Reverse Crayford Focuser Kit

RCF-1 Assembly Instructions

The JMI Reverse Crayford Focuser (U.S. Patent No. 6,297,917) incorporates a revolutionary new design. In order to provide a quality metal focuser at a reduced price, we have created this easy-to-assemble kit version for the mechanically inclined individual. The Reverse Crayford focuser is a tool you can be proud to have on your telescope. With proper cleaning, it will give you years of service.

Please carefully read through the complete instructions before beginning assembly.

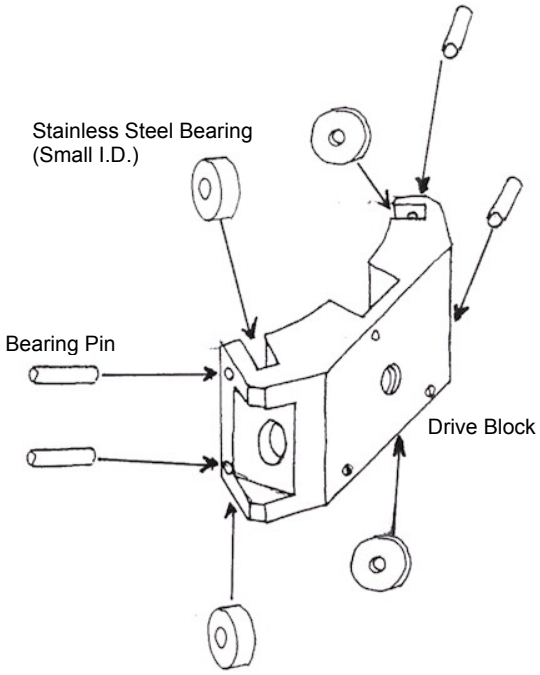
JMI Telescopes

Parts (listed in the order used):

(1) Drive Block
(4) Stainless Steel Bearings (small I.D.)
(4) Bearing Pins
(1) Drive Shaft
(2) Long Cylindrical Plastic Spacers
(2) Short Cylindrical Plastic Spacers
(4) Short Washer-style Plastic Spacers
(2) Knobs
(2) 6-32x1/4 Setscrews
(1) 1/16" Hex Wrench
(1) Drive Plate
(2) 6-32x1/2 Stainless Steel Flathead Screws
(1) 5/64" Hex Wrench
(4) 10-32x3/8 Setscrews
(1) 3/32" Hex Wrench
(1) Base Plate
(2) 10-24x1/2 Black Flathead Screws
(1) 1/8" Hex Wrench
(2) 6-32x1/4 Metal Thumbscrews
(2) 6-32x1/4 Nylon Thumbscrews (extra)
(1) 1/4-20x1/2 Nylon Thumbscrew
(4) 6-32x5/8 Black Flathead Screws
(4) 6-32 Nuts

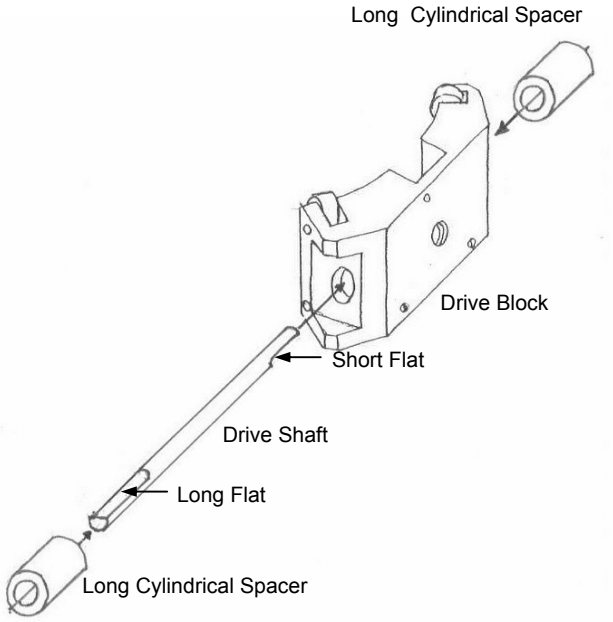
Step 1

- ☐ Place large flat surface of drive block face down.
- ☐ Insert stainless steel bearing with small I.D. (small inside diameter) in slot and align with hole in drive block.
- ☐ Push or lightly tap bearing pin through hole and bearing.
- ☐ Follow above procedure for all (4) bearings.



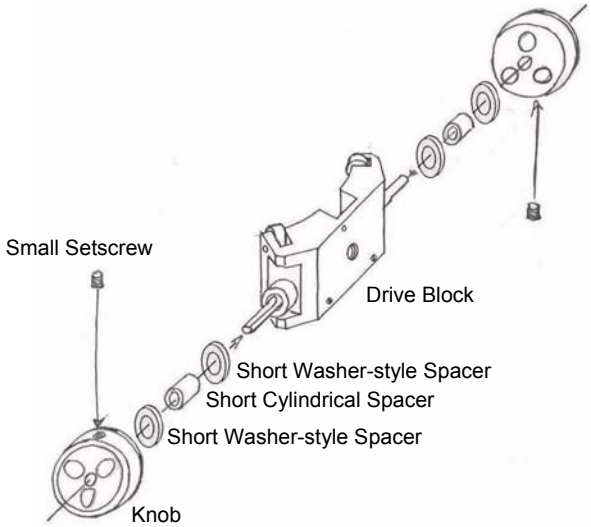
Step 2

- ☐ Slide drive shaft into drive block with longest flat portion on the left (per orientation shown below).
- ☐ Slide (2) long cylindrical spacers on both ends of drive shaft. These spacers act as the drive shaft bearings. They will be as far inside the drive block as possible when the final assembly is complete.



Step 3

- ☐ Slide (2) short washer-style spacers over drive shaft ends.
- ☐ Slide (2) short cylindrical spacers over drive shaft ends.
- ☐ Slide (2) short washer-style spacers over drive shaft ends pushing bearings into holes in drive block.
- ☐ Slide (2) knobs over drive shaft ends (flat side inward).
- ☐ Align setscrew hole in each knob with flat on end of shaft then insert and tighten setscrew (with supplied hex wrench).
- ☐ Loosen setscrews slightly, press knobs inward slightly to remove slack, center shaft in assembly then tighten setscrews securely*.



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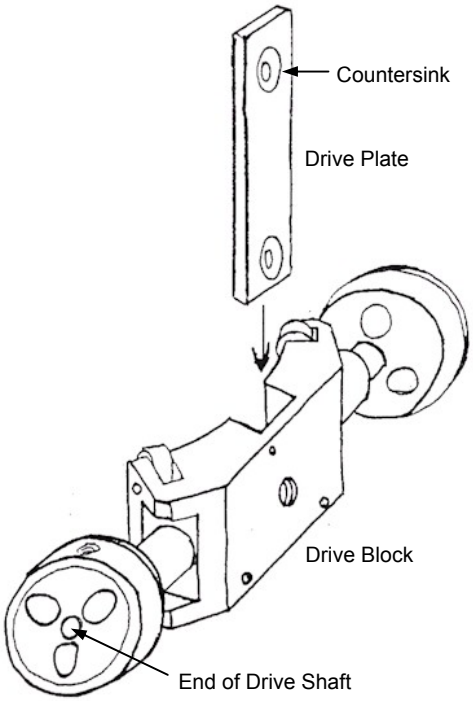
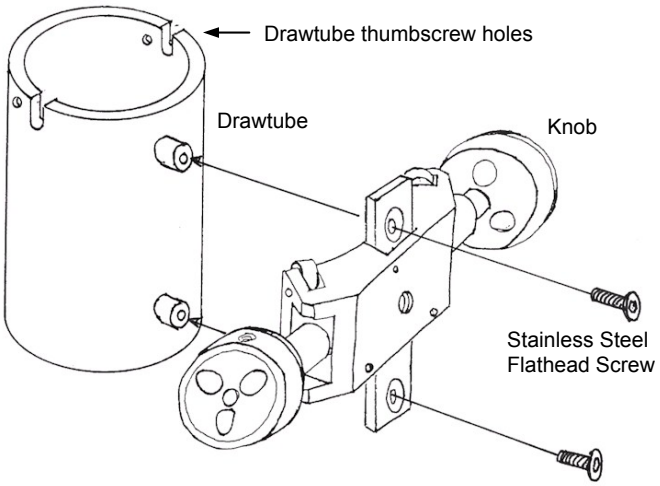
Step 4

- ☐ Slide drive plate between drive block and drive shaft with countersink facing drive block as shown.



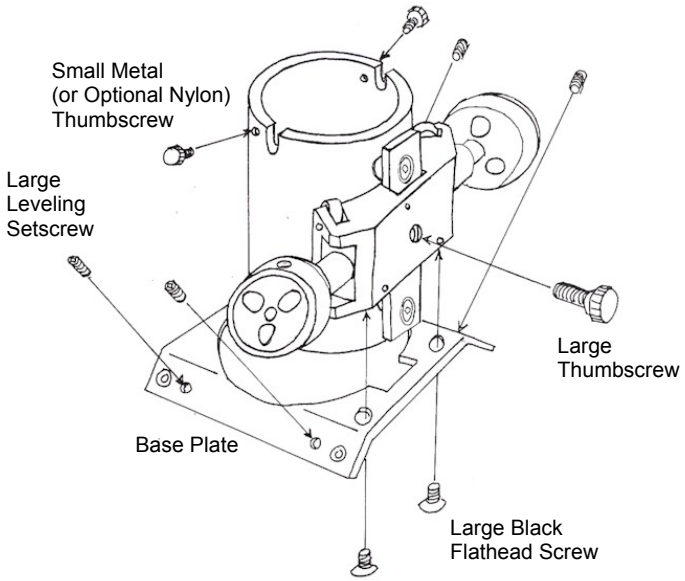
Step 5

- ☐ While holding drive plate in place, loosely attach drawtube with flathead screws. (Note orientation of drawtube thumbscrew holes.) Tighten* carefully and evenly until drawtube travels up and down with rotation of knobs and drive plate is parallel with drawtube. Be careful to adjust both screws evenly, achieving equal pressure throughout entire range of travel. This will give smoothest performance.
- ☐ PLEASE NOTE: Do not over-tighten flathead screws. Damage from over-tightening will not be covered under warranty. Maximum lifting capacity should be 4 lbs.



Step 6

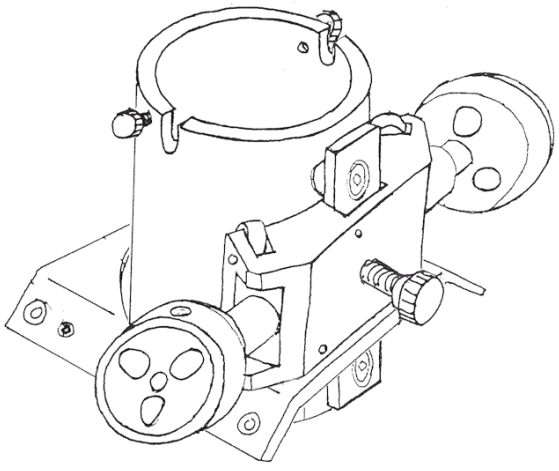
- ☐ Add (4) leveling setscrews to base plate.
- ☐ Attach base plate by inserting (2) large flathead screws through base plate into drive block. Tighten screws securely*.
- ☐ Insert (2) short thumbscrews into top of drawtube.
- ☐ Insert (1) large nylon photography-lock thumbscrew in drive block. Leave loose until needed for locking drawtube in place.



Step 7

- ☐ Your focuser is now assembled.
- ☐ Use the remaining (4) flathead mounting screws and (4) nuts to mount the focuser on your telescope's optical tube.
- ☐ It is very important to keep the drive shaft and drive plate surfaces clean. A cotton swab or soft cloth should be used periodically to remove dirt and other foreign particles from these areas.

* You may optionally use a drop of blue (medium strength) Loctite® threadlocker 242® on each metal screw to prevent them from working loose.



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