

Why is my TigerStop not Accurate?

 Versions 3.0 to 4.72

When setting up a TigerStop for the first time, or even within the first few months, a user can find the TigerStop not meeting +/- .004 repeatability. Some points should be considered when an inaccuracy is noticed using the TigerStop.

- ✓ The TigerStop is accurate and repeatable to +/- .004 inches on a move to move basis.
- ✓ A new saw blade is within tolerance, by manufacturers standards with +/- 0.003 inches of run out, and a re-sharpened blade is acceptable with up to +/- 0.008 inches of run-out. This will affect the saw [kerf](#) and is very important. Saw manufacturers allow .001 inches of play per inch of stroke for a saw. This is for miter saws, up cut saws, radial arm saws and any unit utilizing a moving head or arbor.
- ✓ The tool used to measure the parts will have tolerance errors. A vernier caliper, will have +/- .003 inches of error per reading.
- ✓ Parts cut on a table saw are susceptible to error if not clamped to a fixture and fed with a constant speed throughout the saw.
- ✓ The final factors that influence tolerances will be the type of product being cut, temperature and moisture of the wood being processed, and how often the equipment is calibrated. Geometric tolerancing of errors is the term used for the recognition and compensation for these tolerances for product design. Based upon the tolerances listed above, expect a system tolerance of +/- .012 inches as a minimum and as high as +/- .020 inches.

To test the TigerStop for accuracy ask the following questions:

- ✓ Is it inaccurate at all lengths?
Check the [calibration](#) of the machine. Click [here](#) for more information.
- ✓ Is it accurate at the short lengths and inaccurate at longer lengths?
The [scale factor](#) may be slightly off. Click [here](#) for more information.
- ✓ Is it inaccurate at random cuts throughout the TigerStop? i.e., accurate short and long, but off in the middle.
Check the [lash](#) setting. The TigerStop is set up at the factory to be used in a push feed system. The lash value default is 0.03, but the factory range for lash is 0.03 - 0.6. If the user is making random cuts, the lash should be increased. We recommend to increase it to 0.6 and work from there. (The machine is more accurate but slower with a higher lash setting.)
For more information regarding lash, click [here](#).

If these do not resolve the accuracy problems on a new machine, check the following:

- ✓ Are the washers being used when bolting the TigerStop to the table?
If the washers are not being used, the beam can be damaged and cause it to be warped, affecting the accuracy of the machine.
See point 1 in [Four Important Cautions](#).
- ✓ Are TigerStop tables installed? If not, is the table completely level?
Accuracy can be affected by the machine being bowed or bent.
- ✓ Are the washers on the flip away located on the inside of the carriage bolt? [view](#)
Loosen the bolts on the TigerStop and move the carriage by hand. If it takes more than 40-50 lbs of pressure to move the TigerStop by hand, it will affect the accuracy. Inspect for warps, or a bend in the beam. If the belt is catching as it's moving, there can be a problem with the drive system, either with the pulley or the gearbox. See belt replacement instructions (click on a link below) that can be used in disassembling and inspecting for problems.
 [Belt replacement Instructions 2003](#)  [Belt replacement instructions 2006](#)
- ✓ Check the factory settings.
Confirm that the machine parameters match the factory parameters. For more information regarding the motion menu, click [here](#).
- ✓ Complete the Data Log Response, found below.
If an older machine is inaccurate, the above questions should still be asked. If this does not correct the accuracy problem, a data log should be completed. Once completed and sent back to us, use the [Data Log Response](#) spreadsheet to determine what has caused the inaccuracy. Instructions are found in the spreadsheet.

Contact TigerStop [Technical Support](#) for additional assistance.