



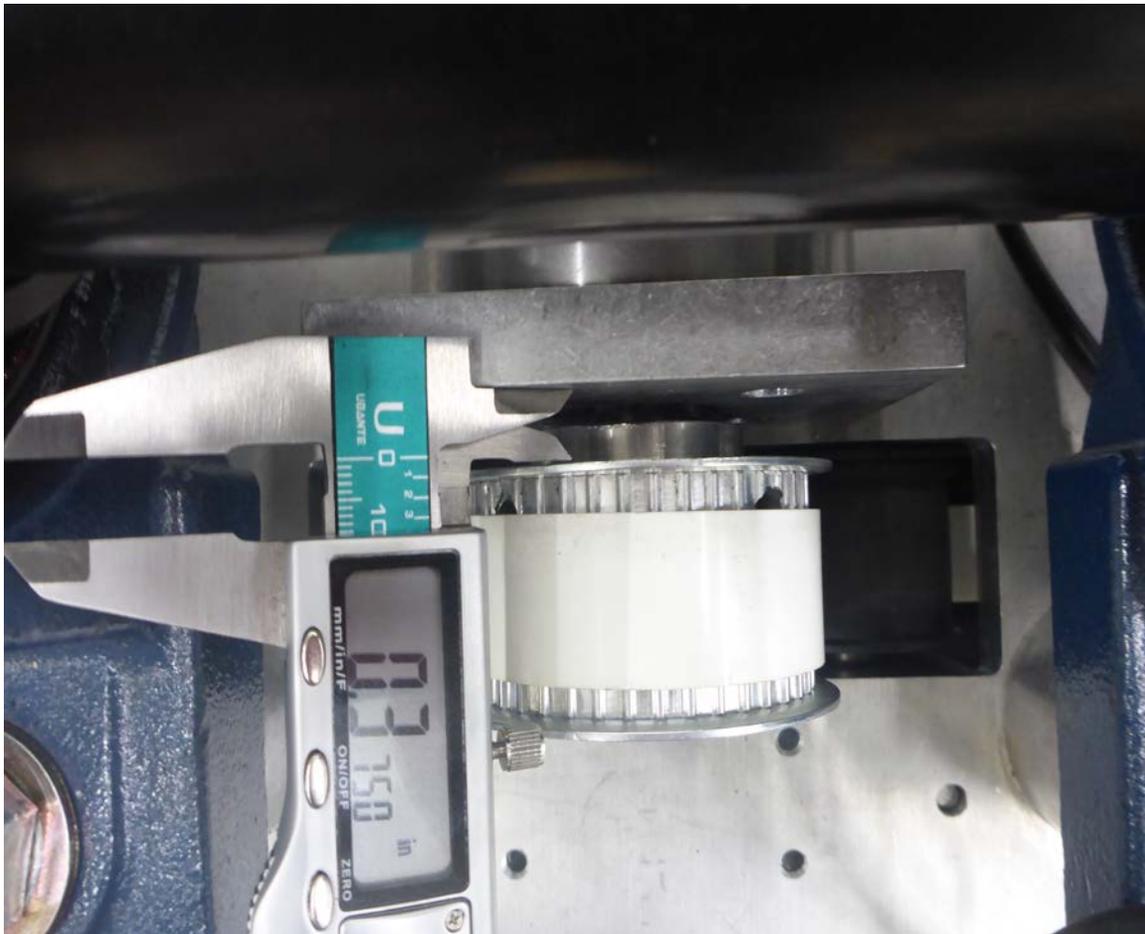
BEND-TECH, LLC.

Quality software & machines developed and manufactured in USA

Pulley Spacing and Belt Tension Guide.

In the case that the pulley inside your chuck housing is closer than the desired distance (0.375), the X-axis belt on your machine may not function properly and the risk of tearing or snapping a belt is greatly increased.

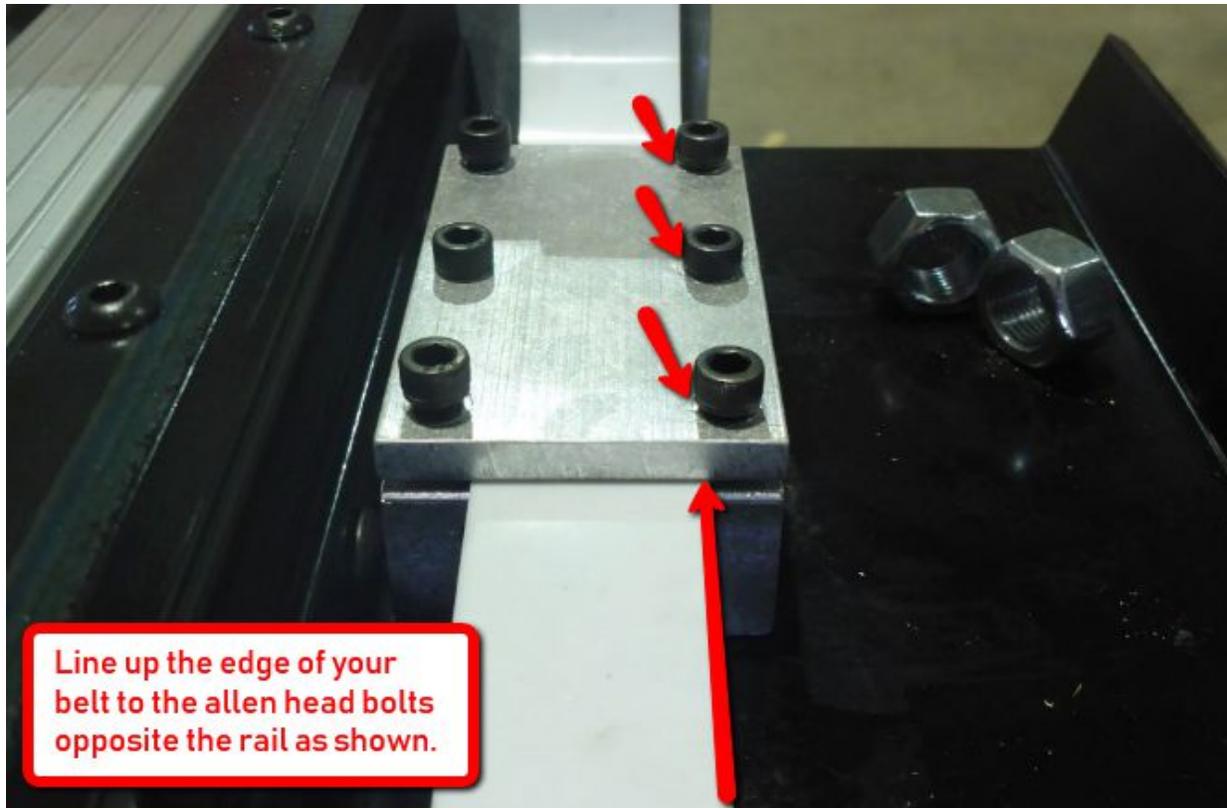
From the ridge of the pulley to the motor mount surface, this distance should be spaced to about 3/8" inches or 0.375. See the image below for the preferred method of measuring the exact distance with a micrometer.



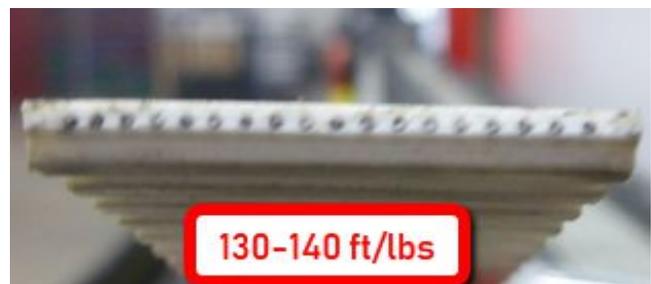
There are 2 set screws on this pulley that require a 1/8" allen/hex wrench to adjust this pulley's distance.

This will help ensure that the belt doesn't ride on the edges of the black wheels underneath which is what causes the belt to get hung up and twisted inside, in turn causing it to snap/tear.

Furthermore, when installing the belt, please tighten it into the clamp blocks using a 5/32" allen head wrench, so that the belt is mounted in its furthest position away from the rail. This should be done at both the head and tail of the machine. See the image provided.

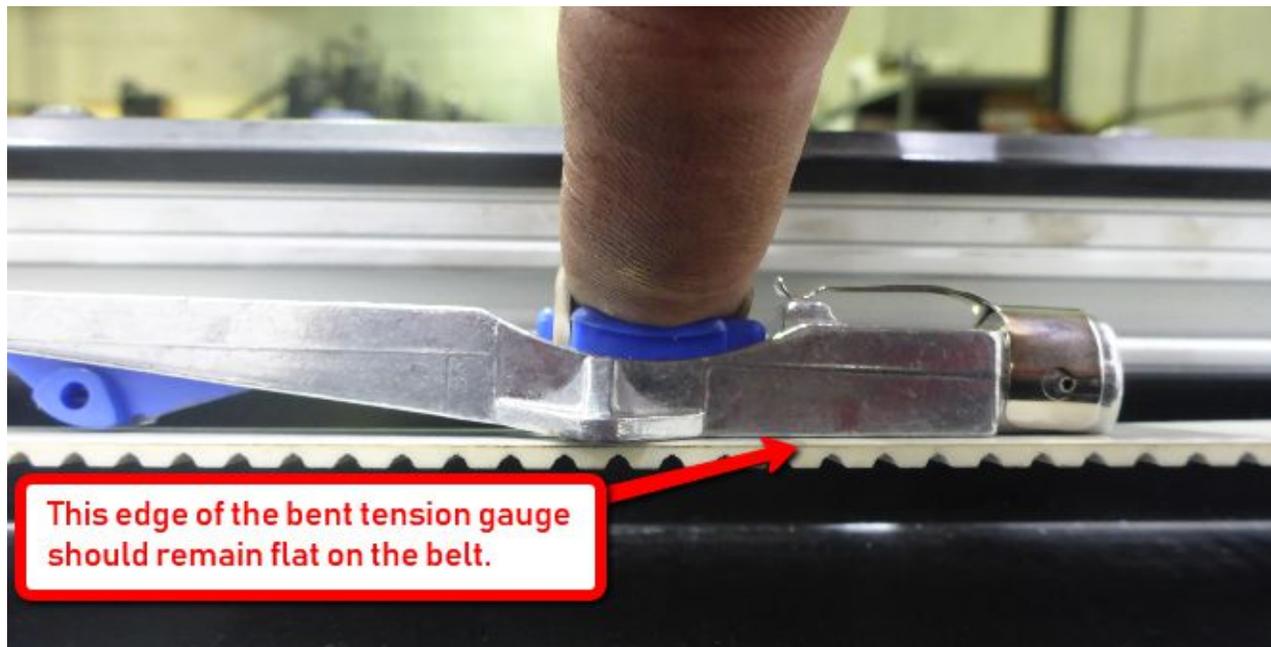


Belt style #1 (left) will have steel reinforcement of a lesser thickness, but will have more strips (26 total). Belt style #2 (right) will have thicker steel reinforcements, but fewer strips (18 total).



Using a belt tension gauge, these belts should be tensioned to within a tolerance of 100-120 ft/lbs for belt style #1, or a tolerance of 130-140 ft/lbs for belt style #2 (see pictures).

When performing a belt tension test, it is important to keep the gauge steady, go slow, have the chuck trolley positioned at the front of the Dragon machine and preform the test about a foot (12") from the rear clamp block as shown.



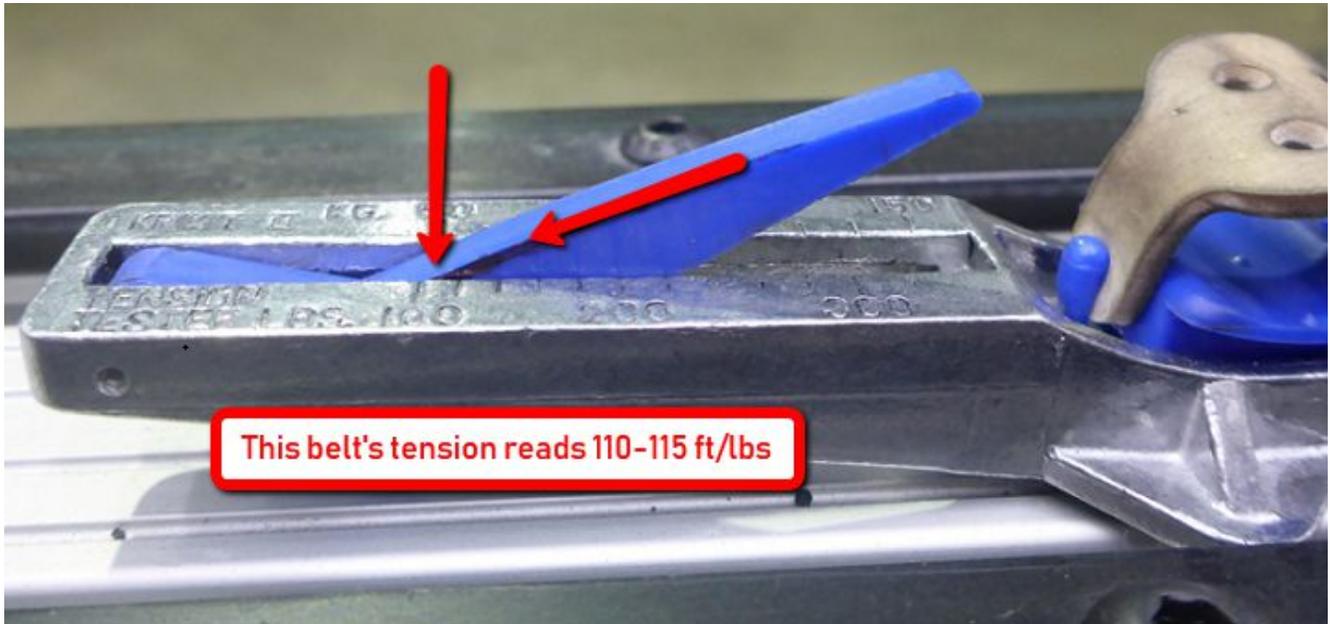
When pressing down on the tension gauge you may have to hold the belt up with your other hand to ensure the belt is not making contact with the rail when taking your reading. Press until you hear a click noise and quickly release.



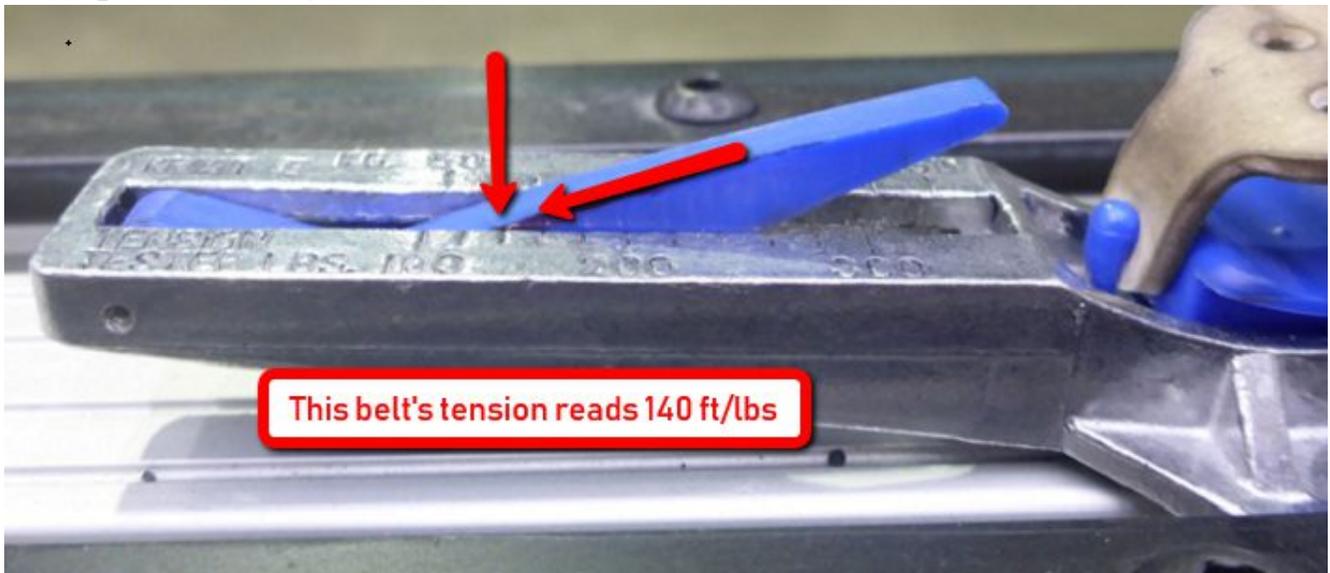
Take your reading from the left most side of the blue plastic gauge arm where it meets the number scale on the gauge.

Below is an example of a reading at 110 pounds and an example reading 140 pounds with black sharpie showing the correct side to read from.

Example for belt style #1 (100-120 ft/lbs):

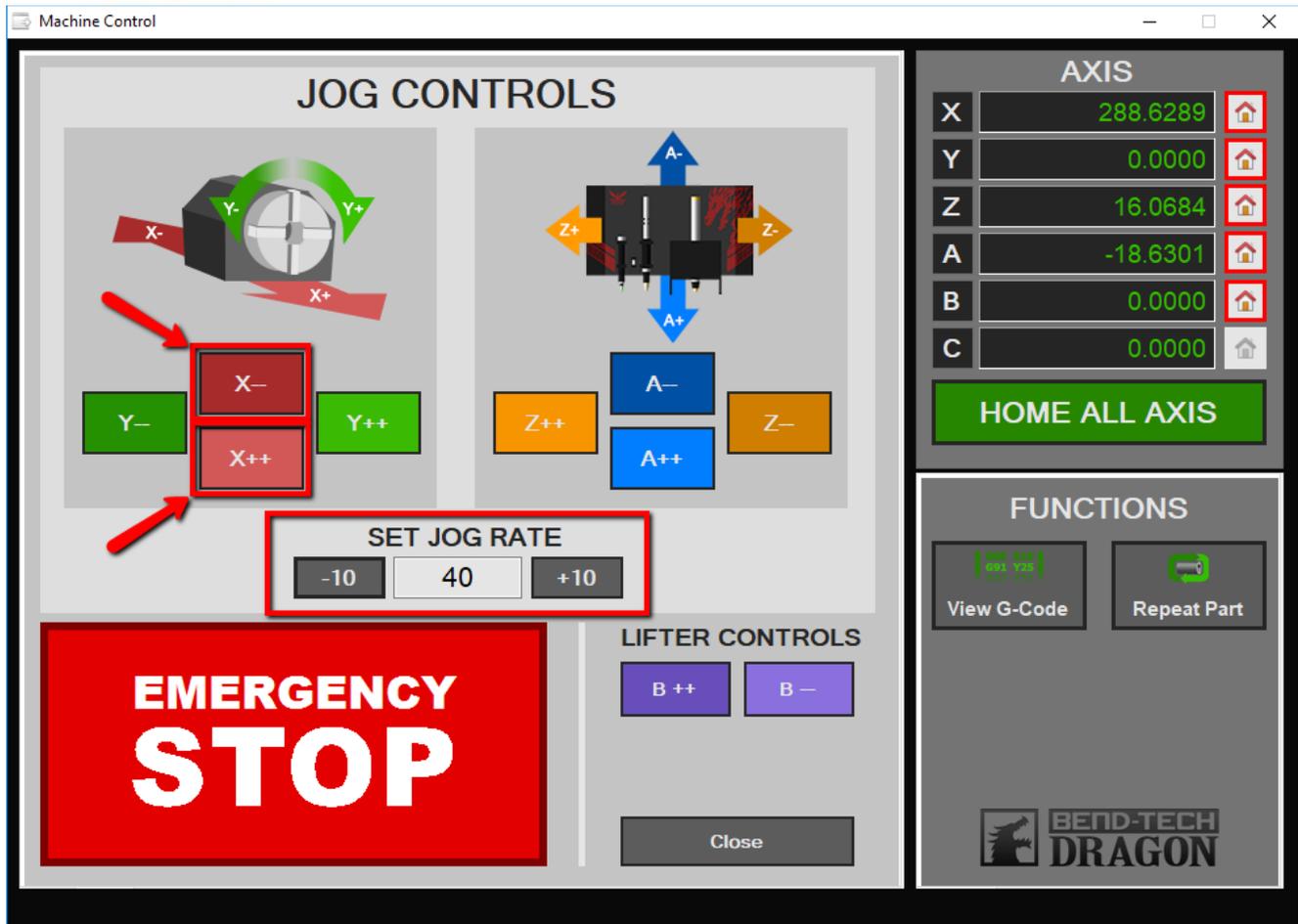


Example for belt style #2 (140 ft/lbs).



For a quick instructional video on how to use your belt tension gauge, please click on the link provided here: <https://youtu.be/0DZYfYFccAM>

- After the belt tensioning process is complete, you should ensure that your rail sections on the machine are completely straight. If you have one, use a laser to ensure straightness from tail to head, but most of our customers get by without incident by eyeing it up or using a string to judge by.
- Afterward, use the Machine Control screen in Dragon CAM, select the Jog Controls button, lower the jog rate to between 20-40 and jog the X-axis back and forth along the rails. This will be the first test to make sure you've completed these steps successfully and that your belt will not experience issues during later machine operations.



In cases where you follow all of the installation and adjustment instructions provided here, but are still concerned about the state of your belt and X-axis drive pulley, please don't hesitate to contact your Bend-Tech Support Representative.

Thank you for reading this helpful guide.

**If you have questions or concerns please contact a Bend-Tech representative using
the information provided below.**



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