

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.

Replace the Reducer Drive Assembly

The Reducer drive assembly acts as a coupling device between the X-Motor and the X-axis.

This should be a fairly rare occurrence that this should need to be replaced.

Preliminary steps

Disconnect the engraver from its power source.

Remove both upper side access panels.

Remove the tension from the X-axis belt.

Remove the flex cable clamp from the X-axis flex cable.

Disconnect the X-axis flex cable from the X/Y PC Board.

Remove the X-axis cable Guard.

Loosen the X-Motor Mounting bracket.

Remove the Reducer Drive Belt.

There are four Allen Screws which secure the Reducer drive assembly to the Fusion X-axis assembly. Remove the four screws and the reducer can be removed from the machine as shown in figure 47.

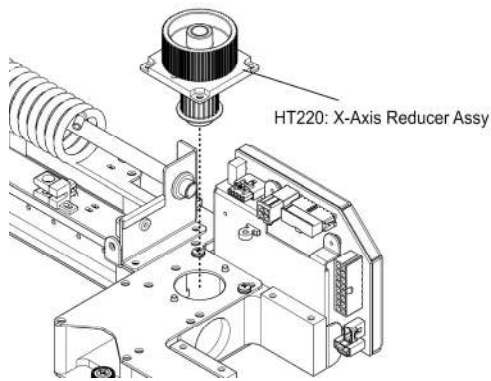


Figure 47

Installing the Reducer drive assembly

- Install the reducer drive assembly.

Ensure that when the reducer drive assembly is installed in the X-axis assembly that the X-axis belt is properly routed around the reducer drive pulley.

- Install the four screws which secure the reducer drive.
- Install the Reducer Drive Assembly 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 to the reducer drive belt, tighten the mounting screws.
- Replace the X-Axis Cable guard.
- Reconnect the flex cable to the X/Y PC Board.
- Install the Flex Cable Clamp.
- Re-tension the X-axis belt.
- Replace the rails top cover.
- Replace both upper side panels.
- Reconnect the engraver to its power source.
- Test for functionality.