

FSA MegaExo Bottom Bracket & Pinch-Bolt Crank Installation Instructions(ENGLISH)

TS-BB-MegaExo

Revision Date 4/4/2007

Service Instructions:

Read these instructions and follow them for correct use. These instructions and instructions for other FSA products are available for download at www.fullspeedahead.com

Specification

- **Model No. / Model Name** **BB-6000 / MegaExo Bottom Bracket for alloy road cranks**
 - BB Shell 68mm English (BC1.37") or 70mm Italian (M36)
- **Model No. / Model Name** **BB-4000 / MegaExo Bottom Bracket for Omega cranks**
 - BB Shell 68mm English (BC1.37") or 70mm Italian (M36)
- **Model No. / Model Name** **BB-7550 / MegaExo Quad Bottom Bracket for Gravity MTB cranks**
 - BB Shell 68mm / 73mm, and 83mm English (BC1.37"), including E-type
- **Model No. / Model Name** **BB-7000 / MegaExo Bottom Bracket for alloy MTB cranks**
 - BB Shell 68mm / 73mm English (BC1.37"), including E-type
- **Model No. / Model Name** **BB-1000 / MegaExo Bottom Bracket for Gamma MTB cranks**
 - BB Shell 68mm / 73mm English (BC1.37"), including E-type

Compatibility

FSA MegaExo bottom brackets are only compatible with FSA MegaExo cranksets.

Warning: MegaExo BB's are not compatible with non-FSA cranksets.

Check the compatibility chart for MegaExo BB's.

Warning: Specific models of FSA MegaExo cranks require specific models of FSA MegaExo BB's.

Table 1: FSA 2007 Compatibility Chart for Road Double MegaExo Cranks and BB

FSA 2007 Road Double Compatibility Chart: MegaExo Cranks and BB			Chain Line				
			BB Model				
BCD	Crank Model	Model No.	MegaExo 8200	MegaExo 8060	MegaExo 8000	MegaExo 6000	MegaExo 4000
		Model No.	BB-8200	BB-8060	BB-8000	BB-6000	BB-4000
Road Double 130mm	K-Force MegaExo	CK-8000	X	X	YES	X	X
	SLK MegaExo	CK-8680	X	X	YES	X	X
	Team Issue MegaExo	CK-8060	X	YES	X	X	X
	Energy MegaExo	CK-8080	X	X	YES	X	X
	Gossamer Pro MegaExo	CK-6021	X	X	X	YES	X
	Gossamer MegaExo	CK-6020	X	X	X	YES	X
Compact Road Double 110mm	K-Force Light MegaExo	CK-8200	YES	X	X	X	X
	K-Force MegaExo	CK-C8000	X	X	YES	X	X
	SLK MegaExo	CK-C8680	X	X	YES	X	X
	Team Issue MegaExo	CK-C8060	X	YES	X	X	X
	Energy MegaExo	CK-C8080	X	X	YES	X	X
	Goss. Pro MegaExo	CK-C6021	X	X	X	YES	X
	Gossamer MegaExo	CK-C6020	X	X	X	YES	X
	Omega MegaExo	CK-C4000	X	X	X	X	YES

Table 2: FSA 2007 Compatibility Chart for Road Triple MegaExo Cranks and BB

FSA 2007 Road Triple Compatibility Chart: MegaExo Cranks and BB			Chain Line			
			Road Triple CL 46mm			
BCD	Crank Model	Model No.	MegaExo 8060	MegaExo 8000	MegaExo 6000	MegaExo 4000
		Model No.	BB-8060	BB-8000	BB-6000	BB-4000
Road Triple 130mm	K-Force MegaExo	CK-8000	X	YES	X	X
	SLK MegaExo	CK-8680	X	YES	X	X
	Team Issue MegaExo	CK-8060	YES	X	X	X
	Gossamer MegaExo	CK-6020	X	X	YES	X
	Omega MegaExo	CK-4000	X	X	X	YES

Compatibility Continued

Table 3: FSA 2007 Compatibility Chart for MTB MegaExo Cranks and BB

FSA 2007 MTB Compatibility Chart: MegaExo Cranks and BB			MTB Triple CL 50mm (57.5 for 83mm BB)				
			Chain Line	MegaExo 9200	MegaExo 9000	MegaExo 7000	MegaExo 7550
BCD	Crank Model	BB Model	MegaExo 9200	MegaExo 9000	MegaExo 7000	MegaExo 7550	MegaExo 1000
		Model No.	BB-9200	BB-9000	BB-7000	BB-7550	BB-1000
MTB Triple 104/64mm	K-Force Light MegaExo	CK-9200	YES	X	X	X	X
	K-Force MegaExo	CK-9000	X	YES	X	X	X
	Team Issue MegaExo	CK-9050	X	YES	X	X	X
	Afterburner MegaExo	CK-9150	X	X	YES	X	X
	V-Drive MegaExo	CK-7050	X	X	YES	X	X
	Moto MegaExo	CK-7150	X	X	YES	X	X
MTB Gravity 104/64mm	Gamma MegaExo	CK-1150	X	X	X	X	YES
	Gravity MegaExo	CK-9550	X	X	X	YES	X
	Gap MegaExo	CK-7550	X	X	X	YES	X
	Moto X MegaExo	CK-7160	X	X	YES	X	X

Installation Notes – BB Shell Check

- Check the BB shell width and threading dimensions to choose the correct BB cups:

Table 4: Bottom Bracket Designation

Type	BB Shell Type	BB Cup Color	Crank Arm	Center Sleeve
Road	68mm x BC 1.37"	Red	Carbon	Alloy
			Alloy	
	68mm x BC1.37"	Titanium	Carbon	Alloy
			Alloy	Plastic
70mm x M36	Silver	Carbon	Alloy	
		Alloy	Plastic	
Road 19mm	68mm x 1.37"	Black	Alloy	Plastic
MTB	68mm x BC 1.37"	Red	Carbon	Alloy
			Alloy	
	73mm x BC 1.37"	Brown	Carbon	Alloy
			Alloy	Plastic
MTB Quad	68mm x BC 1.37"	Black	Alloy	Plastic
	73mm x BC 1.37"		Alloy	Plastic
	83mm x BC 1.37"		Alloy	Plastic
MTB 19mm	68mm x BC 1.37"	Black	Alloy	Plastic
	73mm x BC 1.37"			

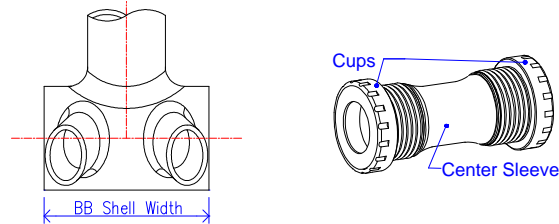


Fig. 1: BB Shell and BB Diagram

- Ensure that the BB shell ends are faced and square and clean from paint.
- BB shell width should be within +0/-1mm of the nominal dimension:

Table 5: BB Tolerance

BB Shell Nominal Size	Min. Dimension	Max. Dimension
68mm	67mm	68mm
70mm	69mm	70mm
73mm	72mm	73mm
83mm	82mm	83mm

- Ensure that the BB shell threads are clean from machining chips, dirt, dust, etc.
- **Prepare all threaded contacts.** (I.e. grease the B.B. shell threads when installing cups, threadlock all bolts, etc.)
- **Do not apply grease on MegaExo carbon crank splines. Apply assembly/retaining compound such as Loctite 641 (provided.)**
- For MTB cranks check the number of 2.5mm alloy shell spacers required:

Table 6: Alloy Shell Spacers for MTB MegaExo

MTB BB Size	BB mounted derailleur or chain-guide	L. Spacers	R. Spacers
68	no	x1	x2
68E	yes	x1	x1
73	no	x0	x1
73E	yes	x0	x0
83	no	X0	X2
83	yes	X0	X1

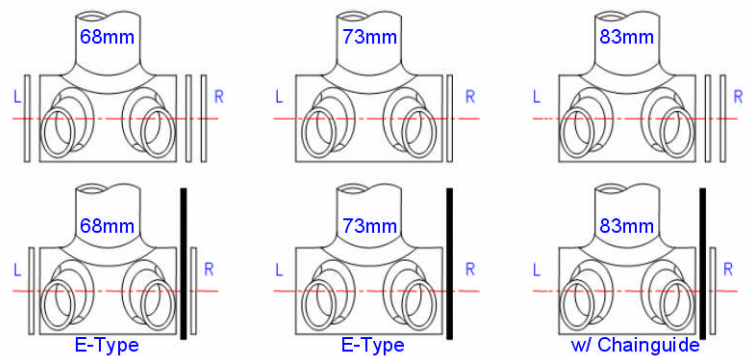


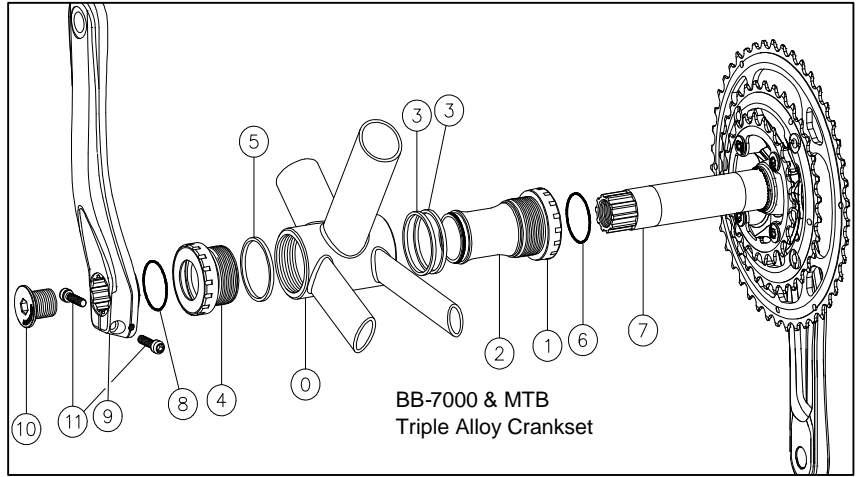
Fig. 2: Alloy Shell Spacer Diagram for MTB MegaExo

- **Installation note:**
 - FSA is including the use of Loctite 641 retaining compound for all carbon MegaExo Cranksets. This compound is not a thread compound. It is used on the BB spindle splines and the L. arm splined insert. Loctite 641 is a repairable, non-permanent compound. Clean and re-apply upon repair and re-assembly.

BB-7000/7550/1000 / MegaExo Bottom Bracket for use with alloy MTB cranks

BB-7000/7550/1000 are designed to work with FSA MegaExo alloy MTB cranks. Follow the assembly order in the illustration:

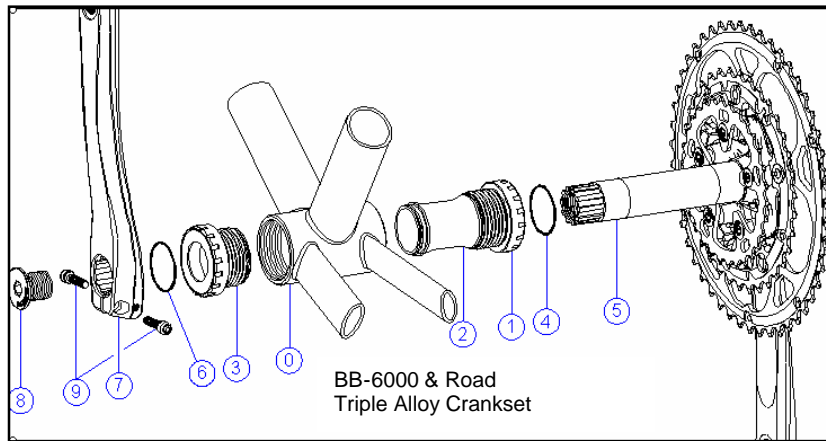
- (0) Check the BB Shell as described above.
- (1)(2)(3) Install the R. bearing cups and plastic middle spacer, and any shell spacers required. Tighten cup to 400~500 kgf-cm / 39~49 N-m / 29~36 ft-lbs. (Use FSA cup tool part no. E0139.)
- (4)(5) Install the L. bearing cup and shell spacer. Tighten cup to 400~500 kgf-cm / 39~49 N-m / 29~36 ft-lbs.
- (6) Check that the O-ring is fully installed onto the axle of the R. crank from the factory. (Note: BB-1000 does not require the use of o-ring.)
- (7) Gently and completely insert the R. crank through the BB cups. Take great care not to damage the plastic cover of left BB cup. Use a light layer of grease on the spindle if necessary.
- (8) Install O-Ring on L. side of axle. (Note: BB-1000 does not require the use of o-ring.)
- (9) Install the L. crank onto the axle.
- (10) (11) Loctite 242 compound is pre-applied to the adjusting cap and to the M5 fixing screws. Upon re-installation, or if the compound is not present, apply Loctite 242 or similar compound to the adjusting cap and M5 fixing screw threads. Install the L. crank onto the axle. Adjust the cap to 4~7 kgf-cm / 0.4~0.7 N-m / 3.5~6 in-lbs
- (11) Make sure there is blue threadlock on the M5 fixing screws and tighten to 120~130 kgf-cm / 12~13 N-m / 104~113 in-lbs.



BB-6000/4000 / MegaExo Bottom Bracket for use double or triple chainring alloy road cranks

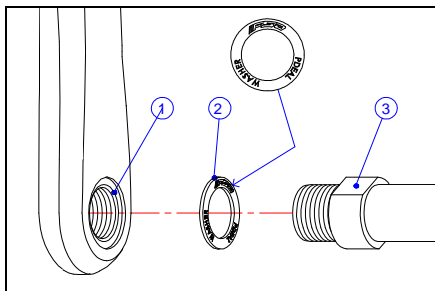
BB-6000/4000 are designed to work with FSA MegaExo alloy road cranks. Follow the assembly order in the illustration:

- (0) Check the BB Shell as described above.
- (1)(2) Install the R. bearing cup and plastic middle spacer. Tighten cup to 400~500 kgf-cm / 39~49 N-m / 29~36 ft-lbs. (Use FSA cup tool #E0139.)
- (3) Install the L. bearing cup. Tighten to 400~500 kgf-cm / 39~49 N-m / 29~36 ft-lbs.
- (4) Check that the O-ring is fully installed onto the axle of the R. crank from the factory. (Note: BB-4000 does not require the use of o-ring.)
- (5) Gently and completely insert the R. crank through the BB cups. Take great care not to damage the plastic cover of left BB cup.
- (6) Install O-Ring on L. side of axle. (Note: BB-4000 does not require the use of o-ring.)
- (7) Install the L. crank onto the axle.
- (8)(9) Loctite 242 compound is pre-applied to the adjusting cap and to the M5 fixing screws. Upon re-installation, or if the compound is not present, apply Loctite 242 or similar compound to the adjusting cap and M5 fixing screw threads. Install the L. crank onto the axle. Adjust the cap to 4~7 kgf-cm / 0.4~0.7 N-m / 3.5~6 in-lbs
- (9) Make sure there is blue threadlock on the M5 fixing screws and tighten to 120~130 kgf-cm / 12~13 N-m / 104~113 in-lbs.



Pedal Installation

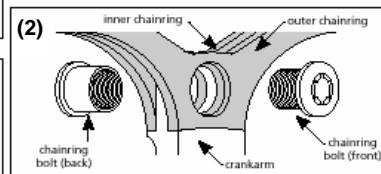
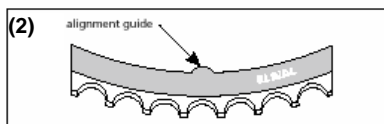
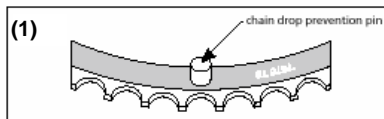
- (1) Grease pedal threads.
- (2) (Carbon cranks only) Install the pedal washer between the pedal and the crankarm.
- (3) Torque pedals to 300~350kgf-cm / 29~34 N-m / 22~25 ft-lbs.



Warning: FSA does not recommend the use of pedal extenders.

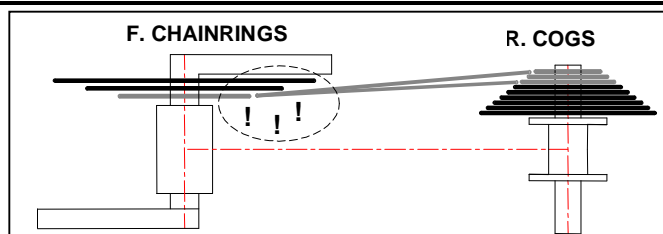
Chaining Assembly

- (1) With the FSA Logos and printed surface facing out, position the larger chainring so that the chain drop prevention pin is located behind the crank arm. For cranks with bashguards instead of outer chainrings, assemble with FSA Logos facing out.
- (2) With the FSA Logos and printed surface facing out, position the inner chainring so that the alignment guide is located behind the crank arm. Use the same installation procedure for the third chainring on a triple crankset.
- (3) Apply grease to the chainring bolt threads and surfaces where they contact the crank arm and chainrings. Fasten the chainrings to the crankarm using the T-30 chainring bolts to a torque of 120 kgf-cm / 12 N-m / 104 in-lbs.



Inner Chaining – Small-Cog Chain Angle

- When the chain is on the inner chainring and the small cogs of the rear cassette, it may contact the larger ring(s) and make noise.
- It is not recommended to use the chain at this extreme combination of chainring and cog.



Maintenance

Inspect your FSA cranks and bottom brackets for straightness, cracks, deep scratches and gouges, or damage before each ride. If any of the preceding conditions are present, do not use your FSA cranks or bottom bracket until they have been replaced.

It is the product user's responsibility to examine the product on a regular basis to determine the need for service or replacement. Cyclist should inspect their bicycle and parts on a regular basis in order to detect damage that may have occurred from normal use and abuse. Check all parts for damage and wear before every use. Check all screws periodically for tightness. Do not over-tighten. Periodically re-grease all screws.

WARNING: In the event of a bicycle accident, all parts should be thoroughly examined by a qualified bicycle mechanic, and any damaged FSA parts replaced. Do not attempt to straighten bent cranks, they must be replaced.

All damaged parts should be repaired or replaced by a qualified bicycle mechanic before the bicycle is used again. Continuing to use damaged parts may lead to loss of control of the bicycle and cause injury or death.

Warranty

Bottom Brackets: Full Speed Ahead MegaExo, Isis Drive and square taper bottom brackets are guaranteed against defects in materials and workmanship or bearing failure for two years from date of purchase.

Cranksets: All Full Speed Ahead alloy and carbon fiber crank arms are guaranteed against defects in materials and workmanship or breakage for two years from date of purchase.

Chainrings, spiders and bolts are guaranteed against defects in materials and workmanship for two years from date of purchase

LIMITS OF WARRANTY: At its sole discretion, FSA agrees to repair or replace products deemed by FSA to be defective.

NOT COVERED UNDER WARRANTY:

1. Products that have been modified neglected or poorly maintained.
2. Products that have been used in competition, stunt riding, or for commercial use.
3. Products that have been improperly installed, maintained, or repaired.
4. Damage from causes other than defects in materials and workmanship such as a user's lack of skill, competence or experience.
5. The finish or aesthetics of the product.
6. Normal wear to the product.
7. Any labor cost associated with the removal, replacement or reassembly of the product.

WARRANTY SERVICE:

To obtain service under this warranty, original purchaser must send their FSA product with (i) the proper RETURN AUTHORIZATION, and (ii) the retailer's original bill, your charge or credit card receipt or other satisfactory proof of date of purchase of the product to:

-In the U.S.A.: Full Speed Ahead Headquarters

-Outside of U.S.A.: the FSA distributor in your country of residence. Check <http://www.fullspeedahead.com> for the complete list of distributors.

Any postage, insurance, shipping costs incurred in sending your product for service are the product owner's responsibility.

Visit <http://www.fullspeedahead.com> for specific warranty return instructions.

Contact:

Full Speed Ahead – USA, 12810 NE 178th St. #102, Woodinville, WA 98072, U.S.A.
www.fullspeedahead.com 1-425-488-8653

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