

X-Axis Motor Replacement

The Following Procedure is easiest with the X-axis removed from the machine, but can be done while the rail is installed in the machine. The procedure below describes the replacement done with the rail installed in the machine.

Preliminary Steps :

Disconnect the machine from its Power Source. Remove the upper Right hand side access panel. Gently pull the rail forward in the machine. This will provide room to work on the rail.

Remove the X-axis Flex Cable

Located on the right hand side of the rail is the X-axis Flex cable. Disconnect both of the flex cable connectors from the X/Y PC board. Remove the flex cable clamp. Remove the HT519 X Axis Cable Guard, shown below in figure 16.

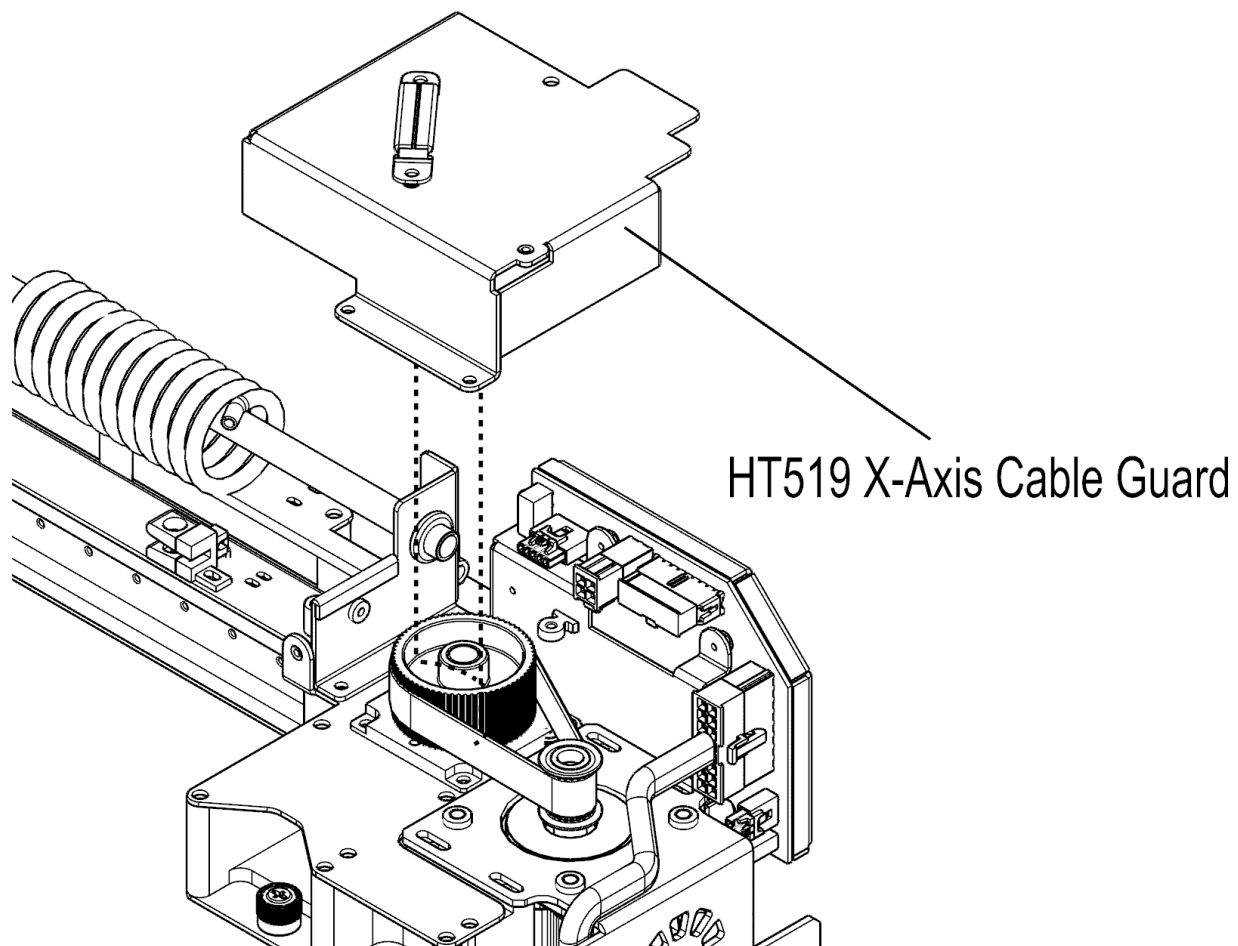


Figure 43

Once the Reducer belt has been exposed, take a minute to get a “feel” for how tight this belt is. This will aid you when it is time to reassemble. From the top of the rail; loosen, but do not remove the four Motor Mounting bracket mounting screws circled in figure 17 below

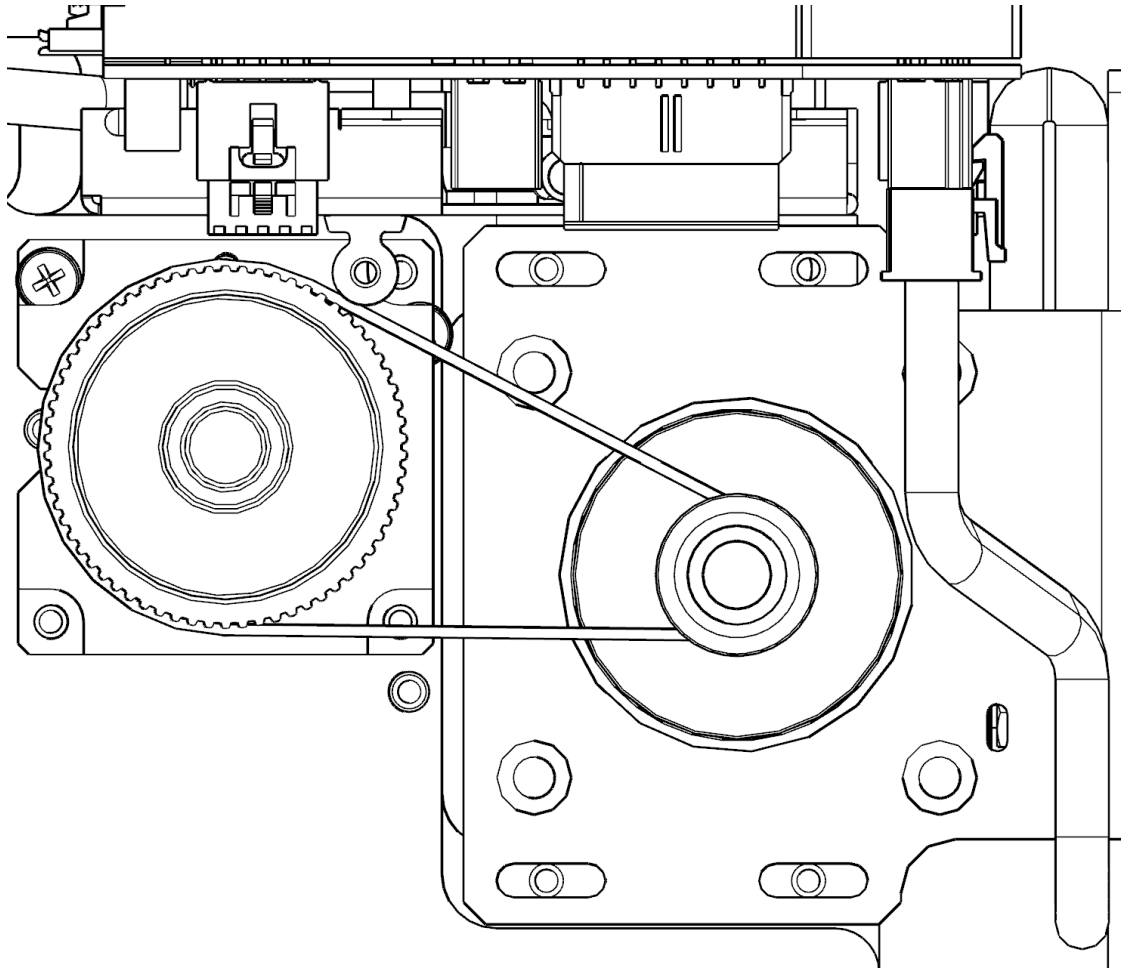


Figure 44

Move the X-motor to the left in the machine. Remove the reducer drive belt. From the bottom of the rail, remove the four motor mounting screws, as shown in figure 45.

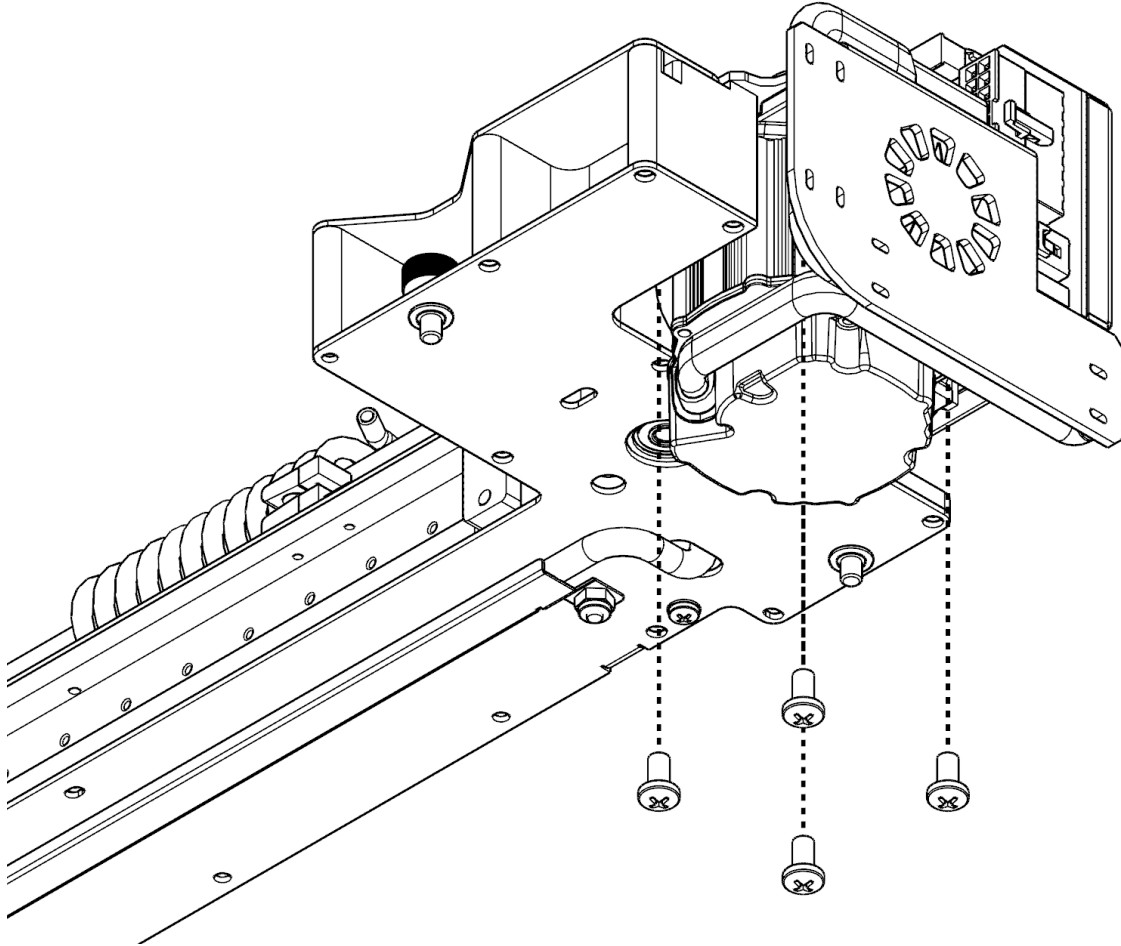


Figure 45

Remove the motor from the X-axis assembly.

***Two different types of X-axis assemblies were produced:**

Type 1: Has no wave spring positioned between the motor and the body of the X-axis rail.

Type 2: Has a wave spring positioned between the X-motor and the body of the X-axis rail assembly. Machines with a wave spring will have the small pocket machined in to the rail. You can identify which type of machine you are working on by using the figure 46.

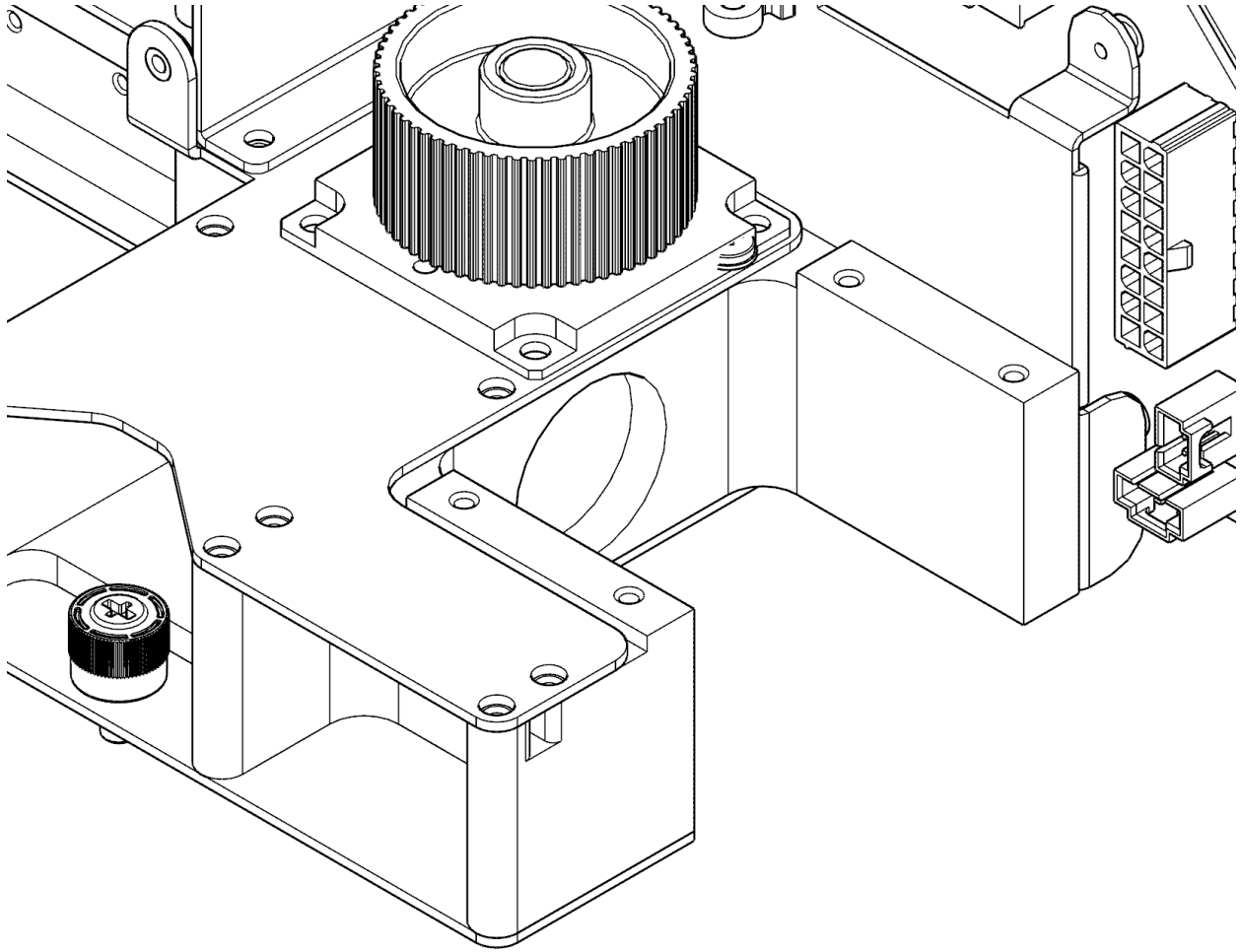


Figure 46

While the X-Motor is out of the machine, this is a good time to clean up the motor cooling fan.

Install the Fusion X-Motor

Install the X-Motor in Fusion X-axis assembly. Ensure proper placement of the Reducer drive belt tensioning spring, if the machine you are working on is fitted with one. The wave spring cannot be retro fitted into a machine that in currently is NOT fitted with the spring. Install the four motor mounting screws Install the Reducer Drive belt. Apply tension to the Reducer drive belt by:

- Wave Spring type: If fitted with the Wave Spring, allow the wave spring to apply the proper amount of tension to the reducer drive belt. Move the lens carriage side to side to ensure proper fitment of the reducer drive belt in to the pulley.
- Non-wave Spring type: If the X-axis is NOT fitted with a wave spring. Grasp the body of the motor with your left hand and gently pull the motor toward you, applying roughly 8 LB's of pressure to the motor. This belt does not need to be overly tight. Only apply sufficient tension to the reducer drive belt to achieve good registration of the engraving.

***Over tightening this belt will lead to premature X-Motor or Reducer drive assembly failure.**

Once tension is applied, tighten the X- Motor mounting bracket screws to secure the motor and bracket in place.

- Replace the X-axis Cable Guard.
- Reinstall the X-axis Flex cable.

- Reinstall the X-axis Flex cable clamp.
- Reinstall the upper right hand side Access panel.
- Restore power to the machine.
- Test for functionality in the same manner as you would for X-axis belt tension. Run a series of Times New Roman capitol T's. Look for the serifs to be aligned. If they are not, it could be that more tension is needed on the Reducer belt.