

**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 and use lights at night. Failure to heed any of these warnings may result in serious injury or death.

## STUFF YOU NEED (NOT INCLUDED)

- A rear wheel with a Shimano-splined cassette freehub (fig 1)
- Cassette spacers & locking
- Disc rotor bolts (optional)

## TOOLS

- 3mm hex wrench
- Cassette locking installation tool (see cassette hub manufacturer instructions)
- Torque wrench

## CHANGING COGS

- Remove the six bolts from the Cassette Cog Carrier (fig 2)
- Place the new cog in between the two sides of the carrier, carefully aligning the bolt holes (fig 3)
- Install the bolts with a 3mm hex wrench; alternately tighten the bolts in a star pattern to ensure even pressure (fig 4–5). Torque each bolt to 4–6 Nm

## INSTALLATION OF COG & CARRIER TO CASSETTE HUB

- Determine your ideal chainline and install your cassette spacers accordingly
- Install the Cassette Cog Carrier (fig 6)
- Install the locking per the manufacturer's instructions

## INSTALLATION OF COG TO 6-BOLT DISC MOUNT (FIXED-GEAR ONLY)

**WARNING:** Be certain to use disc brake rotor bolts and blue thread-locking compound to attach the cog to the 6-bolt rotor mounts.

**WARNING:** Fixed-gear configurations greatly increase the risk of chain breakage, derailment, or drivetrain failure. We strongly recommend the use of front and/or rear hand-brake systems with a fixed gear bike.

**WARNING:** Fixed-gear riding exerts great force and stress on the rotor bolts. Over time, they may become loose. BE CERTAIN TO ENSURE THAT THE BOLTS ARE TIGHT BEFORE EVERY RIDE.

- Attach the cog to the 6-bolt disc interface with disc rotor bolts (not included)
- Tighten bolts in a star pattern to ensure even pressure
- Torque each rotor bolt to manufacturer specifications. If no torque value is given, tighten 6–6.5 Nm

## WARRANTY

One thing we want to make clear: Problem Solvers products let you alter your bike for purposes never conceived by the manufacturer. Therefore, the use of our products may void the warranty provided by other manufacturers. If you're interested in keeping your warranty secure, check with them before installation of any Problem Solvers product.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



## LIMITED 2-YEAR WARRANTY

PROBLEM SOLVERS™ warrants this new PROBLEM SOLVERS product against defects in materials and workmanship for two (2) years from the original date of retail purchase by the consumer. This limited warranty is expressly limited to the repair or replacement of the original product, at the option of PROBLEM SOLVERS, and is the sole remedy of the warranty. This limited warranty applies only to the original purchaser of the PROBLEM SOLVERS product and is not transferable.

In no event shall PROBLEM SOLVERS be liable for any loss, inconvenience or damage, whether direct, incidental or 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 this product except as set forth herein. This warranty gives the consumer specific legal rights, and those rights and other rights may vary from state to state.

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 end user
- 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
- Damage or deterioration to the 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

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 merchant ability and fitness for a particular purpose.

For technical and safety information, visit:  
[www.problemsolversbike.com/safety](http://www.problemsolversbike.com/safety)

