

Image 57 shows the Y-Axis assembly.

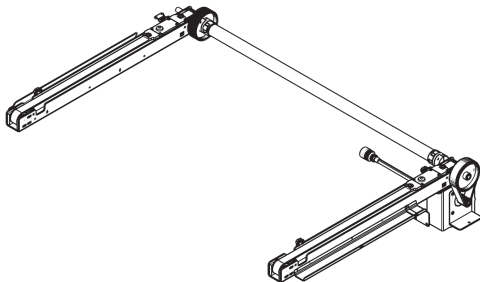


Figure 57

Y-Motor Replacement

Disconnect the engraver from its power source.

Remove the upper right hand side access panel.

Remove the Exhaust Plenum assembly from the rear of the machine. The Plenum is shown in figure 58.

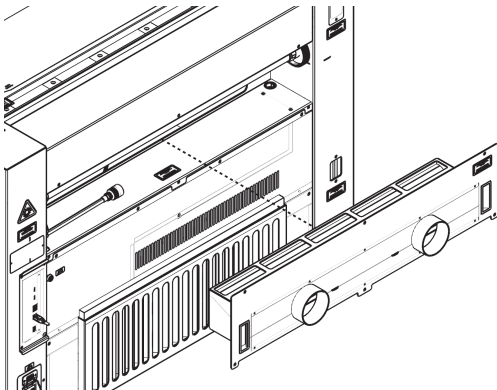


Figure 58

Loosen the Y-Motor Mount

From the rear of the machine, loosen the 4 Y-Axis Motor Mounting screws, but do not remove them at this time.

Disconnect the Y-Axis Harness

Locate the Y-Axis Motor harness and disconnect the motors wiring harness from the PCB it is connected to.

Loosen the Y-Axis reducer drive belt

From the right hand side of the machine, loosen the Y-Axis belt tensioner. This consists of two Allen screws which pull down on the Y-Motor Mounting bracket, as shown in figure 59. The figure below is drawn only showing one tensioning screw, there are in fact 2 and their location is highlighted in the image below.

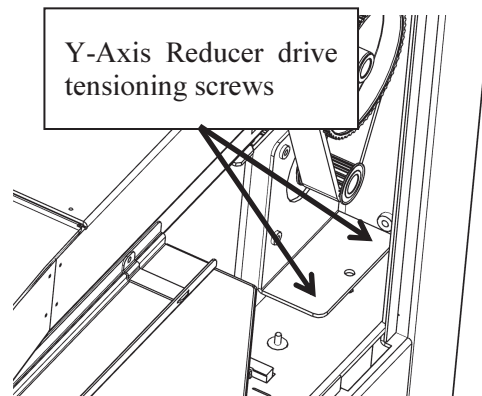


Figure 59

Remove the Reducer Drive Belt

Once the Reducer drive belt is loose, it can be removed from the machine.

Remove the Y-axis Motor Mounting Screws, which were loosened earlier.

Remove the Y-axis motor from the machine.

Installing the Y-Axis Motor

Install the Y-Motor in to the Y-Motor bracket and install the mounting screws, but DO NOT tighten the screws at this time.

Install the Y-Axis reducer drive belt over the motor pulley and the Y-Axis drive pulley.

Apply tension to the Y-Axis Reducer drive belt by tightening the tensioning screws represented by the circles figure 60.

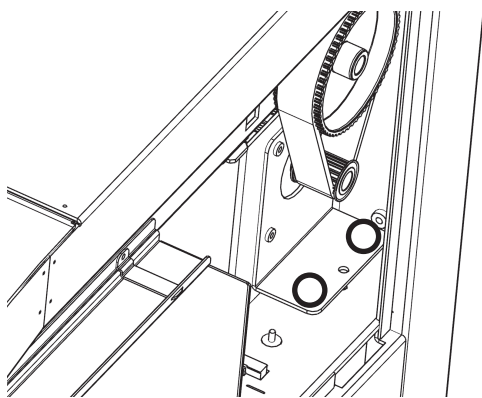


Figure 60

Apply sufficient tension to the Y-Axis belt so that the Y-Motor Bracket is roughly 1/2 inch from the bottom of the machine, as shown in figure 61.

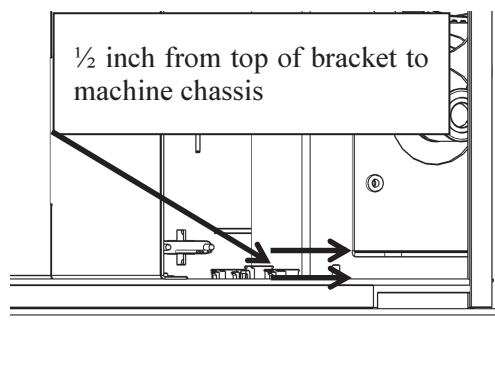


Figure 61

We have found that the tension that is set on this belt is not critical, as long as it is tight, it will be OK.

Removing the Y-Axis Drive Shaft

The Y-Axis drive shaft is located along the rear of the machine and couples the two Y-Axis drives together.

The Drive shaft is set in place and two pinch clamps hold it in place.

To remove the drive shaft, loosen the two pinch bolts and remove the outer clamp as shown in figure 62.

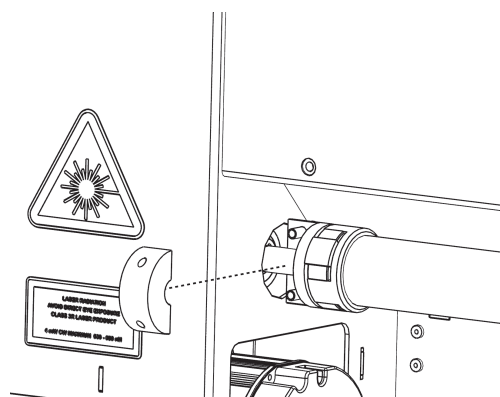


Figure 62

Once the outer clamp is removed from both sides of the Y-Axis drive shaft, the shaft can be removed.

Figure 63 is an example of the left side of the Y-Axis drive shaft fully disassembled.

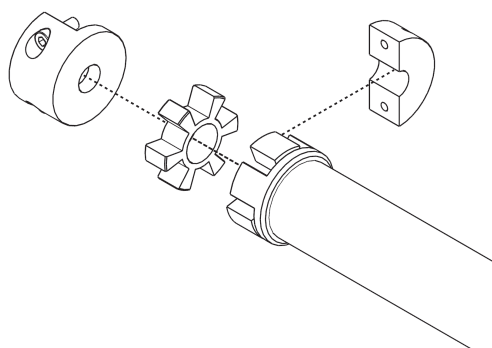


Figure 63

To install the Y-Axis Drive Shaft, reverse the steps above.

Replace the Y-Axis Reducer Drive Assembly

Remove both right hand side access panels.

Remove the Exhaust Plenum to gain access to the Y-Axis drive Shaft.

Loosen the two Green captured screws on the right hand side of the x-axis assembly.

Remove the Cable Clamps (highlighted in Red) shown in figure 64. There are an additional 2 clamps to the left, which are not shown, which also need to be removed.

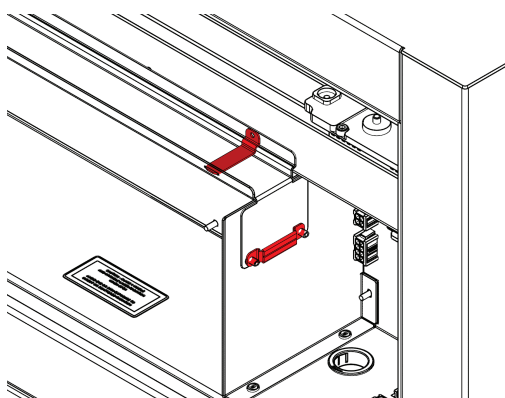


Figure 64

At the front of the Y-axis drive assembly is an electrical connector. This connector is attached to the switch location in figure 65.

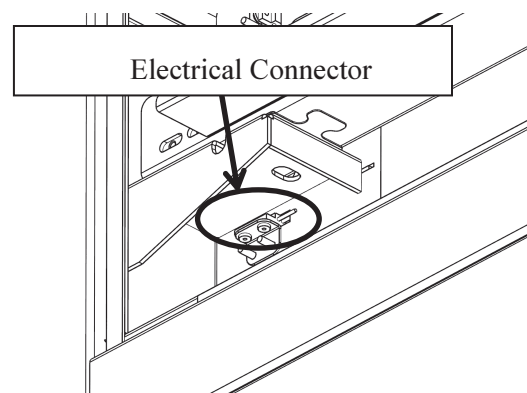


Figure 65

Loosen the two pinch bolts which secure the Left hand side of the Y-axis drive shaft. These pinch bolts are shown in figure 66. Do not remove the bolts; they only need to be loosened.

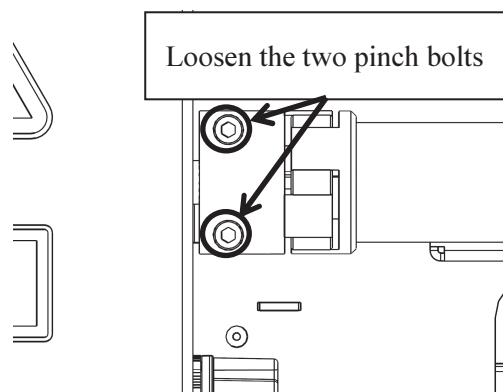


Figure 66

Remove the Y-Axis Drive Assembly

Locate and remove the 2 Allen Screws which secure the rear of the Y-Axis drive assembly to the machines chassis. The locations of these Allen Screws are shown in figure 67.

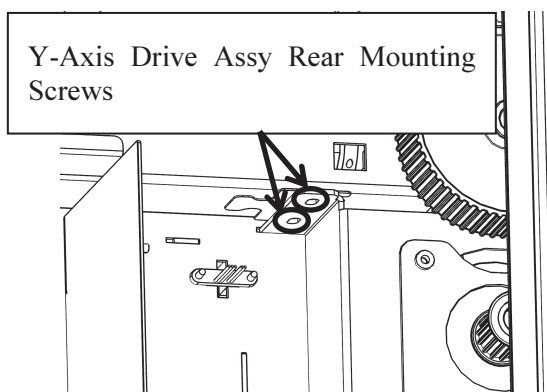


Figure 67

Y-Axis Drive Assembly Shim:

NOTE: A shim has been placed between the Y-Axis Drive assembly and the Engravers Chassis. It is very important that the Shim be returned to the location from which it was removed. The rear shim is shown in figure 68.

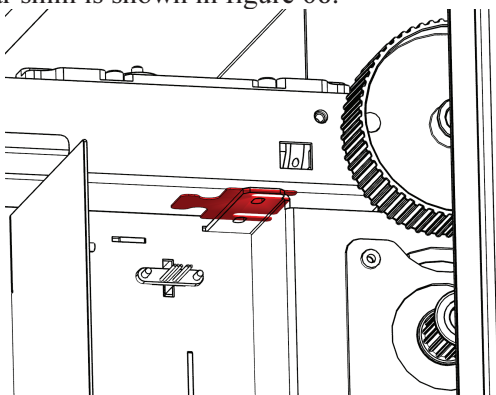


Figure 68

Locate and remove the two Allen Screws at the front of the Y-axis Drive assembly. The location of these Allen Screws is shown in Figure 69.

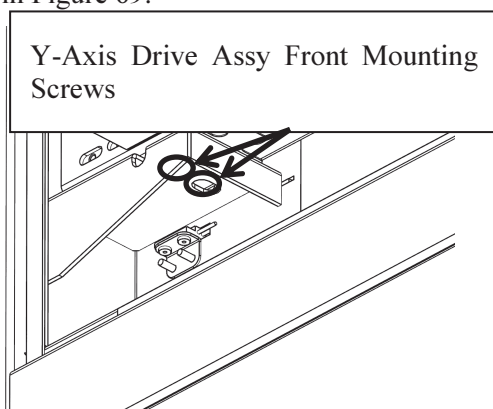


Figure 69

There is also a shim at the front of the Y-axis drive assembly and it too needs to be installed from where it was removed when replacing the Y-Axis Drive assembly. The front shim is shown in figure 70.

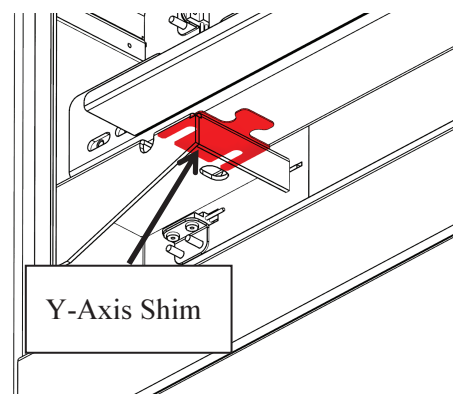


Figure 70

Removing the Y-Axis drive Assembly

Once all the mounting screws have been removed, raise the front of the Y-Axis drive assembly, this will allow the reducer drive belt to be released from the pulley.

By removing the drive assembly in this manner, you will not need to reset the Y-Axis belt tension when you install the replacement Drive assembly.

You may also need to lift the X-axis assembly slightly to get the Y-Drive assembly to clear the X-axis assembly.

Install the Y-Axis Drive Assembly

Install the Y-Axis drive assembly in the Fusion machine, but do not install the mounting screws at this time.

Install the Y-Axis reducer drive belt over the large pulley on the Y-Drive assembly

Lift the front of the Y-axis drive assembly enough to allow the Reducer drive belt to fit over the Y-Motor drive pulley.

Once the reducer drive belt is in place, install the two Y-Axis shims beneath the Y-Drive assembly, ensuring that the shim which was removed from the front is installed in the front, and the one which was removed from the rear is installed in the rear.

Install the X-axis Assembly on to the Y-Drive plates, ensuring that the Guide pins from the plate enter the opening in the bottom of the rail as shown in figure 71.

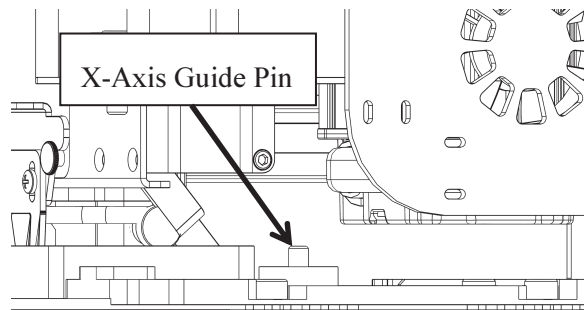


Figure 71

Tighten the four green captured screws which secure the X-axis Assembly to the Y-Axis drive plate.

Tighten the four Y-Axis drive Allen Screws which secures the Y-axis drive assembly to the Fusions chassis until they are finger tight.

Slowly and gently, move the X-axis assembly forward and back in the fusion 2 to 3 times. This will aid in the alignment of the Y-Drive assembly.

Move the X-axis assembly to the rear of the Fusion and tighten the two rear Y-axis Drive Allen Screws.

Move the X-axis assembly to the front of the machine and tighten the two front Y-axis drive Allen Screws.

Reconnect the limit switch which was disconnected earlier.

Install the Y-Axis Drive Shaft in the rear of the machine and tighten the two pinch bolts.

Replace the rear and side panels of the Fusion.

Reconnect the Fusion to its power source.

Apply power to the Fusion and check for proper operation of the Y-axis assembly.

Exploded Diagrams

