Cane Creek
IS Headset Instructions

WARNING: Cane Creek threadless headsets are designed for use with unthreaded, full-thickness bicycle fork steerer 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 possible injury or death to the rider.

A) Headset & Frame Compatibility:

Cane Creek's IS Headsets can be used only in bicycle frames specifically designed for their use and are incompatible with frames designed for headsets with press-in cups. Head tubes must be made with specific and unique bore diameters, depths and profiles. Some "integrated" headsets from other manufacturers are not compatible with the Cane Creek IS standard.

NOTE: *If you have questions about the compatibility of our integrated headset products with your bicycle, please visit* **http://www.cancreeek.com/tech/** *or call Cane Creek customer service at 800.234.2725.*

B) Inspection of Frame Before Headset Installation:

The cutting tools used to ream and face head tubes for Cane Creek's Integrated System headsets are very different from those traditionally used. It is the responsibility of the frame manufacturer to ensure that the head tube is made correctly. However, the following inspections are necessary to verify the proper installation of your IS headset:

1. Ensure that tapered bearing seats inside the head tube are free of paint and other obstructions that could prevent the bearings from seating properly.

NOTE: *If the head tube has not been properly reamed and faced, then Cane Creek's IS cutting tools should be used to prepare the head tube for assembly. Call Cane Creek customer service at 800.234.2725 for information on purchasing and using the IS cutting tools.*

2. Ensure that the top of the head tube is flat to prevent undesired contact between the bottom of the bearing cover and the head tube.

NOTE: *If the head tube has not been properly reamed and faced, then Cane Creek's IS cutting tools should be used to prepare the head tube for assembly. Call Cane Creek customer service at 800.234.2725 for information on purchasing and using the IS cutting tools.*

3. Pre-assemble the upper assembly components into the top of the head tube in the order shown in the order shown in Fig. B while omitting any spacers. Verify that the upper bearing cover sits slightly above the top of the head tube (It is acceptable to add spacers above the compression ring to adjust this gap as necessary.)
4. Next pre-assemble the lower assembly components into the bottom of the head tube. Verify that the bottom of the crown race is slightly below the bottom of the head tube.

NOTE: *The bearings should assemble into the head tube with little or no resistance.*

C) Preparing the Fork for Headset Installation:

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 this step to ensure a smooth operating headset. If this step is not completed or done improperly, the headset might not turn smoothly or may tend to "stick" to one side or the other. This applies to ALL frames and forks - new or used, painted or unpainted.*

D) Determining the Required Fork Steerer Tube Length:

1. Install the crown race as instructed in procedure F.
2. Assemble the headset as instructed in procedure H.
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, Interlok spacers, upper bearing cover and bearings.

The **required fork steerer tube length** will be 3 mm below the marking on the steerer tube.

E) Cutting the Fork Steerer Tube:

1. Carefully cut the fork steerer tube in the correct location, as determined from procedure D, 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 upper bearing cover o-ring.

F) Installing the Crown Race:

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

G) Installing the Star Nut Into the Fork Steerer Tube:

1. Position the star nut with the concave end facing upward over the top of the steerer tube.

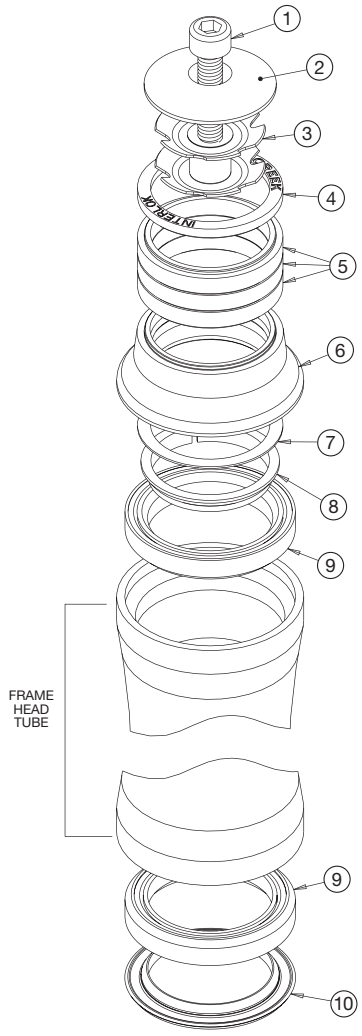


Fig. A - Exploded Assy

1. Preload Bolt
2. Top Cap
3. Star Nut
4. Interlok Spacer (top) 3mm
5. Interlok Spacer 5mm
6. Upper Cover
7. Shim Washer
8. Compression Ring
9. Cartridge Bearing
10. Crown Race

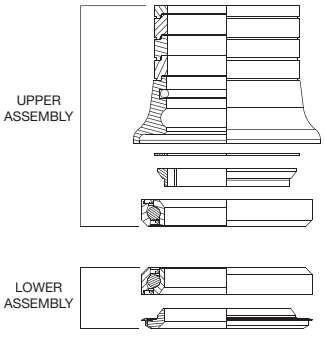


Fig. B

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 TL0200). 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 steerer tubes, 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.

H) Assembling the Headset:

1. Slide one cartridge bearing over the fork steerer tube while ensuring the angled surface at the inside diameter of the bearing is downward and mates with the crown race angle.
2. Insert the fork steerer tube into the head tube, holding it while completing the steps below.
3. Install the upper cartridge bearing over the steerer tube while ensuring the angled surface at the outside of the cartridge bearing is downward and mates with the angle at the inside of the steerer tube recess.
4. Slide the compression ring over the steerer tube with the angled surface downward so that it mates properly with the angled surface on the inside of the cartridge bearing.
5. Install the upper bearing cover (It may be necessary to apply a small amount of grease to the o-ring to allow easy installation).
6. Inspect the gap between the bottom of the upper bearing cover and the top of the head tube. If this gap is less than 0.5 mm, add an appropriate thickness shim washer between the compression ring and the upper bearing cover to increase the gap.

NOTE: *For the IS-8 headset with tall bearing cover, the 1.2mm aluminum shim washer is required to achieve proper assembly clearance. On all other IS headset models, the 0.25mm and 0.5mm shim washers can be used as needed to achieve the proper gap between the bearing cover and head tube.*

NOTE: *On some models, the upper bearing cover includes a rubber lip seal for improved protection from water and debris. The lip seal is designed to hang over the top of the bicycle's head tube. For these headset products, use the minimum thickness of shim washers that will allow the headset to adjust properly.*

7. Install desired Interlok spacers to set the proper stem height.
8. Install the stem onto the steerer tube.

NOTE: *The spacers provided with the headset (1-1/8" headsets only) are interlocking and should be assembled with the protruding rib facing upward. Cane Creek's Interlok spacers minimize the undesirable relative radial motion between spacers and make the assembly more rigid. Though less desirable, it is possible to invert spacers as desired to make slight stack height adjustments or to accommodate stems with minimal interface at the top of the spacers.*

9. Seat the steerer tube firmly upward in the head tube and the stem firmly downward against the spacer stack (or upper bearing cover), 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 preload 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.*

I) Tightening/Preloading the 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.*

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:
   a) Loosen the stem clamp bolt/s
   b) reset the preload with the compression bolt (step I-3)
   c) retighten the stem clamp bolts to the proper torque specification (step I-4).

CAUTION: *Ensure that the gap between the upper bearing cover and the top of the head tube is at least 0.5mm after preloading. If not, return to step H-6 above.*

WARRANTY

Cane Creek Cycling Components warrants its bicycle products for a period of 2 years from the original date of purchase. Any product 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.