



110 IS Headset Instructions

Rev. A



You have chosen wisely - the **CANE CREEK 110** is the best headset money can buy. Following these instructions will help ensure it performs to its fullest potential.

WARNING: Cane Creek threadless headsets are designed for use with unthreaded, full-thickness bicycle fork steer tubes. Use of this headset with a threaded steerer tube or a steerer tube with a reduced wall thickness can result in cracking or breaking of the steerer tube, causing damage to the bicycle and possibly injury or death to the rider.

A) Preparing Frame and Fork for Headset Installation:

1. Use a head tube reaming and facing tool to prepare the top and bottom of the frame's head tube. (Be sure to use the correct reamer diameter corresponding to the headset being installed.)
2. Use a crown race cutting tool to turn and face the crown race seat of the fork. (Be sure to use the correct cutter diameter corresponding to the headset being installed.)

NOTE: It is imperative to complete these steps to ensure a smooth operating headset. If these steps are not completed or done improperly, the headset may be more rough in turning or may tend to "stick" to one side or the other. This applies to ALL frames and forks, new or used, painted or unpainted.

B) Determining Required Fork Steerer Tube Length:

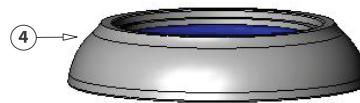
There are 2 possible methods for determining the required fork steerer tube length (explained below):

i) Assembly Method (preferred):

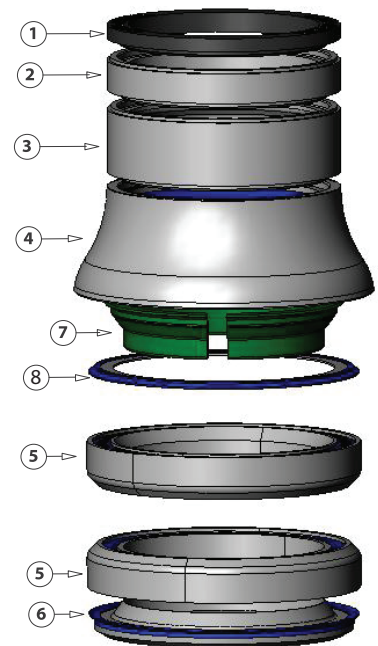
1. Install the crown race as instructed in step E.
2. Assemble the headset as instructed in step G.
3. Tighten 1 stem clamp bolt enough to hold the assembly in place.
4. Mark the steerer tube at the top of the stem.
5. Disassemble the stem, spacers, upper bearing cover and bearings.
6. The **required fork steerer tube length** will be 3 mm below the marking from step 5.

ii) Calculation Method (if necessary)

1. Determine the headset stack height by adding the following measurements (see diagram).
 - A) Top of the headtube to the top of the upper bearing cover. **Nominal value is 9.2mm (short) and 16mm (tall).**
 - B) Crown race bottom to the bottom of the head-tube. **Nominal value is 1mm.**
2. Measure the head tube length.
3. Measure the total height of any Interlok spacers used.
4. Measure the height of the clamp portion of the handlebar stem.
5. Add the above dimensions and subtract 3 mm for adjustment clearance



- ① Interlok top spacer (2mm)
- ② Interlok spacer (5mm)
- ③ Interlok top spacer (10mm)
- ④ Top bearing cover
- ⑤ Bearings
- ⑥ Crown Race
- ⑦ Compression ring
- ⑧ Compression ring seal



$$\text{Required fork steerer tube length} = \text{headset stack height} + \text{head tube length} + \text{total height of spacers} + \text{stem clamp height} - 3 \text{ mm}$$

C) Cutting Fork Steerer Tube:

1. Carefully cut the fork steerer tube in the correct location, as determined from step B, using a tubing cutter, hacksaw, or other appropriate cutting tool.
2. Use a file to remove any burrs from the area of the cut to prevent damage to the top bearing cover o-ring.

D) Installing Upper and Lower Bearings:

Drop the upper and lower bearings into the head tube by hand. The bearings should slide in easily, if they do not, the frame should be reamed and faced with appropriate tools.

E) Installing Crown Race:

Press the fork crown race onto the fork with an appropriate crown race installation tool until the flat back face is flush against the fork crown. Do not press against the tapered portion of the crown race.

F) Installing Star Nut Into Fork Steerer Tube:

1. Position the star nut with the concave end facing upward over the top of the steerer tube.
2. Press the star nut into the steerer tube to a point 15 mm below the top. This should preferably be done using an installation tool such as Cane Creek's **Star Nut Installation Tool Set** (p/n TLO200). If this tool is unavailable, thread the compression bolt into the star nut and lightly tap the assembly into position with a deadweight mallet or similar tool. Ensure that the threads of the star nut are aligned with the steerer tube.

Notes: 1. When replacing a fork, it is necessary to use a new star nut.

2. Certain fork models, especially those with carbon steerers, use a special preload mechanism supplied with the fork. When supplied, these should be installed per the instructions of the manufacturer of the fork or preload mechanism.

G) Assembling Headset:

1. Insert the fork steerer tube through the lower headset cup assembly and head tube. Hold it with one while completing the steps below.
2. Slide the top cover assembly (top cover, compression ring, compression ring seal) over the steerer tube with the compression ring (the green ring) facing the upper headset bearing.
3. Install 110 Interlok spacers & top spacer as required to achieve desired stem height. Always use the 110 Interlok top spacer at the headset/stem interface.

NOTE: The spacers provided with the headset are interlocking and should be assembled with the protruding diameter downward. Cane Creek's patented Interlok spacers minimize the undesirable relative radial motion between spacers and make the assembly more rigid.

4. Seat the steerer tube firmly upward in the head tube and the stem firmly downward against the Interlok top spacer, leaving the stem clamp bolts loose.

CAUTION: The top of the steerer tube must be 3 mm below the top of the stem before the compression bolt is tightened. If the steerer tube is too long, sufficient compression may not be possible and the headset will remain loose, risking rapid headset wear and possible damage to the frame. If the steerer tube is too short, the stem may not have sufficient clamping surface against the steerer tube to be used safely.

H) Tightening/Preloading Headset Assembly:

1. Lubricate the compression bolt.
2. Insert the compression bolt through the recess in the top cap and begin threading the bolt into the star nut, while seating the top cap into the top of the stem.
3. With the stem clamp bolts still loose, tighten the compression bolt with a 5 mm hex wrench to preload the bearings. Apply only enough torque to remove all play from the headset while ensuring it still rotates freely.

CAUTION: Insufficient preload will result in a loose headset. Excessive preload will result in the headset binding. Either condition will cause rapid headset wear and could adversely affect the steering characteristics of the bicycle.

WARNING: If after proper preload is achieved, the top bearing cover drags on the top bearing cup, go to Step I) below!

4. With the stem aligned with the fork, secure the stem to the steerer tube and lock in the bearing preload by tightening the stem clamp bolt/s. These should be tightened to the torque recommended by the stem manufacturer.

WARNING: Make sure the stem clamp bolts are sufficiently tight to prevent the stem and handlebars from turning relative to the steerer tube. A loose stem can result in damage to the bike, loss of control, and severe injury or death to the rider.

5. If the headset needs readjusting after the initial break-in period: Loosen the stem clamp bolt/s, reset the preload with the compression bolt (step 3) and retighten the stem clamp bolts (step 4). Note: It is essential that the stem is securely tightened to the steerer tube.

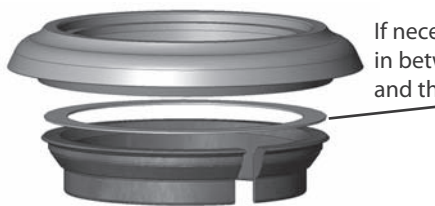
I) Top cover Assembly:

If, after proper preload, the top bearing cover drags on the upper bearing cup, one (or both) of the included spacer shims will need to be installed. To do this, first remove the stem, spacers, and top cover assembly from the steer tube. To install a spacer shim:

1. Remove the compression ring from the top bearing cover by pushing one side of split in the the compression ring toward its center (See Fig.1) and "peeling" it out of the top cover. Light use of needle nose pliers may help the less proficient. When the compression ring is removed, the seal may come off. Don't worry, this is easy to reinstall (see below).
2. Once the compression ring is removed from the top cover, place the thinner of the two spacer shims into the top cover recess and snap the compression ring back into the top bearing cover to capture the shim. Go back to step G).
3. If after reassembly the top cover still drags, install the thicker spacer into the top bearing cover instead of the thinner one. While it is unlikely to be necessary, there is sufficient space in the top cover for both spacer shims to be used.
4. After the compression ring is snapped back into the top cover, install the compression ring seal onto the compression ring using light finger pressure until it snaps into place. When installed correctly, the compression ring seal will easily spin on the compression ring.



Fig.1 - Use one hand to push one side of split in compression ring towards center.



Reinstall compression ring by simply snapping it into the top bearing cover

If necessary, the spacer shim goes in between the top bearing cover and the compression ring



To install compression ring seal:

- 1) make sure seal is oriented properly (see above)
- 2) apply light pressure until seal snaps into groove on compression ring.
- 3) If seal bends slightly, it can be straightened by hand

WARRANTY

Cane Creek Cycling Components warrants the 110 for a period of 110 years from the original date of purchase. Any 110 that is found to be defective in materials or workmanship will be repaired or replaced at the discretion of Cane Creek. This warranty applies to the original owner only. This warranty does not cover damage or failure resulting from misuse, abuse, alteration, neglect, wear and tear, crash or impact, lack of maintenance or other conditions judged by Cane Creek to be abnormal, excessive, or improper. It is mandatory that a Return Authorization Number (RA#) be obtained by calling Cane Creek before any product is returned. Additionally, a dated Proof of Purchase must accompany the product when returned. (Revised 11.15.2007)



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