

Step 1) From the main screen press the SETUP SCREEN button in the upper right corner.

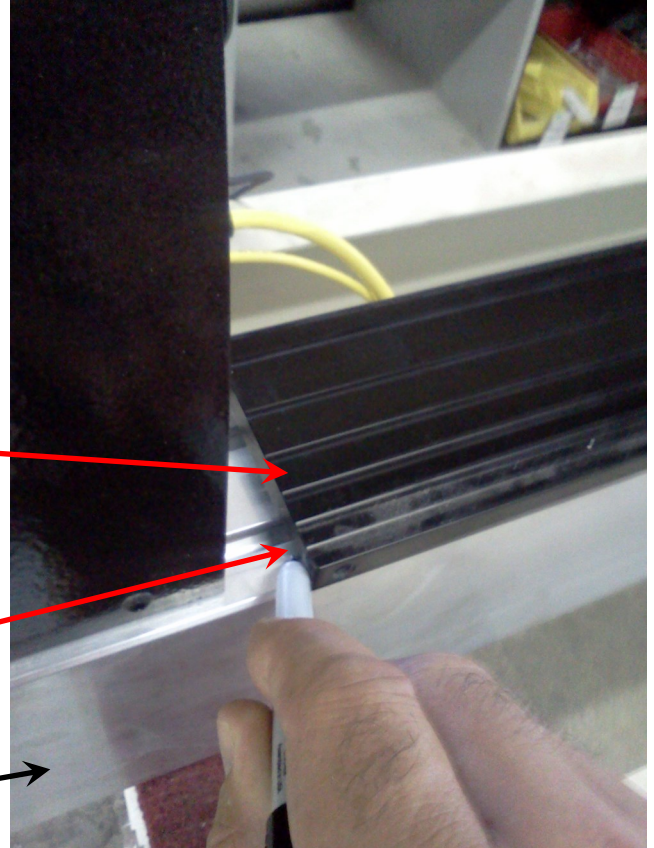
Step 2) On the SETUP SCREEN near the lower left corner there is a button labeled HOME THE POSITIONER. Press that button to home the RazorGage.

Step 3) Using a sharpie or pocket knife use the edge of the black moving carriage bar as a guide to make an accurate mark on the RazorGage extrusion as shown in the picture at right. This mark will help us determine now and in the future if the RazorGage is repeatedly homing in the same place. Take your time to make a clean mark that is perfectly aligned with the edge of the moving carriage.

Moving Carriage Bar

Using the edge of the moving carriage in its HOME position as a guide, make a very accurate mark the top of the RazorGage extrusion as shown.

Front of RazorGage



Step 4) Now that you've made your mark, use the same button we used before, HOME THE POSITIONER, to put the RazorGage through its homing cycle 10 times. After each homing cycle compare the edge of the carriage bar to the mark to make sure they are lined up exactly. If the carriage is not lined up with the mark after a homing cycle, record the distance from the mark to the carriage edge and proceed until you've finished the 10 homing cycles.

Step 5) If the RazorGage is homing in the same place every time when homing begins from the position the carriage is in after completing the Homing sequence, the next step is to move the RazorGage carriage to a position at least 24" away and start the Homing sequence from there. Home the RazorGage 10 times with the homing sequence starting from a position at least 24" away from the final Home position. After each Homing sequence check to make sure the moving carriage bar is perfectly aligned with the mark you made earlier. To move the RazorGage carriage after homing is complete, go back to the Main Screen, enter a number such as 24 as a Target Position and press Enter. Then press the Setup Screen button and press Home the RazorGage. If the RazorGage homes in EXACTLY the same place every time whether homing from close or far then skip to page 3. Otherwise go to page 2,

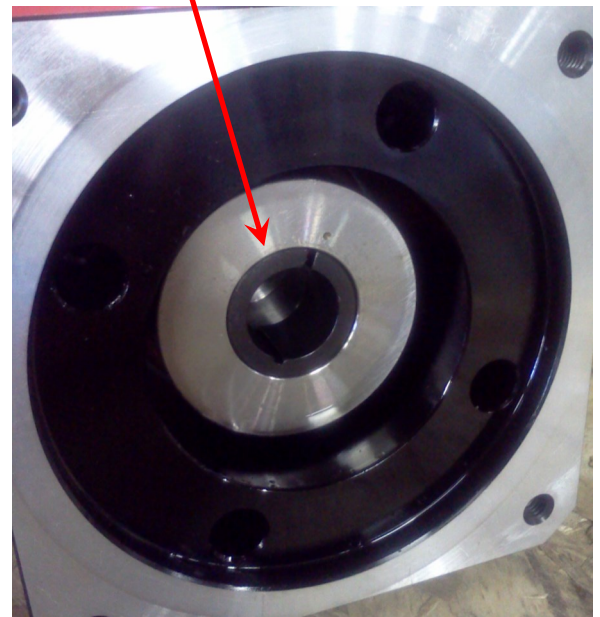
Tightening Gearhead Coupling and Checking Belt Tension

Step 1) Remove Access Hole Plug & Push RazorGage Carriage VERY slowly until you see the set screw through the hole. Loosen



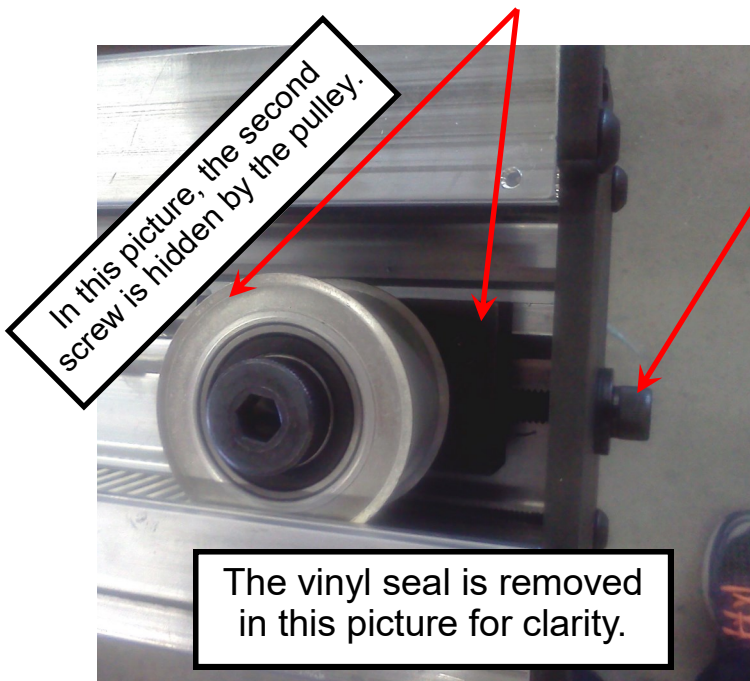
Step 2) Remove the four screws holding the MDrive Motor to the gearhead and remove the MDrive Motor.

Step 3) Look inside the gearhead to make sure the sleeve is in place and that the slot in the sleeve is not lined up with the set screw you loosened in step 1. If it is, rotate it inside the bore so that the slot is not aligned with the set screw.



Step 4) Put the MDrive back on the gearhead, re-install the four mounting screws, tighten the coupling set screw with an allen wrench and a 12" cheater pipe and replace the plug.

Step 5) On the IDLER end of the machine (this is the end opposite the motor) lift the vinyl seal and loosen the two screws holding the idler pulley block to the extrusion.

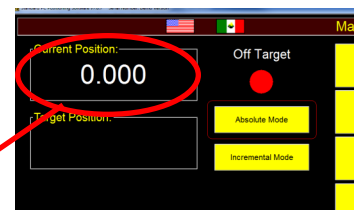


Step 5) Tighten the idler tension screw to make sure the belt is good and tight. To test your tension, re-tighten the two idler block screws and, using the touchscreen, set the speed to 40 and run the stop from one end to the other several times. If you get a stall error, the belt is too tight. Loosen the two idler block screws and relieve some tension on the tension screw and repeat the test.

Measurements to test accuracy.

Step 1) Home the RazorGage & perform steps 2 through 4

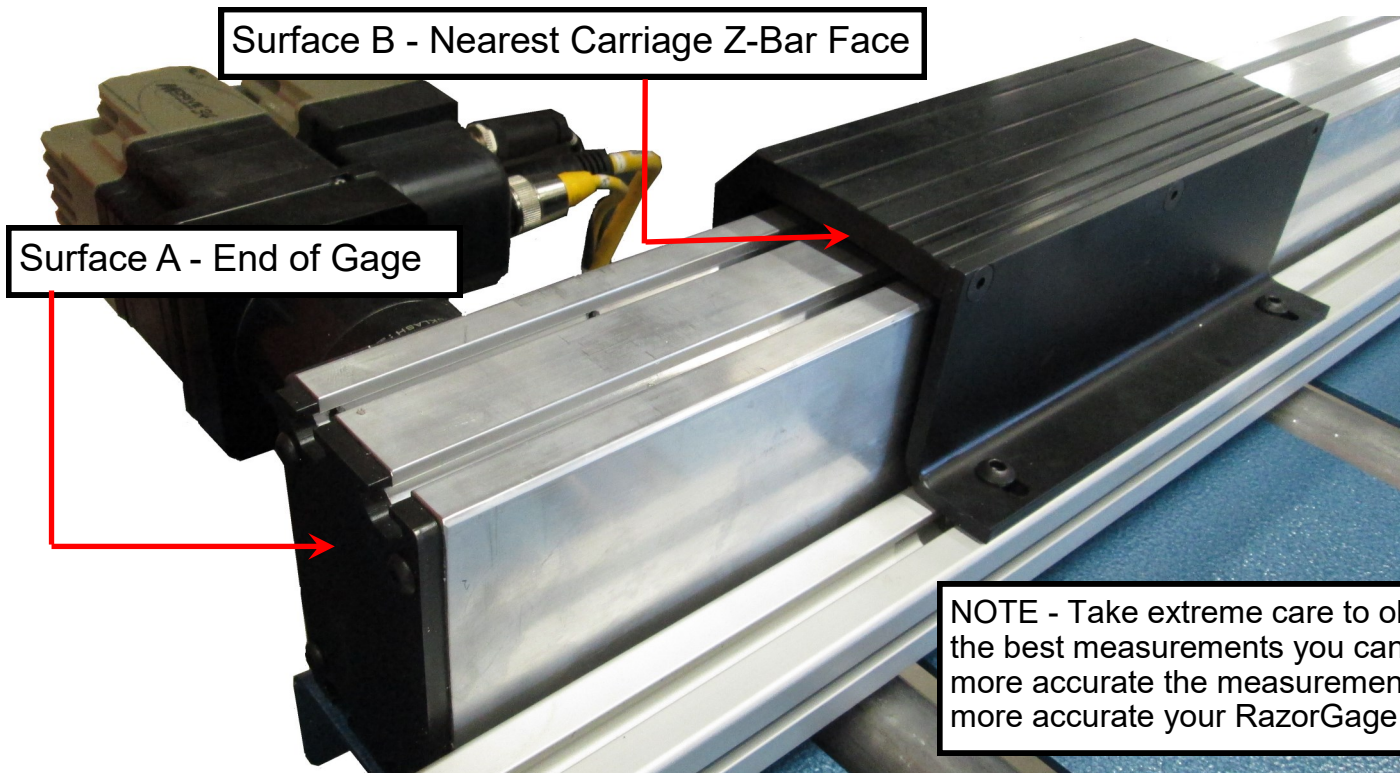
Step 2) Write down the position shown in the Current Position box on the Main Screen here.



Before proceeding to Step 3, see measuring tips on page 4.

Current Position after HOME

Step 3) Using a measuring tape, measure from surface A to surface B as shown below.

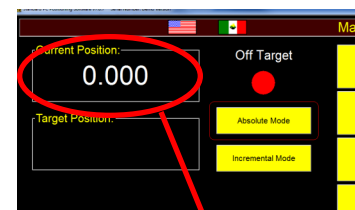


Step 4) Write down the measurement from the end of the gage (Surface A) to the nearest carriage z-bar face (Surface B) here.

Sfc A to Sfc B Distance at LO Limit

Step 5) Go to the Setup Screen and locate the SCALE value in the upper left area of the screen. Record the scale value here.

Scale Factor



Step 6) Still from the Setup Screen, press MOVE TO UPPER LIMIT. Now go back to MAIN SCREEN and record the CURRENT POSITION value here.

Current Position at HI Limit

Step 7) With the carriage at the UPPER LIMIT position measure from SURFACE A to SURFACE B just like before and record the measurement here:

Sfc A to Sfc B Distance at HI Limit

Step 8) Send values to steve.hoshor@tsiames.com or fax this worksheet to (515) 232-2953

Don't Trust the End

The end of the tape measure will have a metal hook to grab onto a board or butt into a wall. These ends can get bent over time, and it's easy to fix that by using a pair of pliers. They are designed to be adjusted, but should you break off the tip, it's probably time to get a new tape measure. This time, get the extra wide model. To avoid having to recalibrate all the time, don't allow your tape measure to retract at full speed and smack the hook against the case. I'm in the habit of stopping the end against my finger instead of the case itself, which is a good incentive to slow down before you take your finger off.

Burn an Inch

If you are transferring measurements between people using different tape measures for precision work, and you haven't had time to calibrate each of the tapes, you should burn an inch, or more. This is also useful when you need to measure something that you can't hook the tape measure onto. To burn an inch, you just line up one end on the 1" mark (or 10" or 1' depending on your preference) and then measure the span from that point. Then be sure to subtract the extra from your measurement or be consistent and burn the same amount everywhere.

