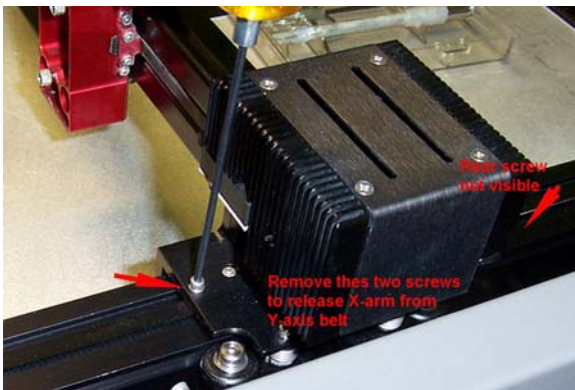


Y Axis Belt Removal

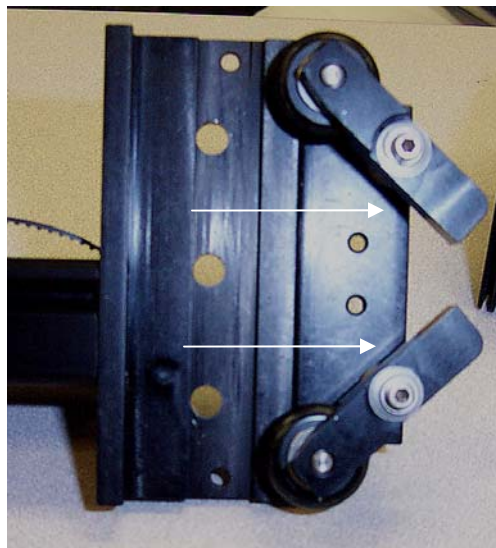
1. Power system down.
2. Remove flex cable from X axis motor.



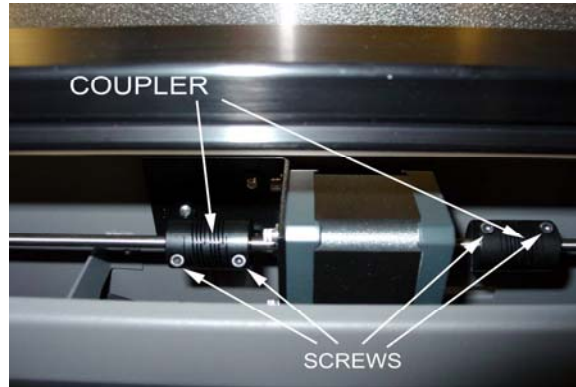
3. Using a 3/32 allen wrench remove the 4 socket screws, 2 on each side of X axis arm. Store the screws in a safe place.



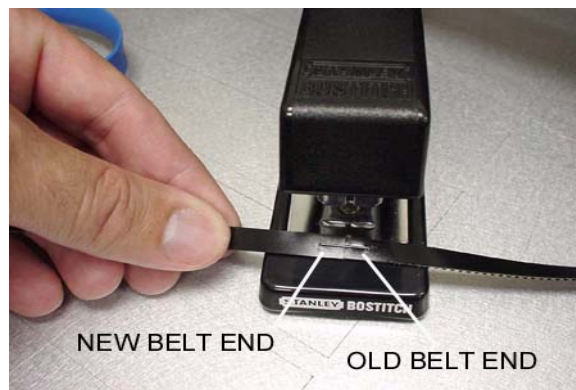
4. Release self-tensioning bearings on right side Y- rail by pressing on the two spring loaded levers as shown.



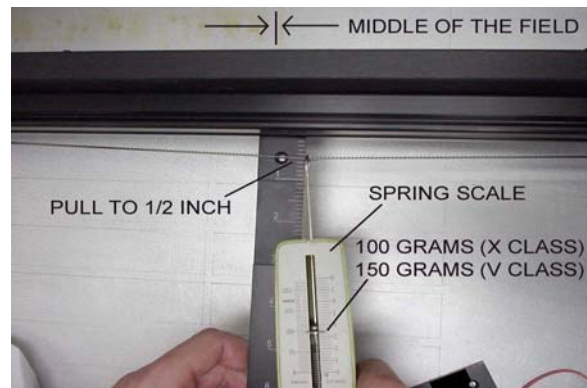
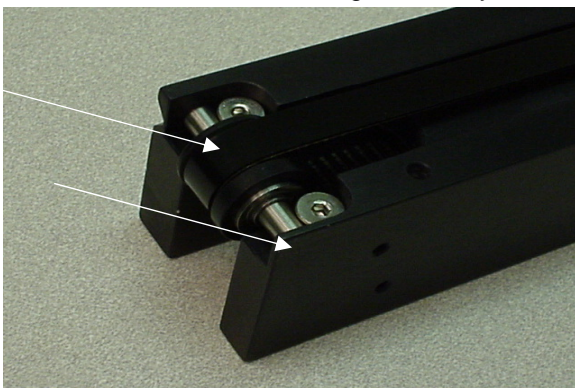
5. Slowly lift X axis arm and place in a safe place.
6. After removing X axis arm, the brackets connecting the ends of the Y axis belt will be exposed.
7. Free the Y axis motor from the Y axis pulley by loosening coupler. See below. This will allow Y axis pulley for the side loosened spin freely.



8. After loosening the coupler in step 7, remove the brackets in step 6. Staple the new belt to old belt, as you pull old belt new will be pulled into position.



9. Using belt tool, adjust tension to specification by tightening or loosening Y axis idler located at the back of both Y axis rails. **Please refer to the attached belt tension document.** Adjust both tension screws equally. Failing to do so will result in Y axis belt tracking incorrectly.



10. Install X axis arm, using allen screws removed on step #3.

System Belt Tensions

M & V Machines

X-axis: 150 – 175 grams at $\frac{1}{2}$ inch outside the groove.

Y-axis: 225 grams at $\frac{1}{2}$ inch inside the groove.

X Machines

X-axis: 100 – 125 grams at $\frac{1}{2}$ inch outside the groove.

Y-axis: 175 grams at $\frac{1}{2}$ inch inside the groove.

C-200

X-Axis: 175 – 200 grams at $\frac{1}{2}$ inch outside the groove.

Y-Axis: 200 grams when belts touch.

11. Square X axis arm using the following procedure.

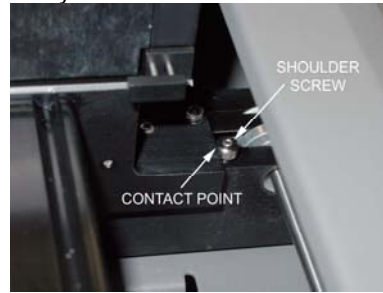
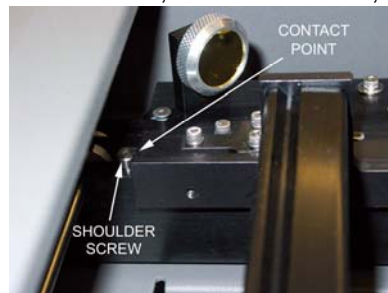
X-axis Arm Squaring Check and Adjustment

Check

- Power off the system
- Remove the #2 mirror cover by removing the thumbscrew, sliding the cover to the right and then off the rail.



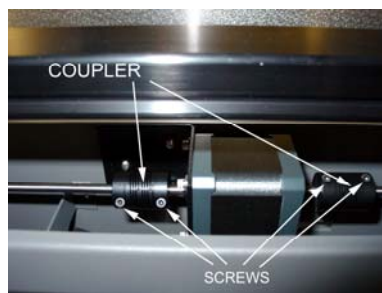
- Grasp the X-axis arm and slowly pull the arm towards you until it stops.
- Observe if the left side and right side of the X-axis arm makes contact with the left and right side shoulder screws, at the same time, respectively.



- If there is a gap between the shoulder screw and the contact point on either the left or right side of the arm, you will need to square the arm by making an adjustment.

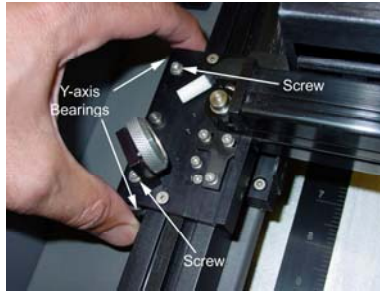
Adjustment

- Locate the Y-axis couplers. For each of the two couplers, there are two screws that mount it to the Y-motor and the Y-axis shaft. Using a 3/32 inch Allen wrench, choose ONE (only one) of those four screws and loosen it a 1/2 turn.



- With your hand, grasp the center of the arm and pull it forward to contact the shoulder screws. While holding it against the arm against the two shoulder screws, tighten the screw that you loosened.

- Now, push the arm into the approximate center of the engraving field. With your thumb and forefinger of your left hand, touch the two y-axis bearings and attempt to “turn” or “rotate” them.



- You should feel an equal turning resistance for each bearing. If one bearing spins freely and the other has a turning resistance, or the turning resistance is unequal, then adjustment is necessary. To adjust, using a 3/32 inch Allen wrench, loosen BOTH the two socket head screws ¼ turn. Then, re-tighten them. This procedure automatically equalizes the force on both Y-axis bearings. Re-check the turning resistance once again and re-adjust if necessary.
- Re-install the #2 mirror cover.
- Squaring is complete.