



**TIREMARKS**  
**WHERE THE RUBBER MEETS THE ROAD**  
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Tiremarks are a frequent part of a vehicle accident. When, where, and how they are made provide important clues to the analysis of an accident.

Reconstructionists classify tiremarks by the manner in which they are made. "Skidmarks" are made by a tire which is "locked" or rotating slower than the vehicle is moving. "Acceleration marks" are somewhat opposite since they are made by a tire which is rotating faster than the vehicle is traveling. A tire can also leave a mark if it is slipping perpendicular to the direction of travel. These are typically referred to as "yaw marks". Additionally, tires may leave marks if something unusual is occurring to create a wobbling of the tire tread. This can occur with a flat tire or a suspension problem. Tires leave marks as a result of movement during a collision. These are sometimes referred to as "collision scrubs".



The nature of the tire mark can provide useful information about an accident. A skidmark with bold outside edges is an indication of an overloaded tire. This occurs on the front tires because of the weight shift during hard braking. Skidding rear tires would more likely exhibit a bold center, a characteristic of an underloaded tire.

Similarly, a vehicle which is simultaneously braked and turned will skid the inside tires first. It takes less brake torque because the turn has reduced the load on the inside tires. However, a vehicle turning hard without braking will leave "yaw marks" on the outside tires because the tire flexes more under the heavier load.

Tire marks also are very important in establishing the area of the collision. A vehicle will leave tire marks which are straight lines or smooth arcs until it strikes another object. At that point the path can deviate sharply. Any sharp deviation in a tire mark indicates a sudden event, either a collision or a major mechanical failure.

*Careful tiremark analysis is essential during vehicle accident analysis. It is often the most critical evidence of the accident speeds, timing and sequence.*

