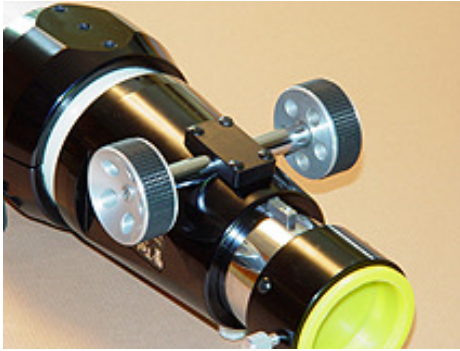


Installation Instructions for the Televue Retrofit Feather Touch Pinion Assembly

WARNING! WARNING! WARNING! : PLEASE READ THIS CAREFULLY, ESPECIALLY THE LAST PART.

Tools Required:
1/16 inch Allen Wrench (Supplied)
5/64 Inch Allen Wrench (Supplied)
7/64 Inch Allen Wrench (Supplied)
Standard Phillips Screw Driver

1. Preparation of Telescope for Pinion Removal



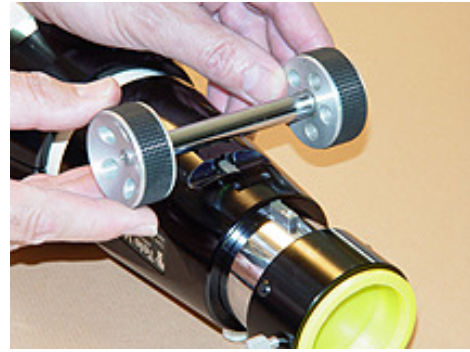
1.a. Place the telescope on a towel or a clean work surface as shown.



1.b. Using the 5/64 Allen wrench remove the (4) Button Head Cap Screws.



1.c. Remove the pinion cover.



1.d. Remove the pinion assembly.

2. Installation of the Televue Retrofit Feather Touch Pinion Assembly to the Telescope.



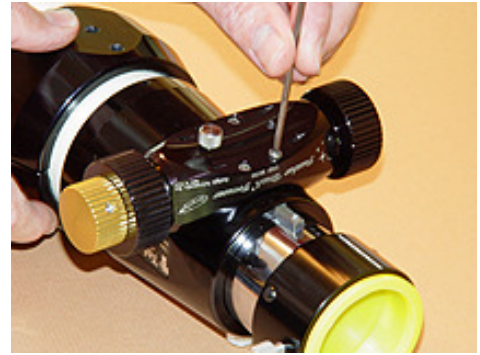
2.a. Remove the Feather Touch TVRF from the shipping box. Insert the coarse focuser knob on the pinion and fasten it with the Phillips screw that is supplied. Hold the knob firmly while tightening the screw. Use a good Phillips screw driver so that the knob can be properly tightened. Be careful not to slip.



2.b. Insert the (4) Socket Head Cap Screws into the Housing as shown.



2.c. Place the Feather Touch Micro Pinion Assembly onto the TV focuser housing and move it back and forth slightly until you can feel the pinion and the screws nest into position.



2.d. Using the Allen wrench, screw the (4) screws until they start to snug the Pinion Assembly to the focuser housing. This step is important because you need to adjust the rack and pinion by using these (4) screws and the (4) leveling screws with the 1/16 Allen wrench as shown in the next step.



2.e. Insert the 1/16 Allen wrench into the adjustment hole and tighten the leveling screws on the front side until you can feel that contact is made between the leveling screw and the focuser housing. Do this for both sides. Then work on the back screws repeating the same steps.

2.f. Repeat step 2.e. for the back screws.

Note: There are (4) leveling screws in the pinion housing. These serve as a contact point between the Feather Touch Micro TVRF Pinion Assembly and the focuser body. The four leveling screws are used to set the position of the pinion housing and the (4) Allen Head Screws are used to hold the pinion housing in place against these (4) leveling screws and the TV focuser body. Check the backlash by turning the coarse focus knob and noticing the backlash between the rack and pinion. Ideally you want a very slight amount of backlash. If the pinion gets forced onto the rack too firmly, a stiffer motion will result and performance will be compromised. Some patience is required because you will need to adjust the four leveling screws with the 1/16th Allen wrench to achieve this alignment. Watch for an even gap between the pinion housing and the focuser housing and above all **DO NOT OVER TIGHTEN THE ALLEN HEAD SCREWS. THIS COULD RESULT IN A SERIOUS PROBLEM IF YOU STRIP THE THREADS IN THE FOCUSER HOUSING. PATIENCE AND CAUTION WILL BE YOUR BEST FRIEND!**

The unit has been designed and built to fit the conical surface of the TV focuser body and is not left hand/right hand reversible because of the conical shape of the TV focuser body. To allow for adjustment of the Feather Touch Micro to the TV focuser body a small gap is necessary between the two assemblies.

3. Tension adjustment with the Brake (Optional)

If you purchased the brake option, the thumb screw can be used to adjust the tension of the Pinion thereby allowing better control of the weight lifting capability. The thumb screw can be turned tight by about 1-1 ¼ turn, after this it will allow locking of the pinion. The set screw next to it is used as a factory adjustment to set the position of the brake lever. It should not be adjusted.

Thank you again for purchasing our product and we hope you enjoy your observing experience with it.

Wishing you clear and dark skies!
Starlight Instruments LLC.

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