

# New Belt Installation

*Upgrading from black belt to green belt on 3D Xtreme key machines*

## Tools needed:

3/32 Allen head T-handle

5/32 Allen head T-handle

5/64 Allen head T-handle (depending on the age of your machine)

Calipers for measuring thousandths of an inch.

**Step 1. Remove the plastic top:** Using your 3/32 T-handle, remove the screws on each side of the plastic top. To remove the screws from the back side of the plastic top you will need either your 3/32 again or possibly 5/64 if your machine is a little older. Once removed, the plastic top should slide straight up and off the machine.

**Step 2. Repositioning Motor:** Attached to your main motor (large pulley toward the back of the machine) are 2 brackets that hold the motor in position. Using your 5/32 T-handle, Loosen, but do not remove the 4 screws that hold the brackets to the machine (not the ones that hold the motor to the bracket, your tool will not fit these). The motor should slide forward at this point allowing you to *remove your old black belt* if needed. The motor brackets are slotted to allow belt tension adjustment. With the belt removed, slide the motor as far back as you can and tighten the screws back while holding back pressure on the motor.

**Step 3. Repositioning the pulley:** On the underside of the pulley you will see a hole with a set screw that holds it in position. Using your 3/32 T-handle, loosen, but do not remove this screw. If the pulley does not slide freely up and down the shaft of the motor at this point, you will need a heat source (heat gun or hair dryer) to heat up the pulley to help remove. This will expand the aluminum allowing for free movement of the pulley. Try to minimize heat to the motor shaft. The distance from the top of the shaft to the top of the pulley needs to be .420". Use calipers to verify this distance. Once you have the pulley at .420 inches from the top of the shaft, retighten the set screw on the underside.

**Step 4. Installing the belt:** Put your belt in the groove of the front pulley that is attached to the front head unit of the machine. With the belt tensioned in this front pulley, stretch it around the back pulley until it is set fully within the groove.

**Step 5. Testing your new belt:** Before putting the plastic top back on your machine, it is a good idea to run it with the new belt to insure it is installed correctly. Open your high security jaw until you are sure it is out of the way and run the machine as if you were cutting a key. For Example: If your machine is not powered up and attached to your laptop, do so at this time. Search for DSD 12 and fill in the cuts with any possible number (we're using jaw 3 because it cuts at a lower level than jaw 1). Start the machine and let it pretend to cut a key so you're not wasting any key blanks. Watch the belt carefully and make sure there is not too much vibration. A little is ok, you will know if it's too much. If it looks good throughout the entire cutting process, you're now ready to re-install the plastic top. You can install the Backlash Limiter at this time.

**Image below shows where to install the backlash limiter:**



**Step 6. Re-installing plastic top:** Slide the plastic top over the top of the machine, allowing the red knob at the front to go through the hole in the plastic top. Using the same screws you took out earlier, insert, but do not tighten all 4 screws. With all four screws in place, tighten the back 2 first then the front 2 on the sides. Be sure the red knob on the front of the machine does not rub on the inside of the plastic top. If it does, you need to loosen the screws and push forward on the plastic top while tightening the back screws.

*If you have any questions or problems please contact us. [info@laserkeyproducts.com](mailto:info@laserkeyproducts.com) or call 281-339-3501*