

Y-axis Belt Tension Check and Adjustment

Before continuing, please read the CAUTION statement at the end of this section.

Check

1. Turn the laser system OFF.
2. Gently pull the X-axis Arm all the way to the front of the machine as far as it will go.
3. You will need a Belt tension meter (ULS part # 800-0004-0), and a ruler that has its "0" point at the edge of the ruler.
4. Using the meter, hook the belt in the approximate center of the Y-axis rail.
5. Place the edge of the ruler against the top of the rail (not on the channel where the belt resides).
6. **SLOWLY** pull the meter towards you until you have reached a length of 1/2 inch (measured from the outside of the belt).
7. The meter should read 200 grams (7 ounces) for the M systems and should read 150 grams (5 ounces) for the V and X systems.
8. If the reading is not within specification follow the adjustment procedure below, otherwise this procedure is complete.

Adjustment

1. Locate the Y-axis Idler Pulley and the two Flathead screws that hold the pulley in place.
2. To Loosen Belt Tension – Slowly turn both screws about ¼ turn counter-clockwise. Make sure that the Idler remains straight (just by visual appearance) and not on an angle. Re-check belt tension using the meter.
3. To Tighten Belt Tension – Slowly turn both screws about ¼ turn clockwise. Make sure that the Idler remains straight (just by visual appearance) and not on an angle. Re-check belt tension using the meter.
4. Always re-check to make sure that the Y-axis Idler Pulley remains straight. If it is on an angle, keep adjusting the screws so that it becomes straight AND it has the proper belt tension.
5. When the belt tension is within specifications, this process is complete.

CAUTION!

NEVER OVER-TIGHTEN THE Y-AXIS BELT. THIS CAN PERMANENT DAMAGE THE BEARINGS INSIDE THE IDLER PULLEY AND/OR THE Y-SHAFT BEARINGS AND WOULD REQUIRE REPLACEMENT OF THOSE COMPONENTS. IT CAN ALSO CAUSE MECHANICAL BINDING AND A LOSS OF POSITION DURING VECTOR CUTTING. ALSO MAKE SURE THAT THE Y-AXIS IDLER PULLEY IS VISUALLY STRAIGHT AND DOES NOT SIT AT AN ANGLE. SITTING ON AN ANGLE CAN CAUSE A "TICKING" SOUND, BINDING, AND EXCESSIVE BELT WEAR ON THE EDGES OF THE BELT.