



Ultra New Axle Kit Installation Instructions

Hi there. Thanks for spending your hard-earned cash on this Surly product. Surly stuff is designed to be useful and durable. We're confident it will serve you well for years to come.

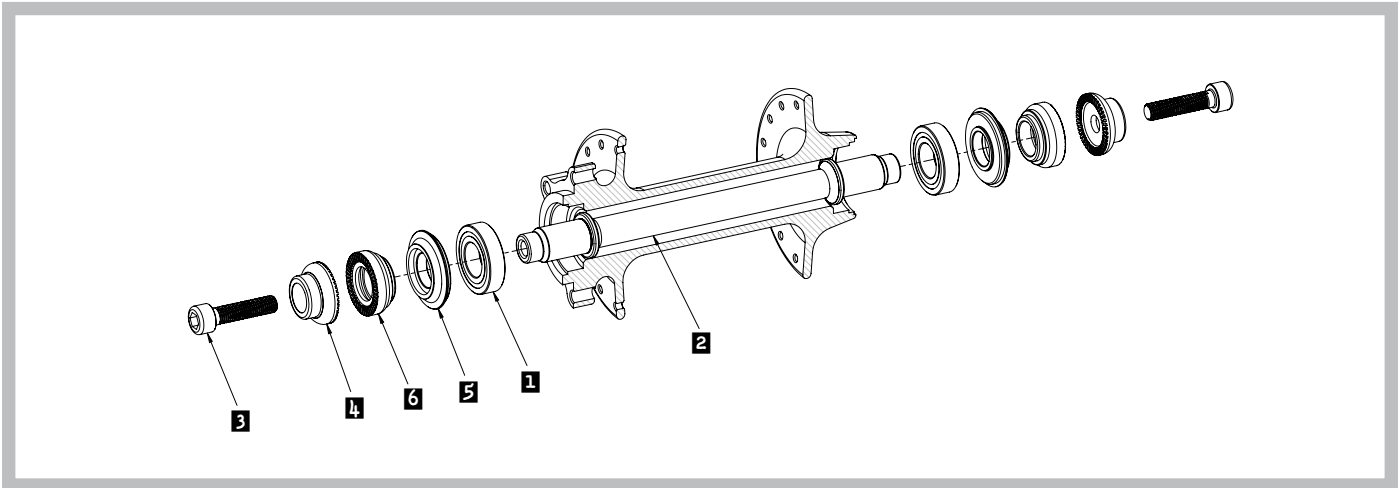
Surly Ultra New Axle Kits are upgrades for the internals of your existing Surly New Hubs or replacing the internals on your Surly Ultra New hubs.

⚠ 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: www.surlybikes.com/safety

Axle Parts List

Part#	Description	Quantity
1	6901 Sealed Bearing	2
2	Axle	1
3	Axle Bolt (M6 x 1.0mm)	2
4	Bolt Cap	2
5	Dust Shield	2*
6	Axle End Cap	2



***NOTE**—There are two hub configurations—the 120mm and 130mm Fixed/Freewheel—that have unique dust shields for the fixed and freewheel ends of the hub. In addition, the axle must be installed with the correct orientation to the fixed and freewheel sides of the hub, see Table 1. The dust shields and axle have “Fx” and “Fw” markings on them to help with orientation and assembly.

TABLE 1

AXLE AND DUST SHIELD SIZE TABLE

	Hub Configuration	Part #	A (mm) Dust Shield Thickness	B (mm) Axle Length
Front	100 (Rim)	HU0880, HU0890	5.1	109
	100 (Disc)	HU0880, HU0890	5.1	109
	135 (Disc)	HU0889, HU0899	6.0	144
Rear	120 (Fixed/Freewheel)	HU0887, HU0897	8.0 (Fx) / 9.0 (Fw)	129
	120 (Fixed/Fixed)	HU0886, HU0896	8.0	129
	120 (Freewheel/Freewheel)	HU0885, HU0895	9.0	129
	130 (Fixed/Freewheel)	HU0888, HU0898	8.0 (Fx) / 10.5 (Fw)	139
	135 (Fixed/Freewheel)	HU0889, HU0899	6.0	144
	135 (Freewheel/Freewheel)	HU0889, HU0899	6.0	144
	135 (Disc/Fixed)	HU0889, HU0899	6.0	144
	135 (Disc/Freewheel)	HU0889, HU0899	6.0	144



Tools Required

- Bench vice
- (1) 15mm cone wrench
- (1) 17mm cone wrench
- Bearing puller
- Hammer/Mallet
- 19mm deep socket
- 5mm Allen wrench
- Grease

Removing the Old “Not Ultra New” Axle

1. Place the wheel horizontally on your workbench. Put the 17mm cone wrench on the lock nut and the 15mm cone wrench on the cone. Turn the 17mm cone wrench counterclockwise, while holding the axle in position with the 15mm cone wrench, to unlock the lock nut. Un-thread the lock nut and axle cone from one side of the hub and then pull the axle out of the hub so all that’s left inside are the bearings.
2. Following the instructions for the proper use of your bearing puller, remove the bearings from both sides. While not everyone will have a bearing puller, we strongly recommend using one. Other bearing removal methods, like a hammer and flathead screwdriver, can damage the hub and possibly cleave the bearing apart, leaving half still embedded in the hub shell, and then you’re worse off than when you started.

To Install the Ultra New Axle Kit

1. Place the wheel horizontally on your bench top.
2. Apply a small amount of grease to the inside surface of the hub where the bearing will sit, see Figure 2. Place and position the bearing in the hub as evenly and straight as you can to get it started for installation.
3. Place the 19mm socket on top of the bearing race. Make sure the socket sits on the OUTER edge of the bearing race and not on the seal. [Not all 19mm sockets are created equal! The most important thing is that the outer edge of the socket sits on the outer edge of the bearing and not on the seal]. Pound directly over the socket to get the bearing into the hub as straight and evenly as possible, as far in as it will go. It should sit counter sunk in the hub with about 1mm of the hubs inner edge exposed, see Figure 3. Apply a small amount of grease to the axle where the bearings will contact it. Insert the axle from the back of the hub and through the bearing. Place the dust shield and axle end cap onto axle. Make sure it’s firmly seated.
4. Take the wheel to your vice. Open the jaws of the vice with just enough open to make room for the thickness of the axle. Place the wheel horizontally on the vice, INSTALLED bearing side down, with the axle between the jaws. DO NOT clamp down the vice to prevent damaging the axle, see Figure 4.
5. Apply a small amount of grease to the inside surface of the hub where the bearing will sit. Place the other bearing on the other end of the axle that is now pointing skyward. Get the bearing started as straight as possible. Place the 19mm socket over the bearing (make sure the socket sits on the OUTER edge of the bearing and not on the seal) and axle (make sure the socket is deep enough that it does not come in to contact with the axle, this is why we have a deep socket) and pound directly over the socket to get the bearing into the hub as straight as possible, as far in as it will go. It should sit counter sunk in the hub with about 1mm of the hubs edge exposed.

***NOTE**—Flip the wheel over and make sure that when you pounded in the second bearing the axle did not unseat the first bearing you installed. The countersinking on both sides should look the same.

6. Apply a thin layer of grease to the ends of the axle. Slide the dust shield over the axle on both sides to cover the bearings, see Figure 5. They should sit flush inside the countersunk lip over the bearings.
7. Slide the axle end caps over the axle on both sides with the serrated part away from the hub, see Figure 6.
8. Put your axle bolts and bolt caps together. The serrations of the outer bolt cap should sit against the frame. Apply grease to the threads of the axle bolts.
9. When placing the wheel back into your bike, the axle nuts require 12 Nm or 106 in/lb of torque for proper tightness.

Surly Ultra New axle kits are compatible with most available quick releases. Please refer to the quick release manufacturer for proper torque specifications.

⚠ WARNING! Failure to properly adjust the quick release and secure the wheel can result in serious injury or death.

***NOTE**—The Ultra New Axle kits with 120mm spacing are not compatible with quick releases as there really aren’t any made in that width and we DO NOT recommend modifying and shortening a longer one.



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6

Ongoing Maintenance

⚠ WARNING! Do not modify the hub. Modifying the hub could cause component failure resulting in serious injury or death.

Periodically remove, clean and inspect your hubs for cracks or any other damage. Any questions about marks or cracks on the hub should be directed to your Surly dealer immediately.

Always inspect your components before a ride. If you have doubts about the integrity and condition of any part, replace it. Consult your dealer if you are unsure about the condition of your Surly Ultra New Axle or any part of your bicycle.

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 bicycle 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.

TO THE EXTENT NOT PROHIBITED BY LAW, THESE WARRANTIES ARE EXCLUSIVE AND THERE ARE NO OTHER EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS INCLUDING WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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