# Effetto Mariposa GF Torque Wrench

By Alan "Uncle Al" Ardizone on http://www.roadbikerider.com/producttests.htm

**www.CantitoeRoad.com**
**Price:** $185
**Source:** website, bike shops
**Made in:** Italy
**Includes:** 16 bits (2-8 mm hex keys; 3 Torx bits; 5 screwdriver bits); 17x4x4 plastic case
**How obtained:** sample from company
**RBR advertiser:** yes
**Tested:** 2 months (about 125 clicks)

## HOT!

- spot-on accuracy
- perfect size for bike parts
- covers range of low-torque values
- nice feel in hand
- using it may save your hide

## not!

- scale somewhat hard to read
- must remember to "zero" dial after each use
- requires recalibration at 5,000 clicks (who's gonna count?)
- is it still accurate at 3,376 clicks?

**After all these years**, this is my first official product review for RBR. It may be my last. This testing stuff is harder to do than it sounds! I've never had to pay such close attention to a tool in my life -- counting and recording clicks, reading instructions in 15 languages, trying not to drop it on the steel plate at the base of the repair stand. *Sheeesh!*

The Effetto Mariposa GF (GiustaForza) torque wrench has been reviewed by several other websites and magazines, but has it been tested in a real shop in busy working conditions? It has now. The GF is designed and marketed mainly for personal use in a home shop, but I figured that if it can do the job in my Cascade Bicycles repair dept., it can do the job in your garage or basement.

It can. After putting this torque wrench through everyday shop punishment for 2 months, I decided it's one of the coolest tools I've ever used. My goal in evaluating it was to be even more strict than the tool's claimed +/-4% accuracy.

### Truth in Torqueing

For years in the shop I've used the extremely accurate Snap-On Torq-o-meter. It has a precise dial gauge (no clicks) for

measuring the specific torque values required for many component installations. To say it's a bit unwieldy -- being a foot long and 3 inches wide at the dial -- is true. But its accuracy has been unbeatable. Until now.

The GF torque wrench is a brilliantly designed tool that should be in every serious home mechanic's shop. Even if you don't actually assemble your own bikes, the admittedly pricey ($185) GiustaForza -- Italian for "correct force" -- is a great way to make sure critical parts -- including handlebars, stems, seat binder bolts, chainring fixing bolts -- are sufficiently tight but not *too* tight. Feeling confident that a stem bolt is not falling out or about to shear off while you're hitting 45 mph on that big descent is, well, priceless.

Since about 4-5 years ago, virtually all components with critical torque values have those values screened or stickered on them. These values are almost always shown in Newton meters (Nm). Considering all the carbon, aluminum and titanium bits and pieces on our bikes these days, it's important to know without doubt that everything is accurately tightened. The GF wrench verifies it and lets you ride with confidence.

## Torque Values

If you don't know the correct torque value for a part, don't guess. Virtually every manufacturer of quality components lists the proper Nm in their website tech manuals. Torques vary so much now that there are no reliable "rules of thumb" to go by. Take the time to research the parts on your bike.

If you can't find torque specs for older components, politely ask the folks at your LBS to look them up in their copy of *Sutherland's Handbook for Bicycle Mechanics* or the Shimano service handbook. Of course, it helps if they know you as a regular customer.

A complete home mechanical kit would include a big torque wrench to handle foot-pound values associated with crankarms, bottom bracket cups and cassette lockrings. (A capable tool such as the Park TW-2 costs about $60.) The GF doesn't work on these big parts, but you can get by without a beastly wrench if you learn what "tight enough" feels like. For all practical purposes, the GF can handle the bike values we really need to be concerned with.

***Note:*** There's an argument about how much torque values should vary on a dry bolt vs. a bolt with greased threads. I figure every bolt needs to be lubed to give an accurate torque reading. And I always go with the lowest suggested torque value.

## How It Works

The GF is a "click" torque wrench with a range of 2-16 Nm. It comes in a square plastic case that also contains 16 bits for just about every size and type of bolt or screw you'll find on a bike. The wrench is about 6.5 inches (16.5 cm) long. It has a knurled handle with a diameter that makes it very comfortable in a mechanic's hand.

Once you know the tightening value for a bolt, you rotate the rod at the bottom of the handle to that setting on the scale. (My tired eyes found the small numbers and hash marks a bit hard to read.) Then when you reach that value during tightening, the wrench lets go with 3 degrees of free play past the click. The wrench is only designed to tighten, not to remove parts.

***Important:*** When you are done using the GF for the day, you must return the adjuster to its minimum torque setting (2 Nm) so its accuracy isn't degraded.

I checked the GF against my Snap-On. Its accuracy was still dead-on at 125 clicks. I do wonder if this would be true after several thousand clicks. It's recommended that you send the wrench back to have it recalibrated after 5,000 clicks ($50 + S&H). This may be something your grandkids will have to do for you. Five-thousand clicks is a whole lot. Based on 2 months of using the GiustaForza in my shop every time I could, it'd be more than 6 years before recalibration would be necessary. I'd say that you, as a home mechanic, would never have to worry about recalibration.

**Tom Petrie** of CantitoeRoad.com, the U.S. supplier for this tool, weighed in on the calibration question by telling me, "Even once you hit 5,000 clicks, it's not like the wrench drops off the face of the Earth. It's guaranteed +/- 4% accuracy for the first 5,000 clicks, provided that the user remembers to return the torque setting to the minimum 2 Nm after each use. After 5,000 clicks, accuracy will progressively deteriorate to a maximum variance of 10% which, in many cases, is still within the tolerances given by bicycle parts manufacturers on torque specifications."

## Bottom Line

Based on the importance of correctly torqueing lightweight bike parts, and the GiustaForza's accuracy and longevity, I highly recommend this gem of a tool. Use whatever good excuse you can -- Mother's/Father's Day, birthday, anniversary, Christmas, Halloween -- or just plain old self-preservation. The peace of mind can only help you ride better, right?