

### MOTORCYCLE DISCOVERY SUGGESTIONS

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In a motorcycle case there are important questions that attorneys and reconstructionists need to get answered that do not or may not come up in cases involving only other types of vehicles.

#### IDENTIFICATION

The vehicle description on police reports is deficient for many analyses. Make, model, and year do not fully define many vehicles, especially since "model" is more often than not filled in incorrectly: "1987 Chev 2dr" could describe eight totally different cars ranging from 1800 to over 3000 pounds; "Ford trk 89 2axl" could describe anything from a mini-pickup to a five ton. Honda alone has made dozens of bikes with the same engine cc's, that were totally different bikes. Numbers like 250, 500, 750 and 1000 are classes, not specific model numbers, or even specific engine sizes. A single digit difference in model number may be an entirely different machine. Get the 17-digit VIN, a description, and photographs. Better yet, get the entire vehicle.

Appraisals or repair estimates can reveal useful information about damaged vehicles. They are especially useful if the vehicle has been disposed of and there are no photographs.

#### PHOTOGRAPHS

They cost next to nothing compared to experts, investigations or depositions, and can make or break a case. Photos never lie or forget. They are the best money you can spend in getting to the truth. Track them down.

Photographs can show: Who is lying. Whether a broken headlight was on. Which wheel(s) skidded. What kind of skid. Where the vehicle was headed just before impact. Actual point of impact or point of rest. Prior damage. Important damage. Paint transfers. Witnesses. Road conditions. Things no one thought to ask about.

There are about 20 megabytes of information on a single 35mm negative! Most of it will be revealed on a print 8 x 12 inches, proportionately less on smaller prints. Most copy processes intended for written material (xerography) can't reproduce even

10% of the data on a photo, although they do reproduce a recognizable copy most of the time. Inquire about negatives, and get original prints, the larger the better. Photographing a photo, even though the image looks similar, usually degrades the resolution about 75%. With each generation of copying a copy the resolution is further degraded. Compare a fax of small type to an original.

In numerous cases a single contemporaneous photograph has revealed evidence that won the case indisputably by showing evidence that was ignored by the police, and forgotten by witnesses.

### **INJURIES**

Even if there is no dispute as to damages, the rider's injuries can tell a great deal about the nature of a bike accident. Where on the body injuries occurred can indicate where contact occurred. The mechanics of a fracture can indicate the direction of force; therefore, the X-rays may be useful. (See chapter 12, Methods). A minor bump to the rider's elbow may cause the bike to turn toward the other vehicle.

### **HEADLIGHTS**

Headlights play an important role in conspicuity of bikes. Bikes with headlights on are up to 40% less accident-involved. Find out everything you can about the headlight, how it was inspected, and where it is now. Was it automatically on? Almost all bikes sold after 1978 were so equipped. Did someone alter it so it could be turned off? Was it off, or burned out? Was the headlight inspected to determine if it was lit at the time of the accident? By whom? What was the result, and are there records or photographs? Where is it now? Did the bike have any extra lights, or a modulator?

### **PERCEPTIONS**

Were there any objects in the line-of-sight, including those that the witnesses do not consider obstructions? A signpost can hide a bike, yet people don't notice the post because it is so slim. I have seen 4"x4" signposts placed so they would hide a city bus from the eye of a stationary observer briefly, or a motorcycle for almost a second. (See Chapter 4, Highway Factors, Blocked Visibility.) Bikes don't have windshield wipers, so weather that might not effect cars at all can blind the rider with condensation. Drivers often say that they looked and did not see any cars. In other words, they were not looking for anything else. This may be an admission of negligence.

## **CLOTHING**

What the rider or his passenger was wearing can be critical to both conspicuity and injury protection. Inquire about every article, including jewelry and eyeglasses. Color is very important, try to arrange examination of the actual items, especially helmets. Ask item by item what the rider and passenger(s) were wearing. Does this correlate with the weather and the length of trip? Do witnesses concur on the description of outerwear? Heavy shoes and gloves are a sign of conscientious riders. Leather riding gear even more so, but it may also indicate an intention or inclination to road race.

## **MECHANICAL**

Motorcycles should be checked for any free play or excessive flexibility in the steering or suspension components. Amounts that would be trivial in a multi-wheel vehicle are unacceptable on a bike. If you can feel play, it is too much. (See Chapter 1, Understanding Motorcycles.)

1) Gearshift: What gear was the bike in? How does the witness know? When did rider last shift, up, or down, and why? The gear the bike was in can confirm or refute the speed claim.

2) Brakes: As with any vehicle, brakes should be inspected or their condition verified. Many motorcycles have had the front brakes removed or downgraded for style. Ask about front and rear separately. Are brakes integrated, or ABS? Are brake pads original, low price, or high performance?. (See Chapter 2 Brakes.)

## **TIRES**

Motorcycles do not respond well to having abnormal tires. Attempt to learn if non-stock tires were used, or if there was any abnormal wear. Get a description of the wear. (See Chapter 3, Tires and Wheels.)

## **SIDESTAND**

A surprising number of single motorcycle accidents happen because of sidestands left down. Most modern ones are interlocked to prevent riding with the stand extended. If a bike lost control in a left turn maneuver, this must be investigated.

## **MODIFICATIONS**

Look for signs of after-market equipment. An accessory lost in the crash, such as an after-market windshield may have caused loss of control. Look for speed equipment like mufflers and air filters.

## **EXPERIENCE**

How much, not just years, but miles or hours? Twenty years of one week a year on vacation is pretty meaningless. Two years as a highway patrolman is a lot. What kind of experience? Riding a moped on campus, competition or commuting in bumper-to-bumper traffic? Not just where, but what kind of roads, traffic and weather. Does the witness's motorcycle experience relate at all to conditions at the time and place of the accident? (See Chapter 6, Rider factors.) Has the witness ever taken a motorcycle course, or taught one? Written a book, or articles? Taken a motorcycle apart?

## **HOW TO**

Many riders will brag about how experienced they are, but when questioned about how they would accomplish a particular maneuver they are unable to articulate. If the rider says he was about to turn, ask him how he would accomplish the turn at the speed he alleges. What is the best way to stop? If he proposes laying down a bike ask him how to do it, and then what to do next. (See Chapter 9, Evasive Action.)

## **ROAD CONDITIONS**

In reconstructing a car accident we would want to know if it was snowing, for obvious reasons. In a motorcycle accident we want to know about seemingly trivial contamination of the pavement. A manhole cover or candy wrapper can have an effect on a bike. We need to inquire about debris, liquids, rain, snow, roughness, metal, anything foreign, even painted lines. A car has traction at four points; loss of one is usually insignificant. A bike has traction at only two. (See Chapter 2, Tires and Wheels, Traction.)

## **WITNESSES**

In most cases, the expert depends on evidence gathered by others, who may be incompetent or biased. I suspect many witnesses hear the skids or crash, witness the post-impact movement, then extrapolate what they witnessed. They convince themselves that they saw things they inferred, as if they had actual knowledge. The best witness is the one who describes events preceding the crash, and was in a position where he had a personal stake in the outcome, i.e., could have been involved, but was not. Witnesses tend to overestimate the speed of motorcycles. This could be due to bias of the fact that most motorcycle engines turn faster, and therefore sound faster than car engines.

Police officers seem to have a tendency to ask the most available driver what happened and write it down. Investigation beyond

## **CLOTHING**

that can be minimal unless someone is going to be charged with a crime. Officers are pretty good about noting the things that they can observe with their own eyes and measure with their own hands, but you might have trouble interpreting their measurement techniques. Sometimes evidence is comprehensively reported; usually it's not. Police are often accused of coming to conclusions first, then only gathering that evidence which supports their conclusion. I cannot disprove that accusation.

## **PUBLICATIONS**

Motorcycle magazines publish excellent road test articles, which tend to be more technical than those in automobile magazines. Articles describing the particular bike can be very useful in quantifying performance and specifications. The writers are not shy about pointing out deficiencies or inferiority to competitive models. Often articles about successor models will point out improvements that amount to deficiencies that have been corrected.

Don't forget to read the rest of the book so you will recognize something important when you encounter it.

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