NexStar 8
Extension Bracket Installation

Set your N8 on a stable table. Remove the hand controller from the Fork arm.

After removing the hand controller, you will see the Dec nut cover held on by three allen screws.
Remove the three allen screws shown to the left

Note: these screws are very small and easy to drop. Don't let them fall inside the fork arm

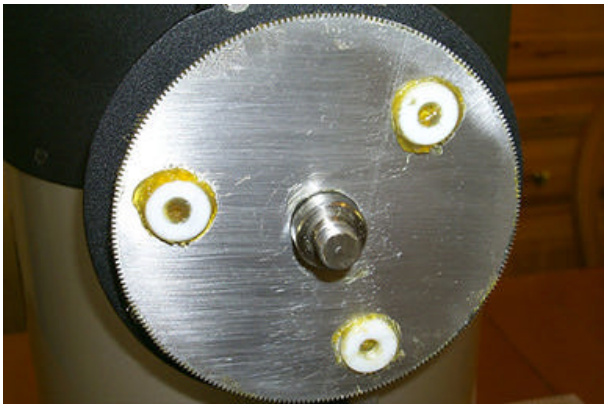
After removing the Dec nut cover you will see the Dec Nut. Position the OTA corrector plate down as far as possible. Now note the position of the nut, you may also want to mark the position of the nut in relation to the shaft with a magic marker. Then remove the nut.

Note: be sure to hold on to the OTA. As the nut is loosened, it will want to fall. Allowing the OTA to fall may cause damage to the OTA

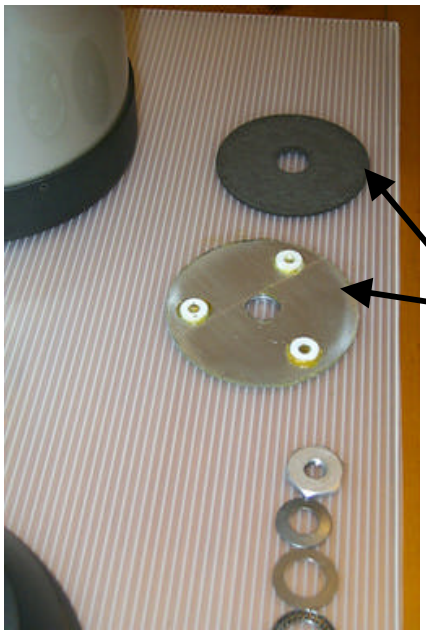
After removing the Nut you should find a conical washer and a Torrington bearing. The grease will tend to hold them into place, Remove them if you can to keep the from falling to the floor. Also try to keep them as clean as you can. (No dirt here)

(Note: Remember the order that parts were removed so they may be reinstalled correctly)

Now slide the OTA out of the fork arm. The Driven gear may stay with the OTA or it may stay in the fork arm. In this instance it stayed with the OTA.



(Note: The Gear is loose on the shaft at this point. It may fall off if the OTA is tipped)

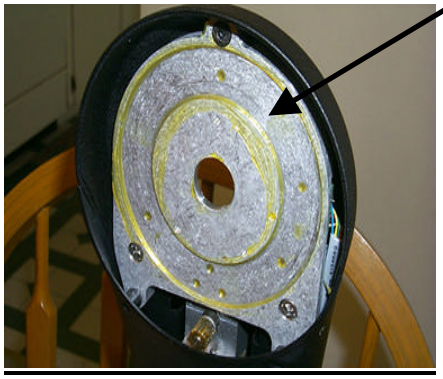


Slide the Driven Gear off the shaft. At that point you will see the Clutch Disk. Remove the Clutch Disk from the OTA Mount Arm.

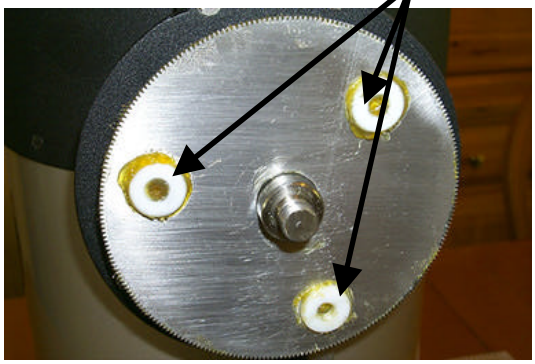
(Clutch Disk)
(Driven Gear)

(NOTE …Don't let any GREASE get on the Clutch disk or the mating surfaces.. It will cause it to SLIP)

(Thrust washer track)



(Thrust washers)

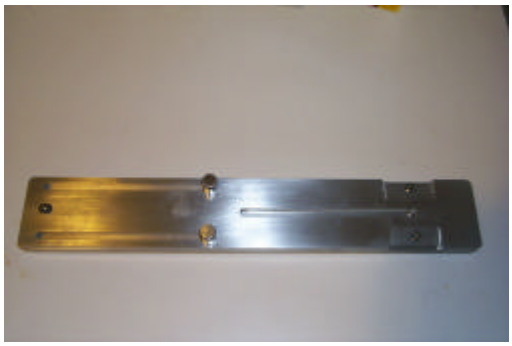


After you have laid the parts out, notice that on the Driven gear there are three (3) Nylon type disk stuck on the gear. These are Thrust Washers and in this picture they are sitting in a pocket machined in the gear. They may fall out if there is not enough grease holding them in place.

There is also a track on the Fork Arm for the Thrust Washers to ride in. If the Washers stayed in the fork arm track, Remove them and place them back into the machined pocket on the Driven gear. There is no top or bottom to the washers. They will fit in either way.

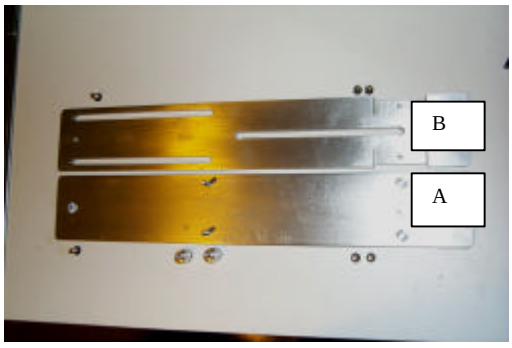
At this point if you look at the OTA you will see the OTA mount arm. It is held in place with three (3) Allen head screws. The two (2) screws at the back of the OTA are smaller that the one (1) at the front of the OTA Remove these three (3) screws and save them for future use. **You will not be using them with the kit.**

(Note: Make sure that you use a good Allen Wrench to prevent stripping the heads of the Screws.)



Take the new bracket, and remove the two thumbscrews.

Next separate the two halves.



Take Part “A” and remove the screws provided. Now mount part “A” to the OTA using the screws that you just removed.
(NOTE: make sure the Frt. screw is not bottomed out. This is a blind hole and the screw should not hit the bottom)

Take Part “B” and remove the screws provided. Now Mount Part “B” to the OTA arm using the screws that you just removed.
(NOTE: make sure that the screws on the OTA mount arm plate do not protrude thru the plate. If they do, shim the screws out with thin flat washers)

Now that the two plates are mounted, they should look like the pictures above.
Now set the OTA aside and let's start to reassemble.

Install the Clutch disk on the OTA arm. After that install the Driven gear to the arm.
(Note: Now would be a good time to apply any grease to the Driven gear and thrust washers. Do not apply too much. A little goes a long way. The type of grease to use is a light machine grease. This grease is very temperature stable. Automotive bearing grease will get thicker as the temperature goes down. I use a Lithium base grease that is used to lube automotive door hinge pins. There are synthetic base greases that will work also.)

Now install the OTA arm into the fork arm as shown. Install the Torrington bearing and the Dec nut just tight enough to hold it together.

Now install the OTA to the arm. Also install your 2” diagonal and your heaviest Eye Piece. Now slide the OTA back and forth to find the balance point. On mine with a CI 2” Diagonal and a Nagler type 5 Eye Piece, the balance point is 2 ¼” forward as shown to the left.

(Note; Balancing is very important to the way the scope works. An out of balance scope accelerates wear on the gear train and the motors. It can also cause erratic tracking of the scope. If you have any other accessories like cameras or Barlow’s, mount those up also and find the balance points.)

I have found that for most of my viewing, the position above works for me 95% of the time. If I mount my 35mm camera and “t” adapter, I move it another inch forward.

Now at this time tighten the Dec nut up to the point were it was before. If you don’t remember where this point was. Place the OTA as shown in the picture above and remove the diagonal. Tighten the nut in small increments until the OTA will stay in place by its self. At that point the torque on the nut should be about 15 inch lbs. Now give the scope a road test. If you find that the OTA slips, tighten it a little more. If you tighten it too much it will not slew correctly at low slew rates and it will not protect the OTA, Motor and Gear train. It will also cause excessive strain on the gear train. Remember, a little goes a long way.

Now that the nut is adjusted, install the Dec nut cover.

(Note: Remember that these are very small and easy to drop. Don’t let them fall inside the Fork arm. If they do, you may have to remove the fork arm cover to retrieve them.)

Now it’s time to have some fun. Enjoy your bracket and the use of all of the 2” accessories available. I have found that the use of 2” diagonal and the TeleVue wide-angle eyepieces have made my scope time much more enjoyable.

If there are ever any questions on the use or assembly of this kit, let me know and I will try to help. Being that I travel the Northwest a lot, the easiest way to get in touch is via e-mail. Leave me a message with a phone number and the best time to call. I will probably return the call in the evening so be sure to leave an evening number.

Thanks and Clear Skies
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