Tandem Crankset Installation Instructions

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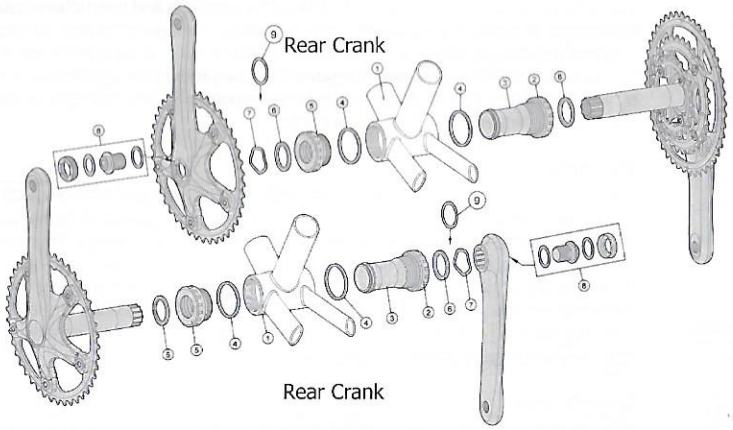

BB Sheel Width	Chainline	Recommended Hub Width (O.L.D) Usage	Bottom Bracket Spacer Position F & R ④	Crank Spacer Position F & R ⑥
68mm	48mm	135mm	1L 1R	2L
68E mm	50.5mm		1L 1R Captain BB 1L Only Stoker BB	1L 1R
73mm	53mm	145mm	No Spacers	2R

Introduction

Congratulations on your Full Speed Ahead product. Please read these instructions and follow them for correct use. Failure to follow the warnings and instructions could result in damage to product not covered under warranty, damage to bicycle; or cause an accident resulting in injury or death. Since specific tools and experience are necessary for proper installation, it is recommended that the product be installed by a qualified bicycle technician. FSA & Vision assumes no responsibility for damages or injury related to improperly installed components.

Warranty

Full Speed Ahead (FSA) warrants all FSA, Vision, Metropolis and RPM products to be free from defects in materials or workmanship for a period of two years after original purchase unless otherwise stated in the full warranty policy. The warranty is non-transferable and valid to the original purchaser of the product only. Any attempt to modify the product in any way such as drilling, grinding, and painting will void the warranty. For more information on warranty policy and instructions for completing a warranty claim, check out the Full Warranty Policy found at our website: http://www.fullspeedahead.com/techdoc

Specification

Item Number / Model Name **CK-8681-TD / SL-K Tandem Crankset (BB-7000/TD)**
Item Number / Model Name **CK-6020-TD / Gossamer Tandem Crankset (BB-7000/TD)**

Components

Follow the assembly order in the illustration:

① Bottom Bracket (BB) Shell
② Right BB Cup x2
③ BB Inner Sleeve x2
④ Alloy BB Cup Spacer x4 (Part #MW002)
⑤ Left BB Cup x2
⑥ Alloy Crank Spacer x4 (Part #MW112)
⑦ Wave Spring Washer x2 (Part #MW120)
⑧ Self-extracting Crank Bolt Assembly x2 (QR-14)
M27 Retaining Nut x1
Black Washer x1
M17 Crank Bolt x1
Silver washer x1
⑨ MS318 Spacer x2

BB Installation

1. Ensure that the front and rear BB shells ① are faced square and clean and free of metal chips, dirt and excess paint.
2. Install the Right BB cup ② with alloy BB cup spacers ④ (see chart for spacer position) and BB inner sleeve ③ on righthand side. Tighten cup to a torque of 400-500 kgf.cm / 40-50 Nm / 355-445 in.lbs.
3. Install the the Left BB cup ⑤ and alloy BB cup spacers ④ on left side. Tighten cup to to torque of 400-500 kgf.cm / 40-50 Nm / 355-445 in.lbs (see chart for bottom bracket spacer ④ position).

Front Crankset:

1. Slide Alloy crank spacer ⑥ on spindle as indicated in chart. Note: Chainline refers to measurement from center chainring to center of seattube.
2. Apply grease to the machined surfaces of the spindle and insert the left timing crank and spindle through bottom bracket ②. Take great care not to damage the plastic cover of right BB cup ②.
3. Install alloy crank spacer ⑥ on spindle as indicated in chart. Install Spacer MS318 ⑨ and Wave Spring Washer ⑦ on right side of spindle. Install the right crank arm onto the spindle. Tighten the self-extracting crank bolt ⑧ to a torque of 400-500 kgf.cm / 40-50 Nm / 355-445 in.lbs.

⚠ CAUTION Do not tighten M17 crank bolt over 500 kgf.cm / 50 Nm / 445 in.lbs torque. Do not completely flatten the wave spring washer ⑦. Clearance between right crank arm and spacer ④ should be 1.5-2.0mm If the clearance is not within 1.5-2.0mm after applying correct torque, DO NOT tighten the crank bolt further. Recheck installation procedure and order of assembled parts. Ensure correct torque is used.
Note: Always use a calibrated torque wrench to tighten crankbolt. Stripping or breakage due to installing without a torque wrench is NOT covered under manufacturing warranty.

Rear Crankset:

1. Slide the recommended alloy crank spacers ⑥ on spindle as indicated in chart. Apply grease to the machined surfaces of spindle and insert into bottom bracket. Take great care not to damage the plastic cover of left BB cup ⑤.
2. Slide alloy crank spacer ⑥ on spindle as indicated in chart, then install Spacer MS318 ⑨ and Wave Spring Washer ⑦ on left side of spindle. Install the left timing crank arm onto the spindle. Tighten the self-extracting crank bolt ⑧ to a torque of 400-500 kgf.cm / 40-50 Nm / 355-445 in.lbs.