



## Mr. Whirly Crankset Instructions

Thanks for purchasing the Mr. Whirly crankset or armset. You now own the most versatile bicycle crank on the market. Set it up wide and geared for your Pugsley or set it up narrow and single for your Cross-Check. Visit [surlybikes.com](http://surlybikes.com) to see a full list of the parts available to configure your Mr. Whirly for any battle.

The following set of instructions should give you all the information you need to properly set up your new crankset on your bicycle. If you do not feel comfortable with the installation, please take your bike and pile of parts to your local bike shop so they can get you set up right.

**⚠ WARNING: Cycling can be dangerous. Bicycle products should be installed and serviced by a professional mechanic. Never modify your bicycle or accessories. Read and follow all product instructions and warnings including information on the manufacturer's website. Inspect your bicycle before every ride. Always wear a helmet.**

Additional Product and Safety Information can be found at the website: [surlybikes.com/safety](http://surlybikes.com/safety)

## Compatibility and Intended Use

Mr. Whirly Cranks are compatible with 68, 73, and 100mm bottom bracket widths with the proper spindle. The Mr. Whirly bottom bracket spindle is compatible with 24mm inner diameter bottom bracket bearings such as the cup/bearings we include with our cranksets and sell individually. Mr. Whirly spiders are compatible with 58, 94, 104, 110mm BCD and the MWOD System. Surly chainrings on complete cranksets are compatible with 9- and 10-speed chains, single, double or triple.



### Condition 3

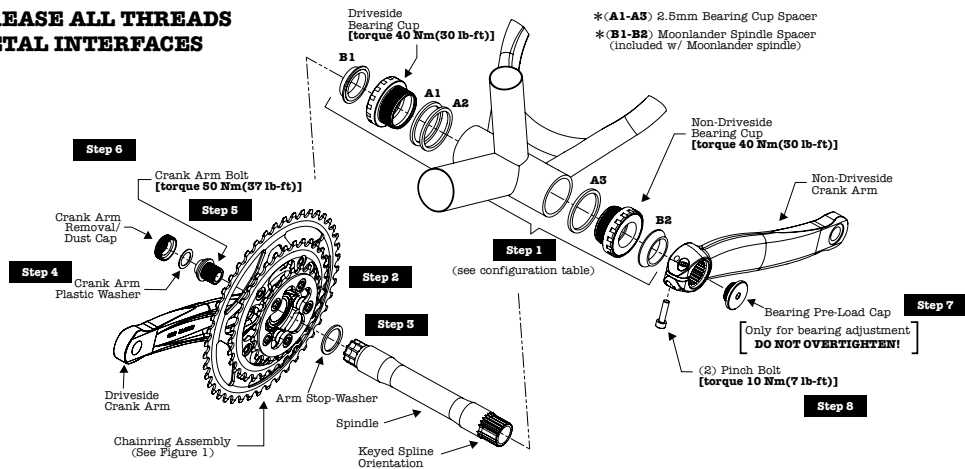
This is a set of conditions for operation of a bicycle that includes Condition 1 and Condition 2 as well as rough trails, rough unpaved roads, and rough terrain and unimproved trails that require technical skills. Jumps and drops are intended to be less than 61cm (24")

**⚠ WARNING: Not intended for use on any type of stationary or spin bike.**

## Tools Required

- 16-notch bottom bracket tool
- Torque wrench that measures in N-m
- 5, 8, 10mm hex wrench
- Grease

### NOTE—LIGHTLY GREASE ALL THREADS AND METAL-TO-METAL INTERFACES



## Installation

1. Install the bearing cups, with appropriate spacers, into your frame's bottom bracket shell. Use the Spacer Configuration Table (Table 1) to determine which spacers to use for your set-up. **NOTE:** Lightly grease all threads and metal-to-metal interfaces.
2. Install chainrings onto the driveside crank arm and tighten chainring bolts to 7N-m. See the detailed exploded view.
3. Attach the driveside crank arm to the spindle. Loosely install the crank arm bolt. **NOTE:** Be sure to include the arm stop-washer, the crankset WILL NOT function properly without it. **NOTE:** The spindle is keyed and must be oriented correctly; it may help to slide the non-driveside crank arm onto the spindle during this step to ensure proper orientation. **NOTE:** Do not worry about proper crank arm bolt torque at this time; you will fully torque the bolt later in the installation process.
4. Install the crank arm plastic washer and the crank arm removal/dust cap.
5. Insert the crankset into the bottom bracket, slide the non-driveside crank arm onto the spindle, and loosely tighten the pinch bolts.
6. Now that the non-driveside crank arm is available for support, USE A TORQUE WRENCH to tighten the driveside crank arm bolt (50N-m).
7. Install bearing preload cap and adjust bearing tension with the preload cap. Hey Hercules, this is only for bearing pre-load! Much like a headset, the bearings should not be too tight or too loose.
8. Tighten the crankarm pinch bolts with a torque wrench (10N-m).

Table 1

BB Shell Width	68mm	68mm	73mm	100mm	100mm
Mr. Whirly Spindle	Short	Medium	Medium	Mondo (Pugsley)	Super Mondo (Moonlander)
Spacers	A1	X	X	X	X
	A2		X		
	A3		X		
	B1				X
	B2				X

**NOTE: E-type mounting components should replace A1 spacer**

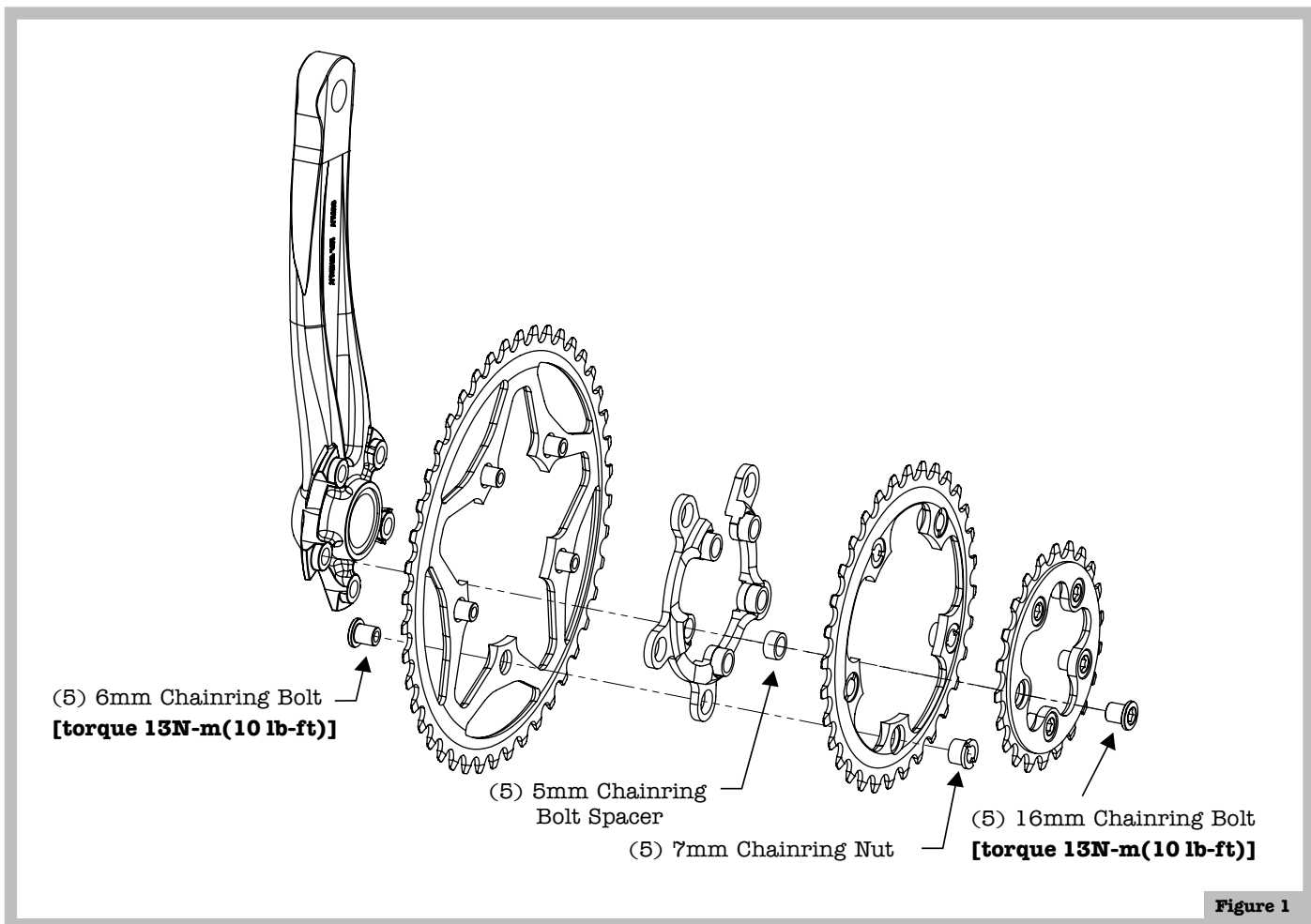


Figure 1

## Ongoing Maintenance

Periodically check to make sure that the drive side fixing bolt, the non drive-side crank arm pinch bolts, and chainring bolts are properly torqued. An annual removal and reinstallation of the bottom bracket with fresh grease and the proper torque to prevent any unwanted component fusion from moisture or offensive off seasonal elements never hurts either.

## Limited Warranty

This Surly product is warranted against defects in materials and workmanship for one year from the date of retail purchase of the product, subject to the limitations detailed below. Save your dated receipt for proof of purchase.

This warranty does NOT cover the following:

- Damage due to improper assembly or follow-up maintenance or lack of skill, competence or experience of the user or assembler
- Products that have been modified, neglected, used in competition or for commercial purposes, misused or abused, involved in accidents or anything other than normal use
- Installation of components, parts or accessories not originally intended for or compatible with Surly product as sold
- Damage or deterioration to the paint, surface finish, aesthetics or appearance of the product
- Normal wear and tear
- Labor required to remove and/or refit and re-adjust the product within the bicycle assembly

This limited warranty is expressly limited to the repair or replacement of a defective product, at the option of Surly, and is the sole remedy of the warranty. This limited warranty applies only to the original purchaser of the Surly product and is not transferable. This warranty applies only to products purchased through an authorized dealer or distributor. In no event shall Surly be liable for any loss, inconvenience or damage, whether direct, incidental, consequential, or otherwise resulting from breach of any express or implied warranty or condition, of merchantability, fitness for a particular purpose, or otherwise with respect to our products except as set forth herein.

This limited warranty gives the consumer specific legal rights, and those rights and other rights may vary from place to place. This limited warranty does not affect your statutory rights.

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