

Why do some cars burst into flames?

Fire: When gas leaks during a crash, sparks can cause explosion.

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LONG BEACH - Crush metal, plastic and other flammable materials together with a hot engine and gasoline, and you have a dangerous recipe for fire.

Three separate car crashes that caused cars to burst into flames this month have raised the questions: Out of the countless car accidents on streets and freeways every day, why do certain crashes ignite into deadly fires? And how can one avoid them?

In many of these cases, gasoline escapes from a rupture to the fuel tank or fuel line, and then the gas is ignited by either a spark from crushed metal or extreme heat from the exhaust pipe.

The fires are especially dangerous if a person is trapped in the car because of the extremely flammable nature of gasoline.

"Those are pretty difficult to extinguish," said Chris Milburn, a Long Beach Fire Department firefighter. "That flammable liquid is designed to burn hot (in the engine)."

The most recent of the three accidents occurred Wednesday, when a 60-year-old Fullerton woman died after her 1971 GMC truck caught fire after slamming into a concrete divider on the Artesia (91) Freeway.

On Oct. 4, a Long Beach Community College professor, Elisa Gigliotti, was severely burned after a speeding motorcycle rider smashed into her Ford Escort on Carson Street near the campus. Her car caught fire after the motorcycle fuel tank exploded.

Gigliotti, who sustained third-degree burns on 56 percent of her body, remains in critical condition at Torrance Memorial Hospital, said her husband, Lorenzo.

That same day, a Seal Beach couple died after a fiery crash on the Garden Grove (22) Freeway. The couple's 1998 Honda Civic was rear-ended by a 2004 Chevrolet Trailblazer after they stopped behind a car with a flat tire.

The couple, Annette Bayly, 66, and Ronald Bayly, 68, were trapped in the car, which caught fire. They died at the scene.

Many factors can increase the potential for a fire in a car accident, experts say.

Speed is one factor that can cause a fire, because the faster a vehicle is impacted, the more likely it is that the fuel tank is ruptured.

"Speed causes damage, damage causes rupture, and rupture causes a gasoline spill," said Larry Richardson, an accident investigator with Accident Reconstruction, LLC, and a former Detroit state trooper.

Older cars tend to be more likely to catch fire, said Officer Jason Wong of the Long Beach Police Department. "The newer the car, the safer the car," Wong said.

Cars have improved dramatically from the 1970s, when for example, "the Pinto always caught on fire because the gas tank was in the back and the bumper rack when it was smashed punctured the gas tank," he said.

Wong also said grease or oil on the engine is not helpful.

"If the engine compartment is free from grease or debris, it's less likely to have something catch fire."

Still, much of the reason for a car fire has to do with where a vehicle is hit during a collision and if the gas tank is near the point of impact, Wong said.

"A side impact is more likely to rupture a gas tank than from the front or behind," he said. "Newer cars (often) have the gas tank under the rear seat."

To reduce the risk of fire, experts suggest performing regular maintenance on your car, cleaning the engine and not speeding.

Wong also suggested having a fire extinguisher in your vehicle - for electrical and grease fires - in case you have time to use one after an accident.

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