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By Brett Emison

Get Educated

the dangers of aftermarket vehicles

What if roads in the U.S. were filled with cars that had been cut apart and put back together again without any blueprints, drawings, testing or safety analysis? And what if these vehicles' owners and occupants had no idea the vehicles were never tested for safety?

Without meaning to scare you into not hitting the roads this summer, most of us in America drive next to "aftermarket," "incomplete" and "altered" vehicles every day on the road. But many of us don't realize the significant safety dangers these vehicles pose to their occupants and the driving public.

WHAT IS AN AFTERMARKET VEHICLE?

The majority of cars and trucks on the road are "original equipment" (OEM) vehicles — meaning the vehicle was designed, manufactured, tested, and sold by a major automaker (General Motors, Ford, Toyota, etc.). However, there are thousands of vehicles that have been modified from their "original" or "original but incomplete" status.

Aftermarket or modified vehicles may begin as an "original but incomplete" chassis or frame. The final product is then created or finished by a vehicle modifier, such as an RV or limousine manufacturer. Other aftermarket vehicles begin as completed OEM vehicles, but are then stripped down, cut apart and reassembled



as something else, such as a handicapped-accessible vehicle or conversion van.

Safety problems result when vehicles are modified from their original configuration. There are thousands of vehicles on the road that have been modified before being put into use. Examples of aftermarket, incomplete and/or modified vehicles include conversion vans, recreational vehicles (RVs), limousines, off-road vehicles, cranes, and more.

Unlike the OEM manufacturers, aftermarket vehicle manufacturers may not be required to comply with the Federal Motor Vehicle Safety Standards (FMVSS).

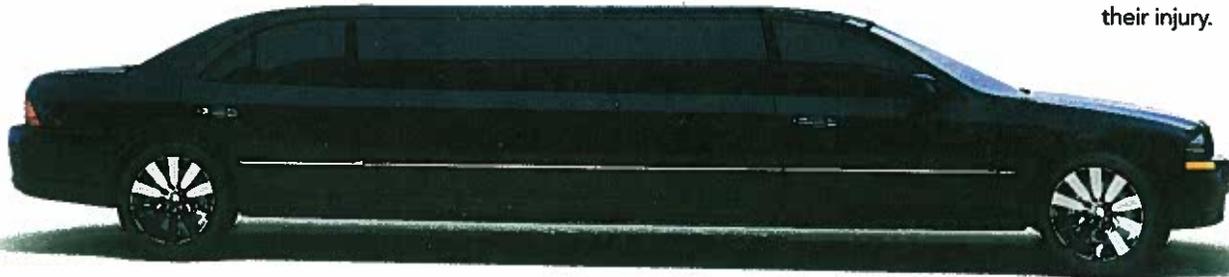
In many instances, aftermarket vehicle modifiers fail to observe even basic engineer practices:

- No engineer on staff
- No engineer ever consulted to design vehicle modifications
- No design drawings/blueprints created for modifications
- No testing performed
- No process controls
- No quality controls

Many aftermarket vehicles are not robust or "crashworthy," meaning they will not provide adequate protection in an accident or collision. In some cases, the modifications may actually cause a collision or make otherwise minor injuries worse during a crash.

TRAGEDIES OFFER LESSONS FOR VEHICLE MODIFIERS

Many modifiers of vehicles for the purposes of making them accessible to the handicapped fail to observe even basic engineering practices. Such conduct, such as failure to consult an engineer when designing the modifications, failure to implement quality or process controls, and failure to test the modifications, can have devastating effects on those using the aftermarket and/or modified products.



A young man in Oklahoma tragically broke his neck while diving into a lake, leaving him paralyzed. After several months of rehabilitation, he was able to regain some independence by learning to drive a handicapped-accessible vehicle. He purchased a conversion van and had it modified for handicapped controls by a vehicle modifier near Oklahoma City.

However, the young man did not know the modifier failed to keep any blueprints, failed to consult the OEM manufacturer or utilize the manufacturer's body builder book or modification recommendations. In fact, the modifier failed to consult an automotive engineer at any stage in the process.

However, that did not prevent the modifier from cutting the vehicle in half and running an additional six feet of fuel filler pipe from the original fill door,

near sharp jagged metal and through the wheel well to a relocated fuel tank behind the rear axle.

The modifier also selected throttle controls susceptible to malfunction, which caused the vehicle to run out of control. The resulting crash rolled the vehicle onto its side and the fuel filler pipe was slashed by the jagged metal it was routed against.

The young man was trapped in the vehicle. He survived the crash and pass-

the propane gas to leak.

The RV exploded while its owner was inside, killing her instantly.

HOW YOU CAN PROTECT YOURSELF

Aftermarket product defects are common and the resulting injuries are often catastrophic. However, many times these claims are not identified and these cases not pursued. If injured, victims should investigate whether an aftermarket component or aftermarket modification contributed to cause their injury.

ersby quickly arrived and attempted to free him from the vehicle. However, the leaking gasoline quickly caught fire and the young man burned to death as rescuers were forced back by the heat of the fire.

Sadly, but not surprisingly, the aftermarket modifier testified he did not know how to relocate a fuel tank and had never even heard of Federal Motor Vehicle Safety Standard (FMVSS) 301, governing fuel system performance.

In another instance, an RV manufacturer installed a propane-fueled stovetop in its recreational vehicle. The RV manufacturer did not have any blueprints, process controls or review procedures to ensure that the propane piping was installed correctly. During manufacture, the propane piping was crimped, leaving a hole that permitted

If possible, take proactive measures to not let it get to that point. Now knowing that aftermarket components and modified products are often inferior in design, quality and performance to original equipment, be sure to ask your dealer for documentation of safety testing and compliance with all FMVSS standards. This is particularly important if you are considering purchasing a aftermarket vehicle in which aftermarket alterations are prevalent, such as RVs, conversion vans, or handicapped-accessible vans.

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