



Cassegrain Secondary Mount

INSTALLATION INSTRUCTIONS

INSTALLATION

Install the Secondary Mirror

The Cassegrain secondary mirror is bonded to the holder using silicone adhesive. Common brands are GE Silicone II, Dow Corning 733, and Devcon Silicone Rubber, and use a fresh tube. The aluminum face of the holder has been sanded and cleaned to ensure good bond strength, so avoid touching this face.

Your kit includes three small Nylon spacer washers. It is important to use these spacers in between the holder and mirror to prevent optical strain after the glue sets. Locate the three spacers at approximately 70% of the mirror's radius, and at 120° intervals. Fix in place with a small amount of glue.

Glue the mirror to the holder using dollops of silicone adhesive. The dollops should be 1/4" to 3/8" in diameter.

Let the silicone adhesive cure for 24 hours in a 70° F (minimum) environment.

Install the Spider

When installing the spider assembly ins-threaded into the aluminum vane lugs (soft metal). Once a few threads are started by hand, you can finish tightening the screws with a screwdriver.

PRINCIPLE OF OPERATION

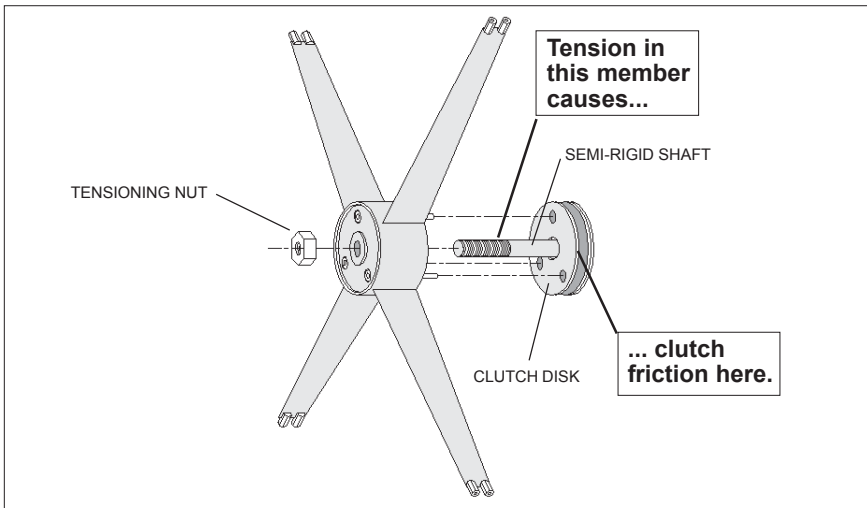
How It Works

Unlike traditional ball and socket pivot designs, **ProtoStar** diagonal mounts utilize a semi-rigid member which permits the range of diagonal mirror movement needed. The three collimating screws press against a clutch disk on the back of the diagonal head assembly. The clutch effectively limits the action of the collimating screws to the desired mirror tilting motion, while also maintaining the friction necessary to hold collimation – even during rough transport.

A major benefit of the design is that it simplifies collimation of the secondary mirror. The tilt adjustment of the secondary mirror can be done directly, without the need to unlock a nut first. Similarly, nothing needs to be “locked down” to hold collimation in place. The *system tension* (see below) is relied upon to hold all adjustments in place. In addition, the design permits most collimating screw adjustments to be made independently (i.e., you can tighten one without having to also loosen others).

System Tension

Figure 6 illustrates how system tension is created. Tension is developed in the *semi-rigid stem* by tightening the *tensioning nut*, which causes a reactive compressive force between the *clutch disk* and diagonal head. In order for the diagonal mount to maintain collimation, there needs to be enough system tension to prevent the clutch from slipping. This can usually be achieved by hand tightening the tensioning nut. A good way to check for sufficient system tension is by trying to rotate the diagonal head. It should turn by hand, but with considerable frictional drag.



Contact Information:



© 1996-2007 ProtoStar

P.O. Box 448

Worthington, Ohio 43085

(614)-785-0245

e-mail: protostar@fpi-protostar.com

WWW: <http://www.fpi-protostar.com/>