



Give me a break

Evaluating bicycle product-liability cases involving carbon-fiber parts



Cooper

BY MILES B. COOPER

The lawyer looked at the images. Some showed various angles of a broken bicycle fork. Others depicted the client's damaged face. One didn't need a radiologist to recognize the orbital fractures. As the lawyer enhanced the fork image, the obvious question arose. Did the fork snap, causing the crash? Or did the client crash, causing the snap? The lawyer knew what the client thought. But what would the evidence show?

Failure analysis

Different bike parts, different materials, different failures. While metals fail and parts can be designed without sufficient strength for their use, the vast majority of today's bicycle product liability cases involve carbon fiber. Don't get us wrong – carbon is wonderful. Most of the time, carbon parts perform perfectly. Even a retrogrouch like me has some carbon elements on the bikes I ride. That said, carbon – and the way the bike industry uses it – can be problematic. Steel typically creaks and deforms prior to failure, giving the user some warning. Carbon doesn't. Carbon suddenly, catastrophically fails. Whether this is the bike's carbon fork, carbon frame, carbon rim, or carbon whatever, the rider usually goes down hard.

It helps to understand how carbon works. "Carbon" is the industry shorthand for the combination of two components. One is a fabric, the carbon fiber. The other is epoxy. Properly made, the epoxy fills the space between the fibers and becomes amazingly strong. Think of it as like dry spaghetti and glue. If the glue fills in all the spaces between the spaghetti, it is near impossible to break. But if there are spaces without glue – let's call them voids – it is vulnerable. It may not snap the first time it is put under flex. It may not snap the 100th. But subjected to constant flex and release, stress fractures will develop inside and work their way out until, WHAM! It suddenly gives way. The most common carbon failures start with voids.

The challenge then is figuring out whether a failure was a stress fracture from a void that worked its way from the inside out (generally giving rise to liability) or one that started outside and worked its way in (generally, but not always, due to misuse or a prior crash). All this is further complicated by the fact the crash usually damages the bike. A main defense is the rider crashed and the bike broke *after* the crash.

Has it happened before?

Defects usually fall into two types. The first type is known defects, and these are inexpensive to prosecute. The first stop is the Consumer Product Safety Commission, followed by general Google searches. Bicyclists have various message boards where people talk about their experiences – they'll pop up in the search. Finally, consider talking to a bike shop as inexpensive local expertise.

If there are prior known incidents, consider reaching out to the manufacturer. In some cases, the manufacturer will accept responsibility and it becomes a damages analysis.

The second type is where there are no prior known incidents. These get expensive, so consider overall case value before proceeding. Thorough testing, involving a materials engineer and a lab can cost tens of thousands just to find out if there's a case.

Reach out

Consider reaching out to the manufacturer early in the case. At this stage, everyone has unified interests. Agree to a testing protocol and test the darned part before litigation starts. Why? For the manufacturer, the company avoids the negative publicity and cost associated with a lawsuit should it turn out no defect exists. For the lawyer, one avoids the time, effort and expense associated with discovery until the defect is confirmed.

Litigation

Curiously, many bike manufacturers tend to be covered by insurance policies where the manufacturer does not have a say in the case. As a result, the carrier frequently assigns in-house defense counsel. Advantage plaintiff!

Counsel tend to be standard insurance defense lawyers, car crash experts with little products-liability experience. In one case, we spent a half hour teaching the lawyer about the part involved. Run the standard drills and one will obtain useful information. Admissions, document requests, and persons most knowledgeable depositions pave the road to success.

Many makers these days are little more than brand names and designers who subcontract everything but the name on the frame. This manufacturing system lends itself to the detail-oriented lawyer. The manufacturer who can't identify where, when, or who actually made their "Built with Italian Pride" road bike, is the same manufacturer who will want to talk settlement. Fight the motions to compel, and the case will build itself.

Outro

Back to our lawyer. Several months later, after negotiating with the manufacturer, the testing was completed. It showed what the client had thought – the crash was not the client's fault. Microfractures, emanating from a void in the carbon fiber, had worked their way from the inside out. Time to initiate some settlement talks with the manufacturer.

Miles B. Cooper is a partner at Emison Cooper & Cooper LLP. He represents people with personal injury and wrongful death cases. In addition to litigating his own cases, he associates in as trial counsel and consults on trial matters. He has served as lead counsel, co-counsel, second seat, and schlepper over his career, and is a member of the American Board of Trial Advocates. Cooper's interests beyond litigation include trial presentation technologies and bicycling (although not at the same time).