## IMPORTANT INSTALLATION MANUAL FOR: CODA ROAD CRANKS MODELS: C9RD AND C9SR AND CODA ATB CRANKS MODELS: C9HC AND C9SM

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## LIMITED WARRANTY

We are proud to have the 900 series cranks as the premier cranks in the CODA product line. These cranks are covered against defects in materials and workmanship for a period of one year from the date of purchase. This warranty is limited to the original owner and is valid for Cannondale products purchased only through an Authorized Cannondale Distributor within the country of purchase. Proof of purchase required. This warranty could be void if the product is not installed properly, paying attention to the following installed tributor. This warranty also does not cover normal-road or mountain bike wear and tear.

Cannondale does however stress that proper maintenance will significantly extend the performance and life expectancy of the product. This maintenance includes cleaning at regular intervals as well as occasional inspection of bottom bracket, arms and rings for tightness and smooth rotation. Enjoy your new CODA Crankset!

CODA Customer Service, RD#7, Friendship Rd., Bedford, PA 15522 or call 1-800-BIKE-USA 1 Thank you for purchasing the World's lightest, strongest, and finest quality, American made CODA crank system. Please read all the instructions before attempting assembly or disassembly of the crank system.

Should you have any questions regarding your new crank system, please write us at Cannondale Customer Service, RD#7 Friendship Rd, Bedford, PA 15522 or call us at 1-800-BIKE-USA. Your questions and comments are welcome.

Your crank system includes the following parts and one tool: (Please also see **FIGURE #6**):

- (1) Right crankarm with chain rings
- (1) Left crankarm
- (1) Bottom bracket spindle
- (2) Crankarm mounting studs
- (1) Right side bottom bracket cup
- (1) Left side bottom bracket cup
- (2). Sealed Bearings-61805 2RS
- (8) 0.005 (five-thousandths inch thick) bearing shims. (2125mm)
- (4) 0.010 (ten-thousandths inch thick) bearing shims. (0.250mm)
- (1) Bottom bracket cup wrench

Note: See FIGURE #'s 1-5 for serial number locations on above parts. Please check the packaging materials and contact us immediately if any parts are missing.

## INSTALLATION STEPS

**IMPORTANT!** Before you begin installation procedure, it is essential for proper bearing function that your bottom bracket shell faces are parallel to each other and perpendicular to the bottom bracket threads. It is also important that the bottom bracket threads are concentric and clean. **The bottom bracket shell width must be 68mm, 70mm, or 73 mm +0.00mm/-1.00mm.** Most bicycle shops have the necessary taps and facers for this job.

Step 1. Lubricate the bottom bracket threads and cup threads with a high quality, water-resistant grease. Thread the cups in and securely tighten them with the supplied cup wrench. Please see FIGURE #4 for cup identification.

Step 2. Lubricate the threads at both ends of the crank arm mounting studs with the above mentioned grease. Thread the larger diameter end into each end of the spindle until the larger diameter is even with the end of the spindle. SEE FIGURE #8.

Step 3. Place one of the sealed bearings over either end of the spindle (The spindle is symmetrical and can be installed in either position.) This is the end to which the right crankarm will be installed. Align the crankarm mounting stud with the tapped hole in the center of Step 4. the right crankarm and slowly turn the stud clockwise with 6mm hex wrench until the spindle is fully engaged (Initially there will be a small amount of resistance as the bearing is seated on the spindle). Slide the spindle through the bottom bracket and push the right tep 5. crankarm towards the center of the bicycle. Place the remaining sealed bearing over the end of the spindle. Install the left crank arm as above. Step 6. Tighten the right crankarm mounting stud to 30 lb-ft (40.7NM) of torque. Slowly tighten the left stud while simultaneously checking for any rotational binding of the crank system. If any binding is detected, STOP! Binding indicates a problem. Generally, either the bottom bracket shell is too wide, or there is a problem with the bottom bracket shell/thread alignment (Please see note at beginning of installation procedure). After both studs are torqued, the crank will have some lateral (side-to-side) play. It is important that the crank has between 0.005 to 0.010 inches (0.125 to 0.250mm) of lateral play for proper function. Push the right crankarm towards the center of the bicycle. Make sure it Step 7: is as far towards the center as it will go. While making sure the crank does not move laterally, remove the left Step 8. crankarm by turning the left crankarm mounting stud counter clockwise. To measure amount of shims needed, hold straight edge across bearing. Step 9. Use shims to fill the gap between the straight edge and face of the cup. When the amount of shims has been determined, subtract one 0.010 inch shim. This is the correct amount of shims. SEE FIGURE #7.

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Step 10. Remove the left bottom bracket cup to remove the left bearing.

- **Step 11.** Completely remove the crank set by removing the left crankarm mounting stud and tapping on the left end of the spindle with a softfaced mallet. The right crankarm may have to be rotated so that the chain ring mounting bolts are aligned with the five cuts in the right bottom bracket cup.
- Step 12. Reinstall the left cup. Install an equal amount (or as close as possible) of shims between the bearing and cup on each side. Please see FIGURE#7.
- Step 13. Repeat steps 5 through 7. Especially note step #6. Too many shims will produce a binding effect, while too few will permit excessive lateral play and consequent wear. If in doubt, repeat steps #7 through #9.

