



**Notes:**

1. Locate (press if necessary) worm gear against shoulder on shaft as shown. Drill  $\varnothing 0.188$  thru hub and shaft. Press dowel pin thru assembly.
2. Apply light coating of Krytox grease to perimeter of worm, worm gear, and spur gears.
3. Prior to tightening screws to hold housing against mounting plate, verify a small amount of axial clearance exists in main shaft/bearing assembly. (Interference would result in large undesirable thrust load.)
4. Design modified from Steve Gunnels MIKE spectrograph drawing 00M15250.

| ITEM | QTY | DESCRIPTION                                | PART NUMBER |
|------|-----|--|-------------|
| 38   | 1   | Camera Focus Actuator Shear Pad            | PFS10013    |
| 37   | 4   | SHCS 1/4-20 UNCx0.75                       | -           |
| 36   | 1   | Die Spring Screw Cap MCM96235K21           | -           |
| 35   | 1   | Die Spring MCM9584K52                      | -           |
| 34   | 1   | Camera Focus Actuator Preload Support      | PFS10004    |
| 33   | 1   | Camera Focus Actuator Preload Body         | PFS10005    |
| 32   | 1   | Camera Focus Actuator Mounting Plate       | PFS10002    |
| 31   | 1   | Shaft 1/4 X 3 3/4 Make from MCM5947K11     | -           |
| 30   | 1   | Die Spring Screw Cap MCM96235K11           | -           |
| 29   | 1   | Boston Worm GDUH                           | -           |
| 28   | 1   | Coupling MCM59925K92                       | -           |
| 27   | 1   | Dowel Pin MCM98380A510                     | -           |
| 26   | 1   | McGill cam roller CCF-3/4-SB               | -           |
| 25   | 1   | Truarc retaining ring 5100-62              | -           |
| 24   | 1   | Truarc retaining ring N5000-137            | -           |
| 23   | 1   | Spring pin MCM92383A691                    | -           |
| 22   | 2   | Pic clamp L4-3                             | -           |
| 21   | 1   | Pic spur gear H49-22                       | -           |
| 20   | 1   | Pic spur gear H49-88                       | -           |
| 19   | 2   | Boston Bearing 1602DC                      | -           |
| 18   | 1   | Boston Worm Gear D1141 modified            | PFS10007    |
| 17   | 8   | SHCS 1/4-20 UNCx3                          | -           |
| 16   | 10  | SHCS 6-32 UNCx0.375                        | -           |
| 15   | 4   | SHCS 10-32 UNFx0.625                       | -           |
| 14   | 4   | SHCS 4-40 UNCx0.375                        | -           |
| 13   | 1   | BI Technologies potentiometer 6373R10KFS   | -           |
| 12   | 4   | Berg Clamp SM-6                            | -           |
| 11   | 1   | Boston Bearing 1623DC                      | -           |
| 10   | 1   | Boston Bearing 1641DC                      | -           |
| 9    | 1   | Superior Electric motor KSL061T1Y          | -           |
| 8    | 4   | Shoulder Screw MCM94035A208                | -           |
| 7    | 1   | Camera Focus Actuator Worm Shaft Spacer 2  | PFS10010    |
| 6    | 1   | Camera Focus Actuator Worm Shaft Spacer 1  | PFS10009    |
| 5    | 2   | Camera Focus Actuator Worm Support Bracket | PFS10008    |
| 4    | 1   | Camera Focus Actuator Drive Shaft          | PFS10006    |
| 3    | 1   | Camera Focus Actuator Potentiometer Cover  | PFS10012    |
| 2    | 1   | Camera Focus Actuator Potentiometer Block  | PFS10011    |
| 1    | 1   | Camera Focus Actuator Housing              | PFS10001    |

Bill of Material

**THE OBSERVATORIES  
OF THE CARNEGIE INSTITUTION OF WASHINGTON**  
813 Santa Barbara Street  
Pasadena, CA 91101

|            |   |  |  |
|------------|---|--|--|
| MATERIAL   | UNLESS OTHERWISE SPECIFIED<br>FRACTIONAL DECIMAL ANGULAR<br>+/- 1/32 .XX +/- 0.01 +/- 0.1 DEG<br>.XXX +/- 0.002 GOAL<br>.XXX +/- 0.005 REQD |  |  |
| EST WEIGHT | 15.2 lb   |  |  |
| SCALE      | 1:2   | <b>P</b> lanet<br><b>F</b> inder<br><b>S</b> pectrograph | Camera Focus Actuator<br>Assembly                |
| DWN        | CRANE   | 6/6/2006   |  |
| APVD       | BY  | DATE   | SHEET B DRAWING NUMBER PFS00002 SHT 1 OF 1 REV 1 |