



WARREN

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# Collision Reconstruction Case Study

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Here is what you know:

1. A two-door coupe and an SUV collided on a straight stretch of a county road that runs northwest and southeast.
2. The driver of the coupe is in a coma.
3. The driver of the SUV has amnesia.
4. Both wrecks have extensive collision damage at their left front corners.
5. There were no tire marks at the collision scene.
6. The same carrier insures both drivers.
7. The investigating officer made no charges.

*The question is: Which driver's policy pays?*

You decide to call in your Collision Reconstruction Engineer to help you figure it out.

Here is what the engineer documented:

1. The left front corner of the coupe is pushed back almost to the firewall.
2. Frame and steering components on the coupe's left side were touching the ground.
3. People who knew the coupe's driver route helped establish who was headed where.
4. The tow truck driver who recovered the coupe reported that he picked it up from the southwest shoulder and it was facing the northwest.
5. The left corner of the SUV was pushed half way back to the firewall.
6. The SUV's left tire was cut and deflated. The left front wheel was jammed tight.
7. The SUV's frame was bent but no parts of the SUV except its wheels were touching the ground.
8. The SUV's transmission case was broken.
9. The SUV's right rear tire was unseated from its rim and there was dirt on the rim.

10. The tow truck driver who recovered the SUV reported that he picked it up from the northeast shoulder and that it was facing northwest.
11. There was some debris on the side of the road that was not picked up. In particular, there was a side view mirror that matched the coupe in the southwest ditch.
12. There were gouge marks on the southwest shoulder.
13. There were gouges and an oil stain on the northeast shoulder.
14. There were gouges and scratches on both lanes of the pavement.

### What Does This Mean?

The collision damage established that the forces of the collision pushed the coupe down and raised the SUV.

The debris established the general location of the scene of the collision. The gouge marks on the shoulders established the resting locations of the vehicles. The oil stain corresponds with the broken transmission in the SUV.

One gouge mark on the northeast shoulder corresponded with the unseated right rear tire on the SUV. Another gouge mark on the northwest shoulder corresponded with the jammed left front wheel. The combination of the gouge marks and oil stain on the northeast shoulder established the path of the SUV after the collision.

That the coupe was facing northwest, in the direction from which it came, establishes that it spun as it departed the collision. That parts of the coupe's frame were touching the ground accounts for the scratches and gouges on the pavement. Gouge marks on the southwest shoulder connected with scratches and gouges on the pavement and established the path of the coupe as it spun and slid after the collision.

**ANSWER:** The engineer reconstructed the paths of the vehicles with scaled models on a scaled drawing of the scene. The reconstruction showed that the coupe was well into the SUV's lane at the point of collision. Now you can make an informed decision on whose policy pays.