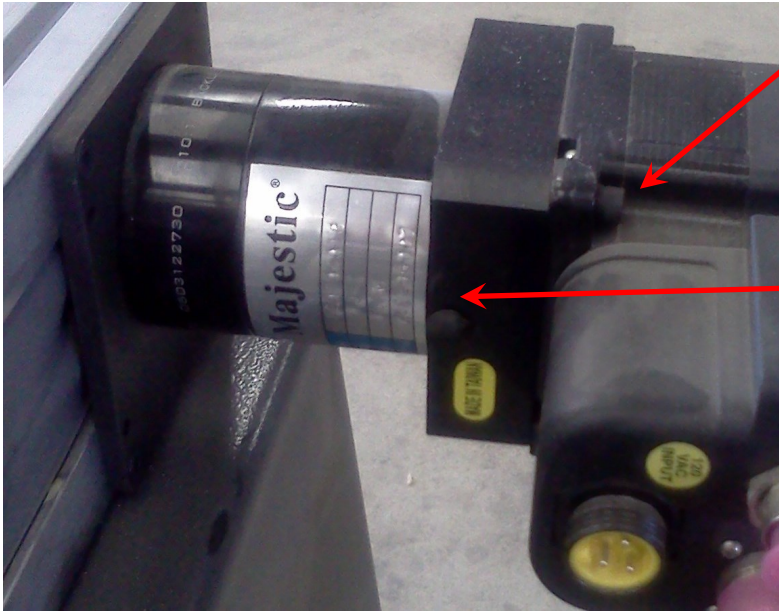
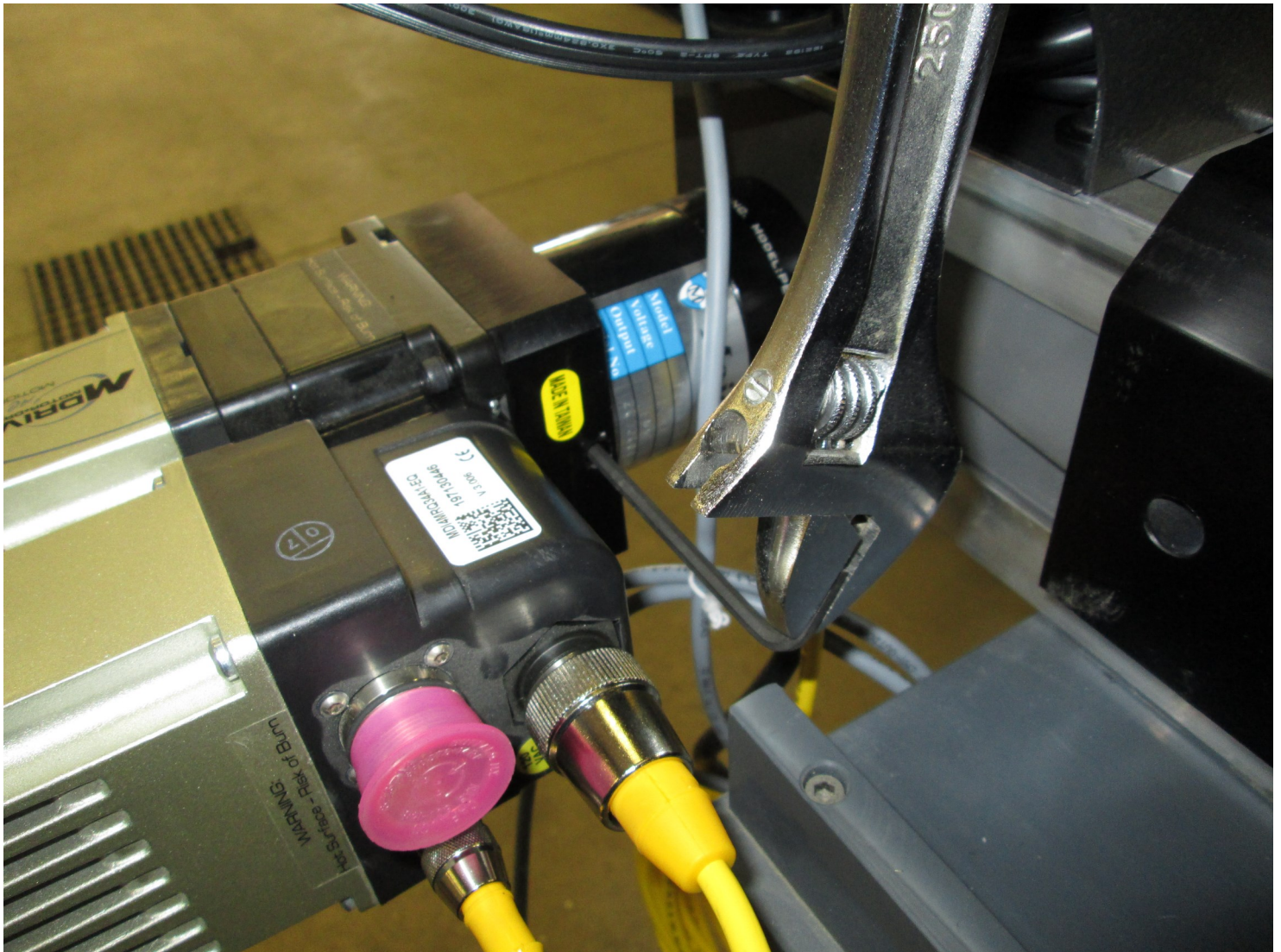


Gearbox Replacement



Remove the four screws holding the MDrive Motor to the gearhead.

Remove Access Hole Plug & Push RazorGage Carriage VERY slowly until you see the set screw through the hole. You may need a cheater to loosen the set screw as shown below.



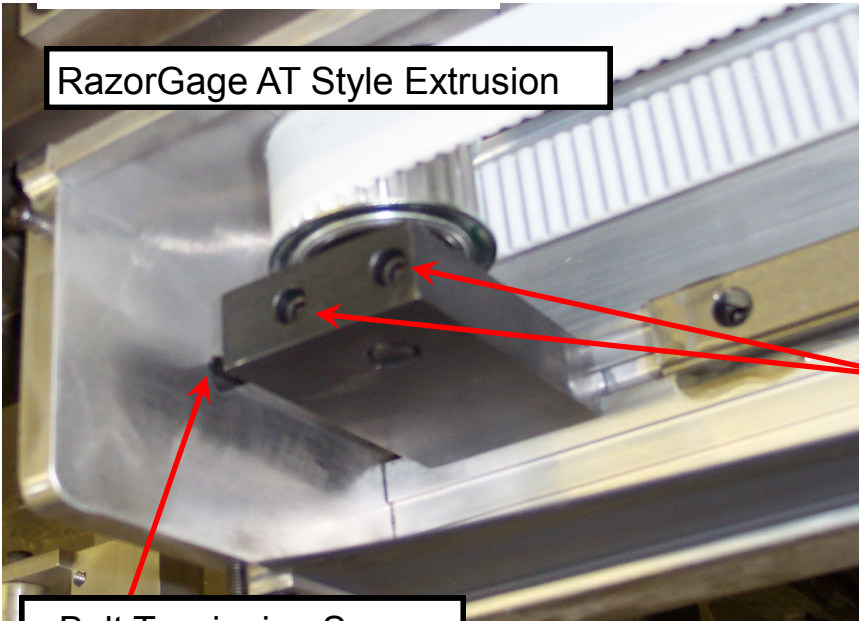
RazorGage AT Style Extrusion



RazorGage ST Style Extrusion



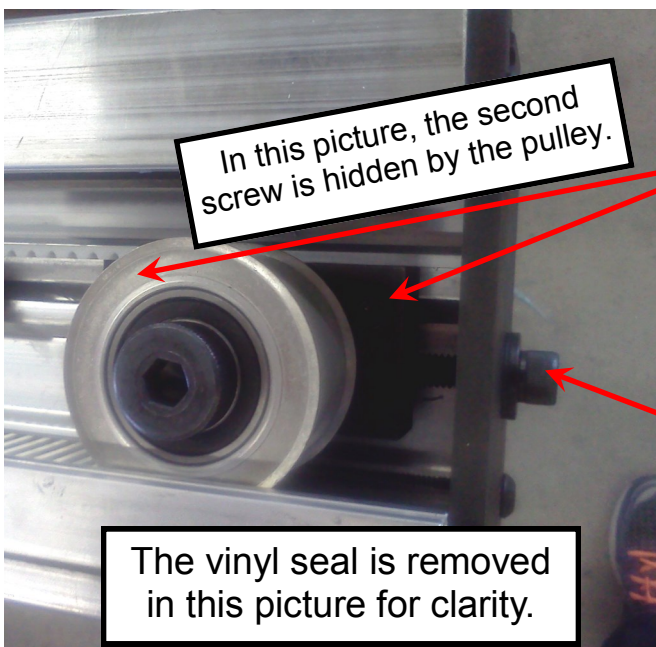
RazorGage AT Style Extrusion



Belt Tensioning Screw

On a RazorGage AT, loosen these screws slightly so that the idler block can slide in the T-slot. Don't loosen them so much they come out of the T-slot nut. Doing so makes it much harder later when you need to re-tighten the screws.

RazorGage ST Style Extrusion



In this picture, the second screw is hidden by the pulley.

The vinyl seal is removed in this picture for clarity.

On the RazorGage ST lift the vinyl seal and loosen the two screws holding the idler pulley block to the extrusion. Don't loosen them so much they come out of the T-slot nut. Doing so makes it much harder later when you need to re-tighten the screws.

Loosen the idler tension screw or remove it completely to loosen the belt so that the gearbox on the other end can be disengaged from the belt before removal.

Once belt is loose, remove four screws that hold the gearbox mounting plate to the extrusion.



Remove the mounting plate and drive pulley from the old gearbox and mount it on the new taking care to orient the mounting plate so that the input coupling set screw can be accessed easily and being careful to mount the pulley at the same shaft location as your old gearbox. Now just reverse the previous steps to put the machine back together and move on to the next page.

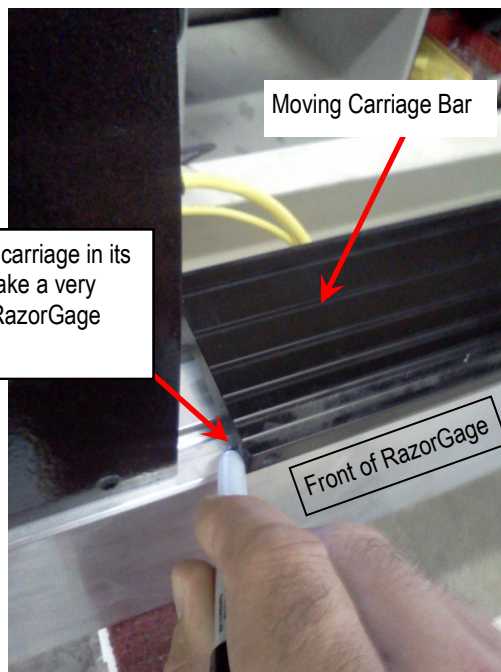
From the main screen press the SETUP SCREEN button in the upper right corner.

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

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.

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.

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.



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 you're finished and can begin using the machine. If the RazorGage did not home in EXACTLY the same place every time then preform the next step..

If the moving carriage did not return to the same spot each time after homing, then either the gearbox input shaft coupling is slipping and you need to tighten the set screw more or the motor is very near the home marker when the carriage hits the hard stop. Home the Razorgage one more time but this time notice how far the carriage moves back once it has hit the hard stop. If that distance is around 5/16" then all that needs to be done is to tighten the gearbox set screw tigher. If the distance is less than 1/4" then we should run the Indexing routine. CLOSE THE RAZORGAGE SOFTWARE, then use Windows to navigate to C:\Program Files\ RGST\ . Then double click on the file named IndexLocator.exe and precisely follow the instructions indicated in the software.

