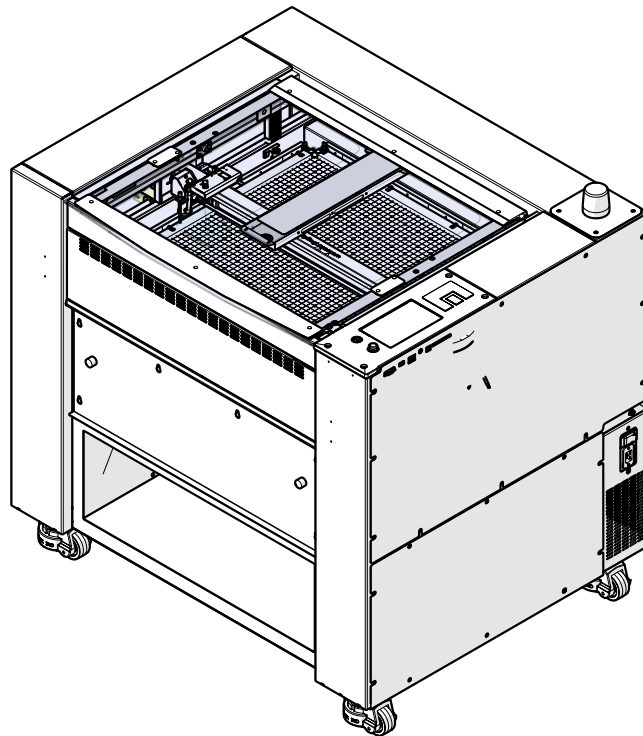


## Reducer Drive Replacement Edge 12, 24, 36 & Pro 24, 36



### Parts Required

- LC0238 - X-Axis Reducer Assembly, 12,24,36

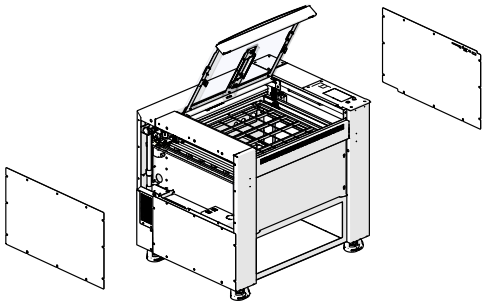
### Tools/ Materials Required

- 2.5mm Allen wrench
- 5/32" Allen wrench
- 7/64" Allen wrench

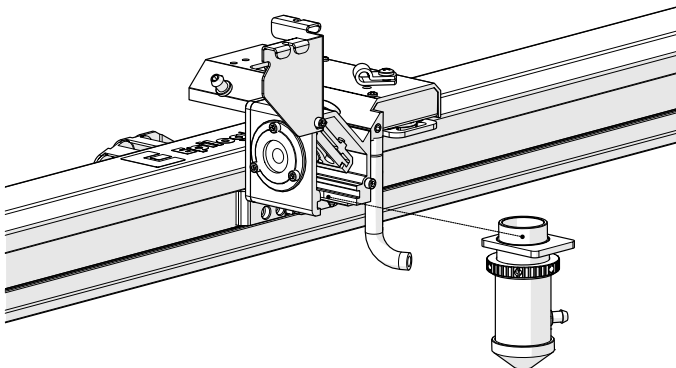
# Reducer Driver Replacement

## Reducer Drive Removal

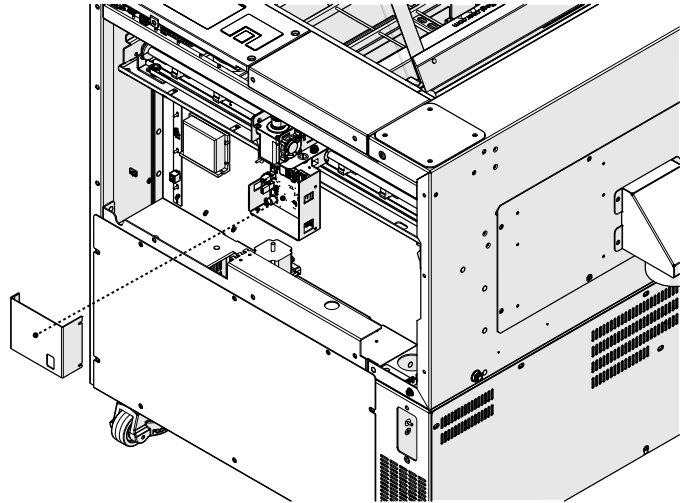
1. Turn off the engraver.
2. Disconnect the engraver from power source.
3. Remove the left and right panels of the engraver:



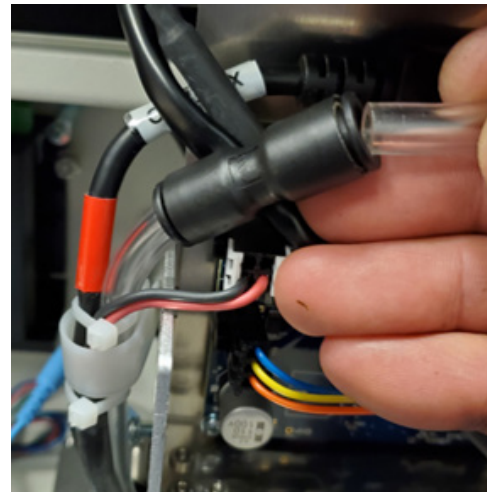
4. Loosen and remove the lens tube assembly from the x-axis assembly:



5. Remove the x-axis drive board cover:

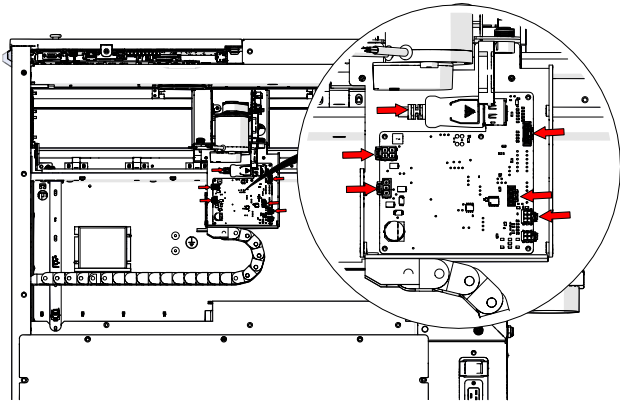


6. Disconnect the air assist tubing from the right side of the x-axis assembly:

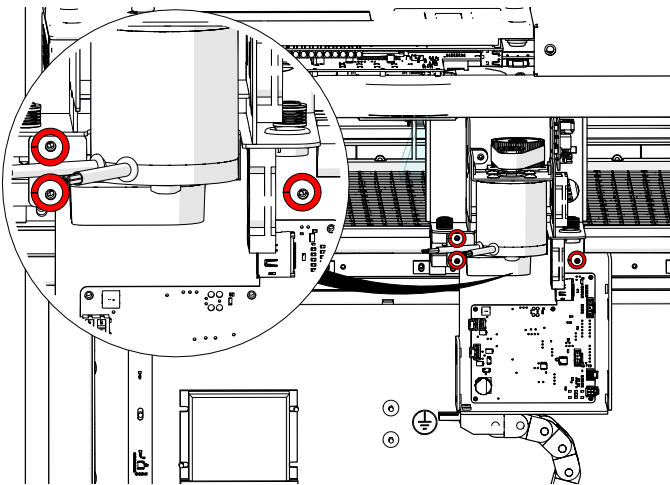


The AA tubing is held by a tubing coupler. To remove the tubing, press the tubing into the fixture. Then, while holding the retaining ring tight to the fixture, pull the AA tubing away from it.

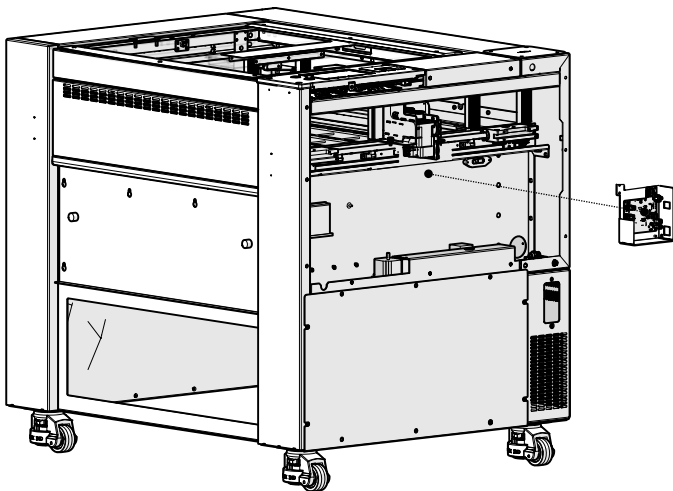
7. Remove the six (6) electrical connections on the drive board:



8. Loosen and remove the three (3) Phillips screws that secure the x-axis drive board mounting bracket to the x-axis assembly:

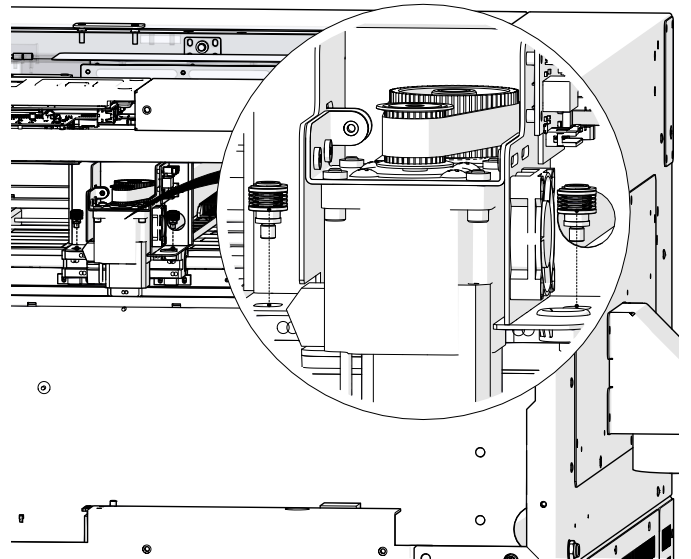
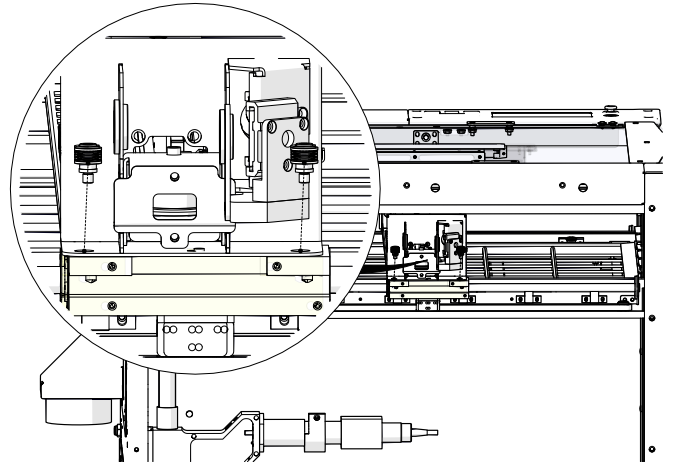


9. Remove the x-axis drive board and housing:

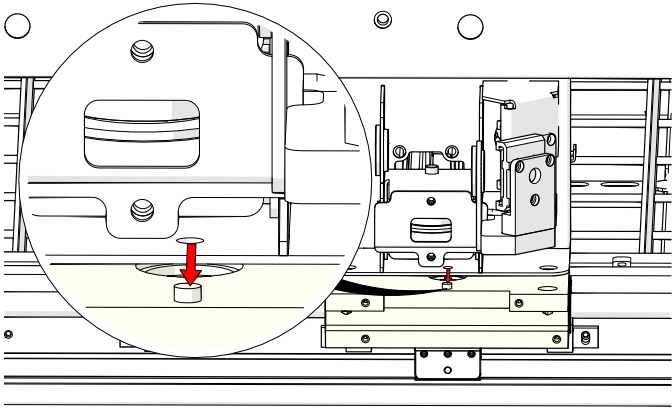


10. Disconnect the belows on the left and right side of the engraver.

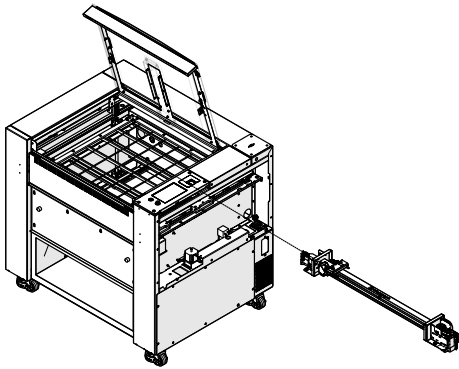
11. Remove the four (4) fasteners that secure the x-axis assembly to the y-axis bearings. There are two (2) on the right side and two (2) on the left side:



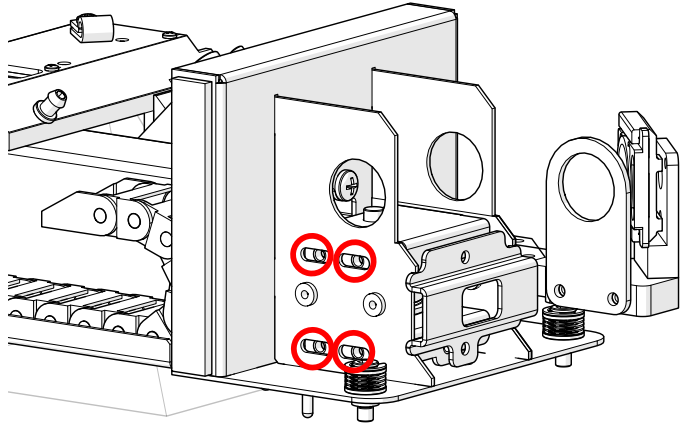
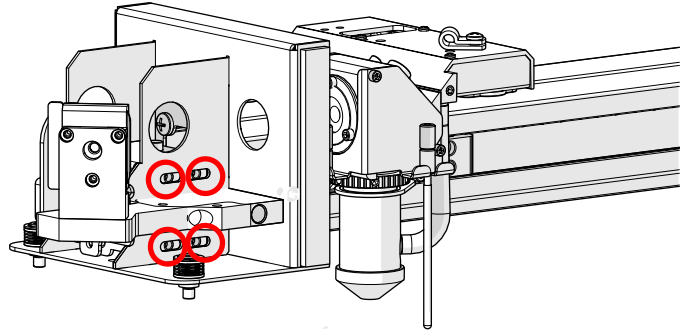
12. Gently lift on the x-axis assembly to free it from the locator pins on the y-axis bearing blocks:



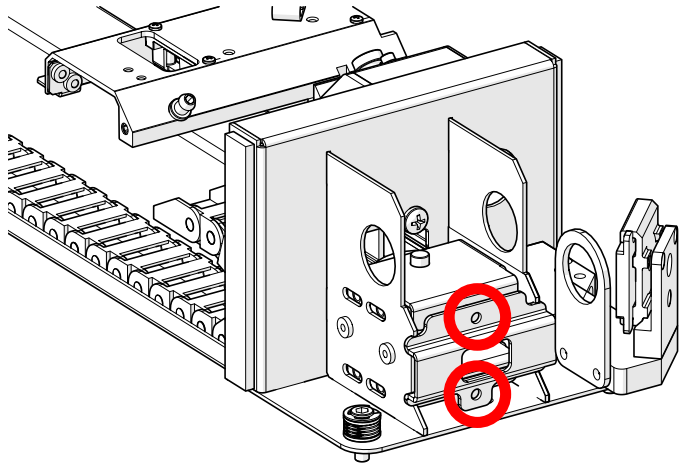
13. Slide the x-axis assembly out of the cabinet through the right side of the engraver:



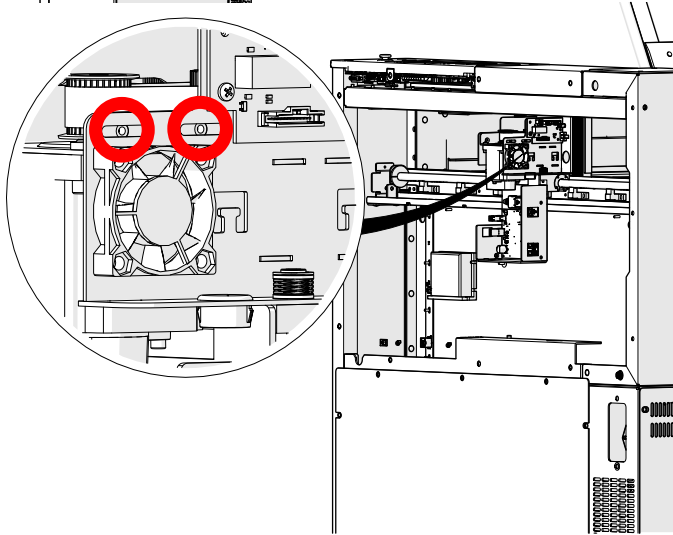
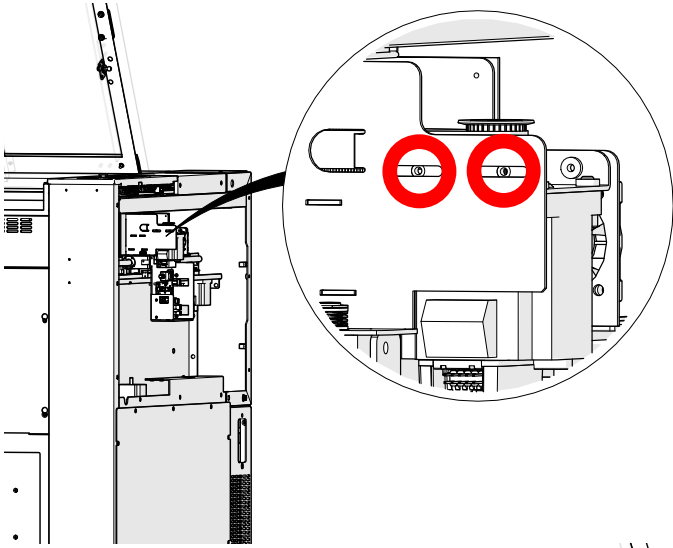
14. Loosen, but do not remove the eight (8) 7/64" Allen screws on the x-axis idler assembly:



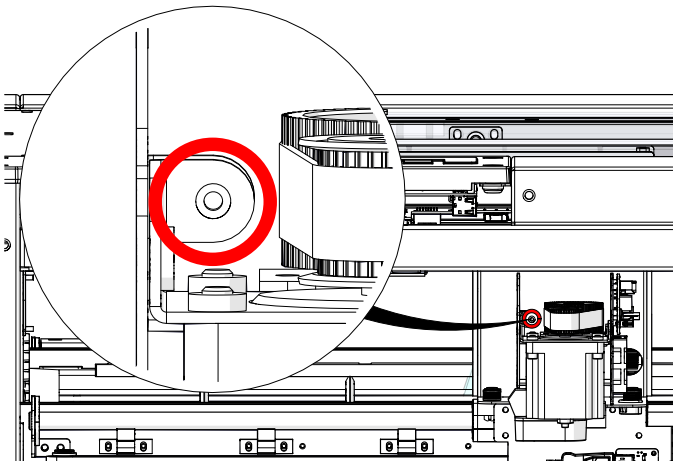
15. Loosen, but do not remove the two (2) 7/64" tensioner screws on the idler assembly body:



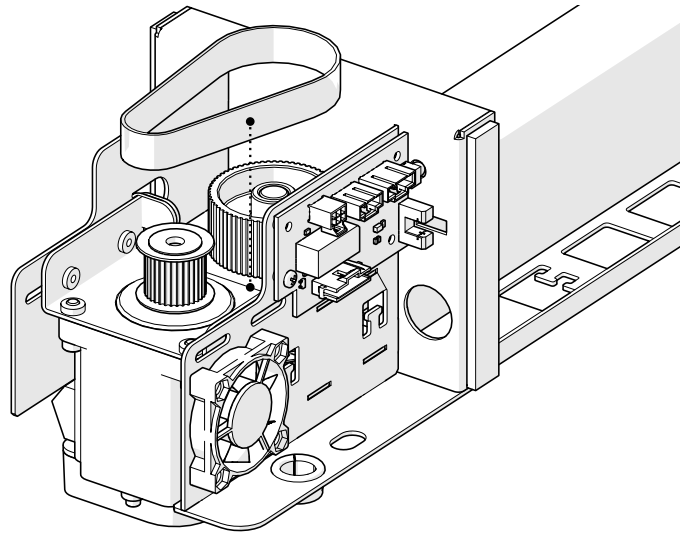
16. Loosen, but do not remove the four (4) 7/64" Allen screws that secure the x-axis motor to the x-axis assembly:



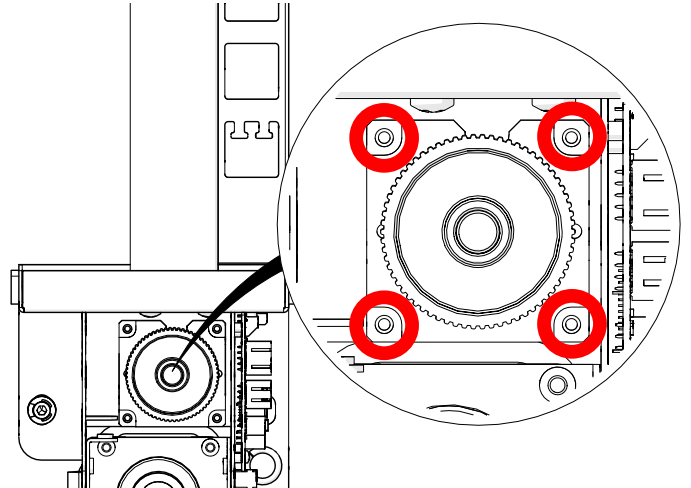
17. Loosen the 7/64" Allen screw on the reducer drive belt tensioner:



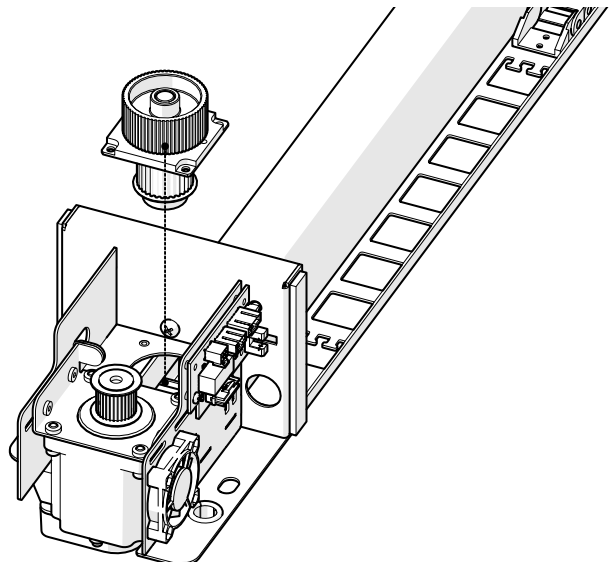
18. Remove the reducer drive belt:



19. Loosen and remove the four (4) 2.5 mm Allen screws on the reducer drive assembly:

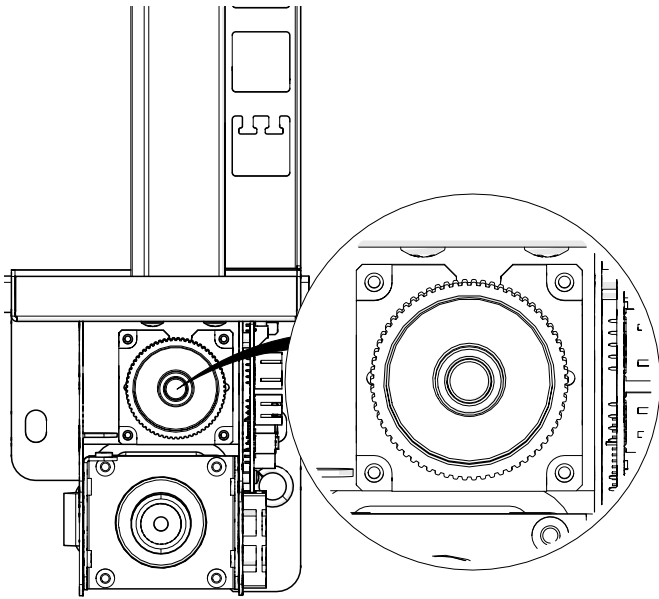


20. Remove the reducer drive assembly:

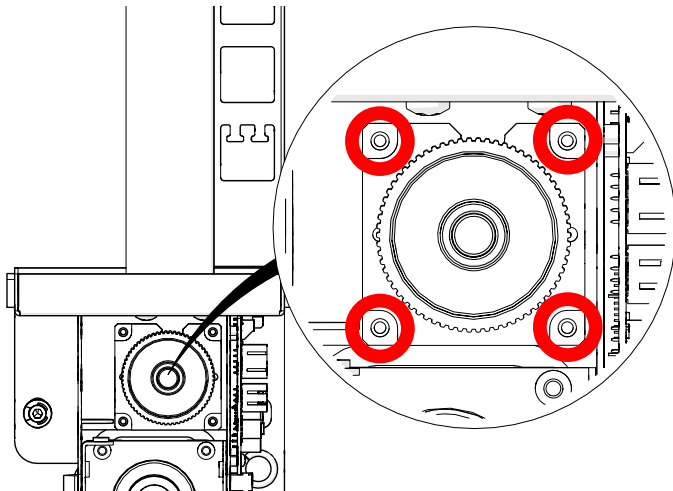


## Reducer Drive Installation

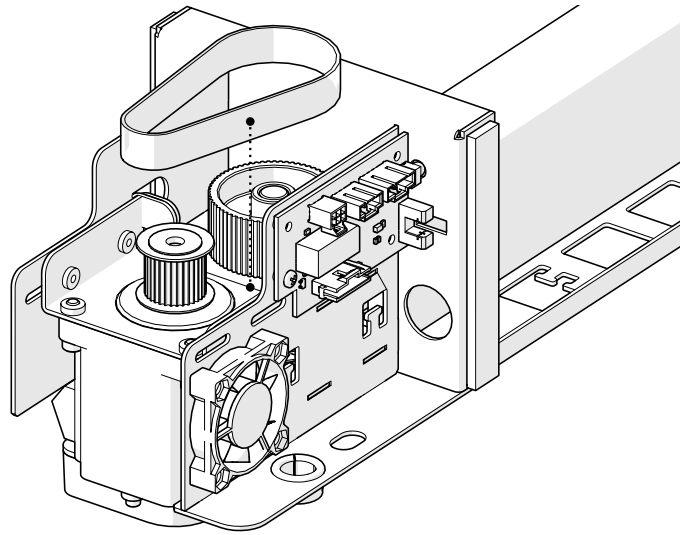
1. Install the reducer drive assembly into the x-axis assembly so that the x-axis belt wraps around the bottom pulley. Ensure that the notch on the reducer baseplate faces away from the x-axis motor:



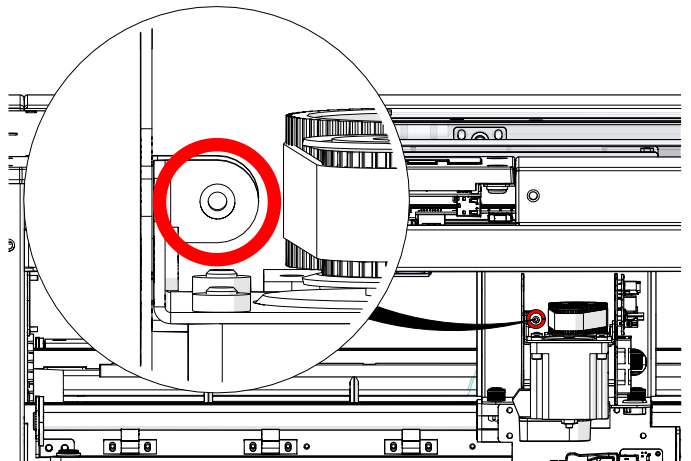
2. Install and tighten the four (4) 2.5 mm Allen screws on the reducer drive assembly:



3. Install the reducer drive belt:

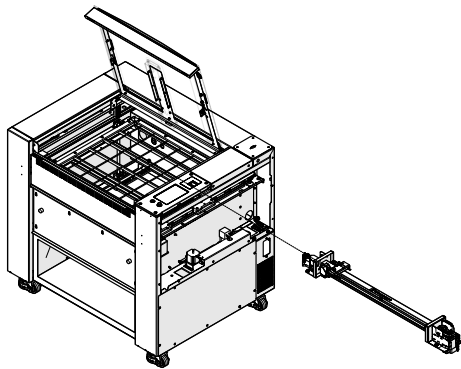


4. Tighten the 7/64" Allen screw on the reducer drive belt tensioner until the slack is removed from the reducer belt:

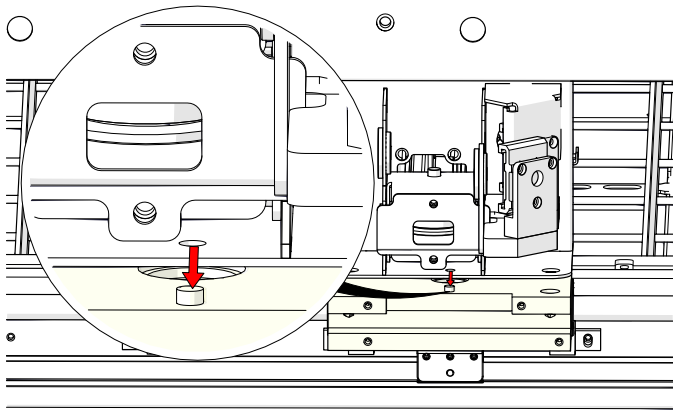


5. Tighten the (4) 7/64" Allen screws that secure the x-axis motor to the x-axis assembly.

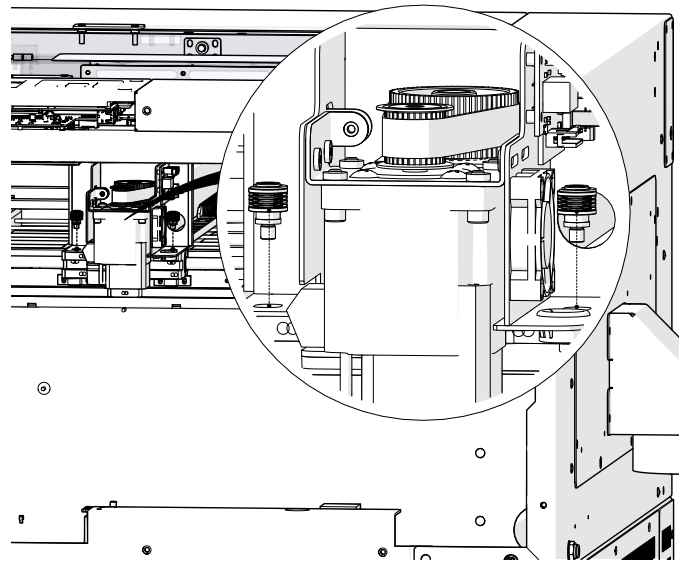
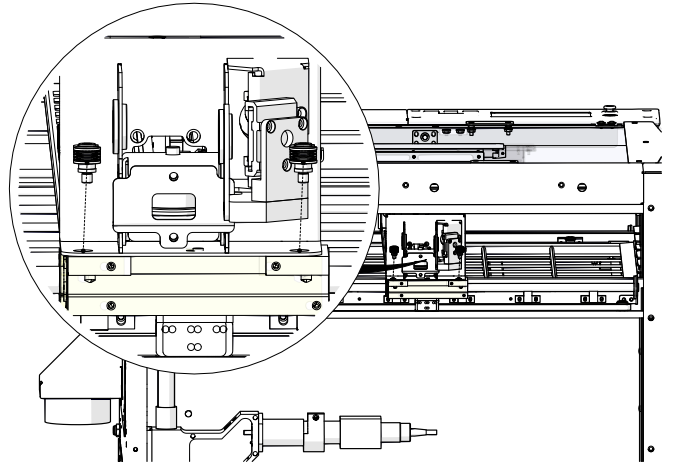
6. Slide the x-axis assembly into the cabinet through the right side of the engraver:



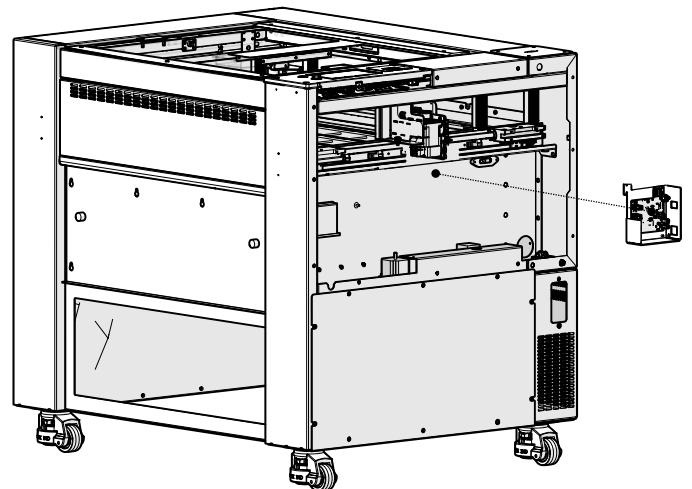
7. Place the x-axis assembly on the y-axis bearing blocks ensuring that it sits on the locator pins:



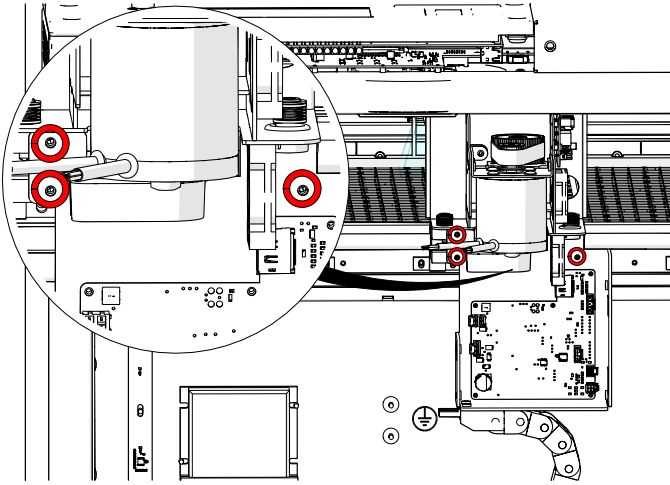
8. Install and tighten the four (4) fasteners that secure the x-axis assembly to the y-axis bearings. There are two (2) on the right side and two (2) on the left side:



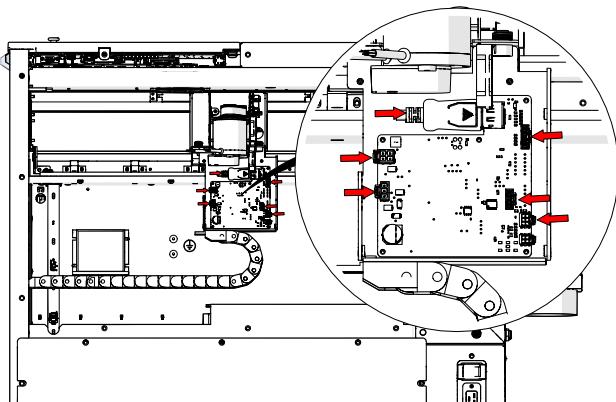
9. Place the x-axis drive board and housing into position:



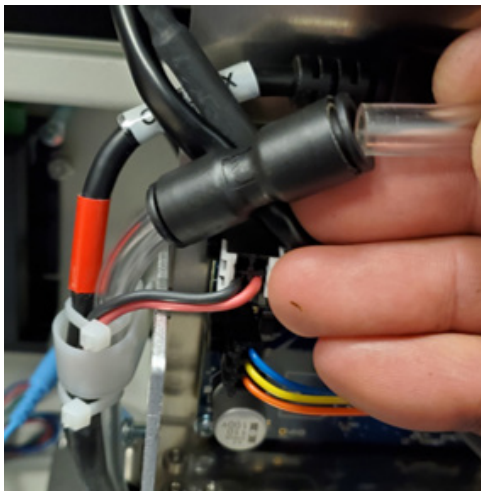
10. Install and tighten the three (3) Phillips screws that secure the x-axis drive board mounting bracket to the x-axis assembly:



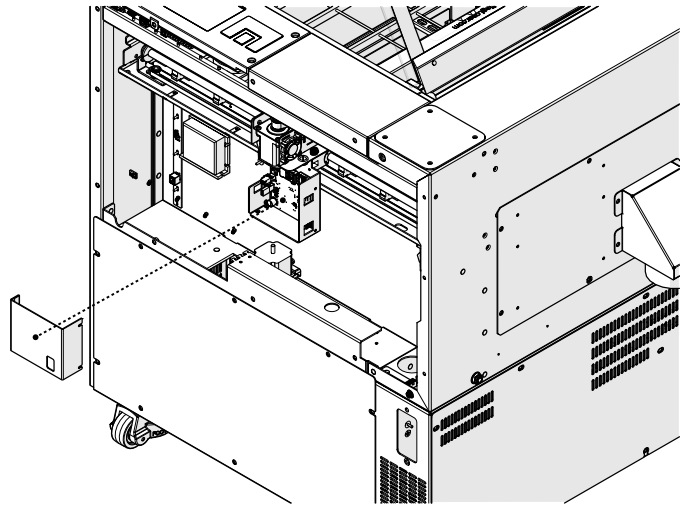
11. Connect the six (6) electrical harnesses on the drive board:



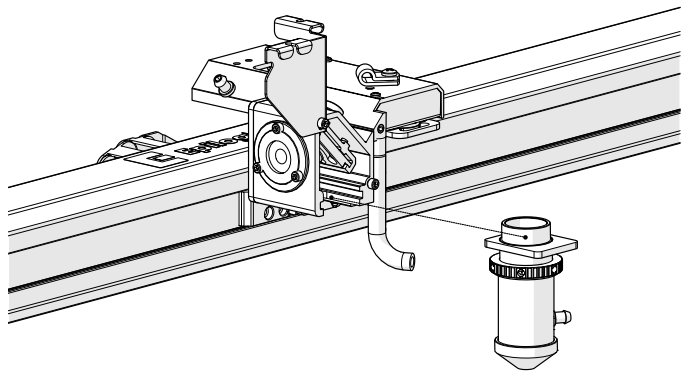
12. Connect the air assist tubing to the right side of the x-axis assembly:



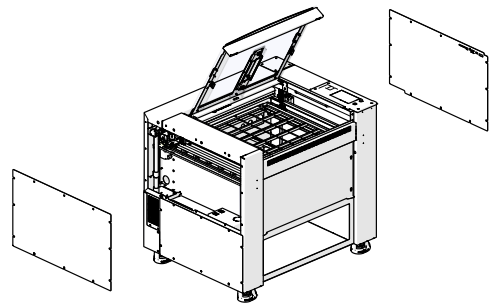
13. Install x-axis drive board cover:



14. Install the lens tube assembly in the x-axis assembly:



15. Replace the left and right panels of the engraver:



## Tensioning the X-Axis Belt

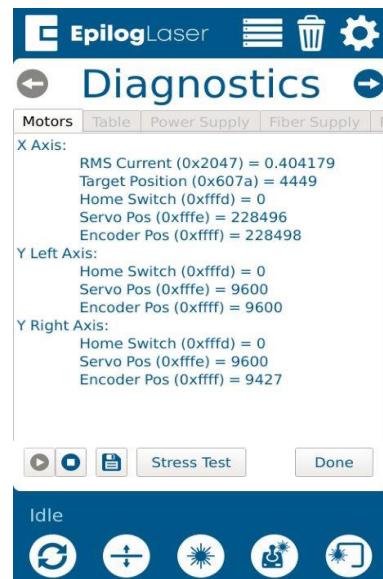
1. Open your preferred illustrating program and create a black, raster box on an artboard that is:
  - For Edge/Pro 12/24: 22" or 560mm wide
  - For Edge/Pro 36: 34" or 860mm wide
  - Roughly 4" or 100mm tall
2. Set the speed to 100%.
3. Power is unimportant, as the machine will be run with the lid open for the procedure.
4. Send the job to the engraver and start the job.
5. At the display panel, press the gear icon in the upper right-hand corner of the display to open the Settings menu:



6. Press and hold the word "Settings" that appears at the touch of the touchpad to gain access to the Advanced Settings menu:

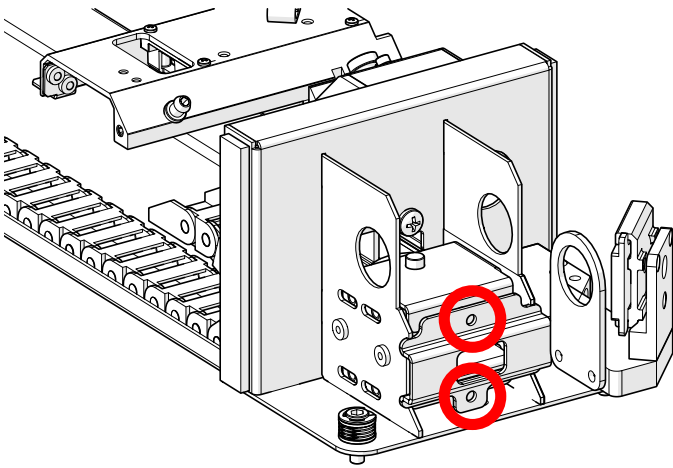


7. Once in the Advanced Settings menu, enter the Diagnostics menu and locate the RMS Current reading for the X-Axis Motor/Drive:

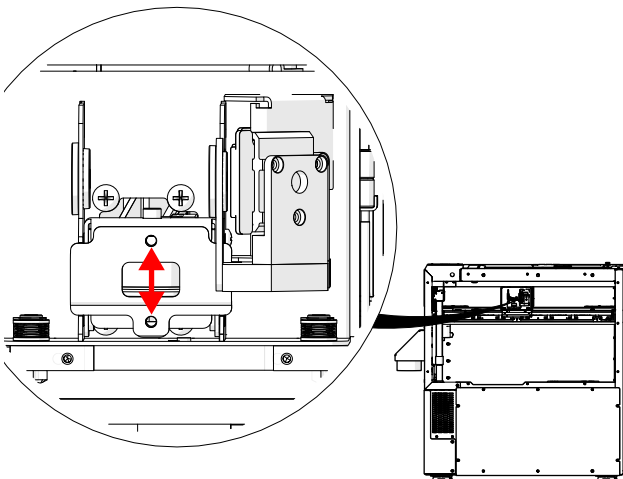


8. During the job, the x-axis motor RMS current should be between 4.0 - 5.1 A, depending on the model of engraver.

- If the RMS current is lower than this, increase the tension on the x-axis belt by tightening the two (2) 7/64" tensioner screws on the x-axis idler assembly.
- If the RMS current is higher than this, decrease the tension on the x-axis belt by loosening the two (2) 7/64" tensioner screws on the x-axis idler assembly.



9. After tensioning the x-axis belt, ensure that the belt remains as centered as possible on the idler pulley when in motion:

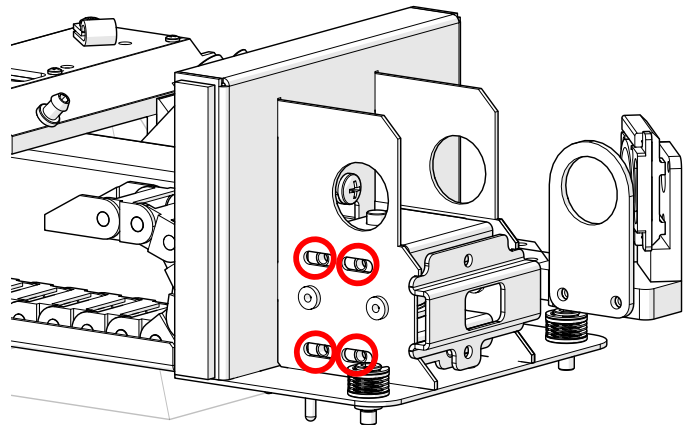
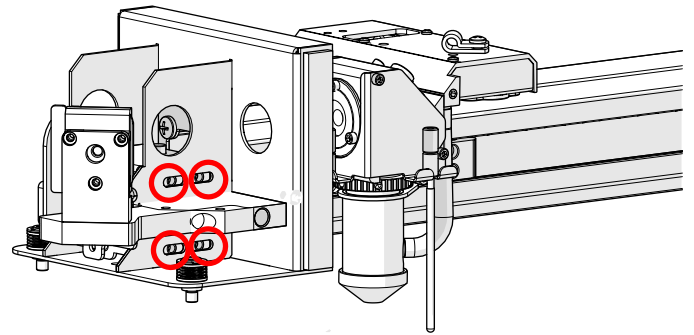


10. If the x-axis belt is riding against the idler pulley flange, make equal but opposite adjustments to the two (2) 7/64" tensioner screws.

- If the x-axis belt is too high:
  - Tighten the top screw 1/4 turn
  - Loosen the bottom screw 1/4 turn
- If the x-axis belt is too low:
  - Loosen the top screw 1/4 turn
  - Tighten the bottom screw 1/4 turn

11. Repeat step 10 until the x-axis belt remains as centered as possible on the idler pulley when in motion.

12. Once the x-axis belt is centered and the optimal RMS current value has been achieved, tighten the eight (8) 7/64" idler mounting screws located on the left side of the x-axis assembly:



If further assistance is required, please contact Epilog Laser Tech Support by phone at 303-215-9171, or by email at [tech@epiloglaser.com](mailto:tech@epiloglaser.com).

