

## Vehicles and Transportation Systems

Packer Engineering, Inc. provides a staff of experienced engineers, scientists, technicians, and support personnel with diverse knowledge in all types of vehicles and transportation systems. We distinguish ourselves by maintaining complete in-house laboratory facilities, including extensive visual, and information services. Clients benefit from our years of experience and expertise, as well as our diligence toward timely customer response.

Count on Packer Engineering to provide total solutions to the most difficult problems anywhere in the world, 24 hours-a-day, 7 days-a-week.

### Services

- Accident investigation and reconstruction
- Design analysis and performance evaluation
- Bench and field durability testing
- Mechanical testing and analytical analysis
- Full litigation support services
- Product liability analysis
- Laser scanning accident scene documentation
- Crash data recorder “Black Box” retrieval



A catastrophic structural failure occurred in a water craft during normal use. Packer Engineering analyzed the failure and made material and structural change recommendations to the manufacturer to eliminate the possibility of recurrence of the problem.



### Our Involvement with Vehicle/Transportation Systems includes:

- Automobiles, trucks, buses, motorcycles
- Forklifts, cranes, personnel lifts
- Utility, all-terrain, recreational bicycles
- Aviation, marine, mining
- Off-road, agricultural, construction
- Railroad, mass transit
- Seat belts, airbags



Packer Engineering investigated a rollover accident involving a motor coach. To determine the coach's stability characteristics, Packer constructed a lift to establish the vertical center of gravity.

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Packer Engineering, a full service engineering consulting practice, serves clients across the nation and around the world. Our multi-disciplinary staff's expertise includes a broad range of engineering disciplines including aerospace, bioengineering, chemical, civil/structural, electrical/ electronics, environmental, facilities, fire modeling, human factors/ergonomics, materials, mechanical, product integrity and structural engineering.

To learn more about Packer Engineering and our Vehicles and Transportation Department, log onto our web site at [www.packereng.com](http://www.packereng.com) or call us at 800-322-0114 for PACKER... "Engineers with Answers."

## Additional Services:

- 3-D modeling: large and small scale, physical and virtual
- Small scale crash-testing using high speed photography and video, anthropomorphic test dummies, and data acquisition
- Full scale crash-testing
- Mechanical, tensile, fatigue, and tribological testing
- Dynamic simulation, animation, finite element analysis (FEA), photogrammetry, and virtual reality
- Mechanical, metallurgical, electrical, chemical, fire and explosion, structural, and design laboratories

## Types of Projects:

- Highway motor vehicle collisions
  - Accident reconstruction
  - Vehicle and occupant kinematics
  - Component evaluation and testing
  - Restraint system analysis
  - Accident scene and vehicle damage documentation
  - Vehicle fire origin and cause determination
  - Crash testing
- Off-Highway vehicle accidents
  - Forklift/personnel lift investigations
  - Construction equipment investigations
  - Component evaluation and testing
  - Operator training determination
- Certification testing
- Design evaluations

