

## Background of Byron Bloch

### *Independent Consultant in Auto Safety Design and Vehicle Crashworthiness*

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Mr. Bloch's background and expertise arises from over 30 years of experience as an independent consultant and court-qualified expert in **Auto Safety Design and Vehicle Crashworthiness**. From 1965 through 2003, he has personally inspected and evaluated hundreds of motor vehicle collision accident vehicles across America, as well as conducting his own "hands-on *autopsy*" or dissection of exemplar vehicles.

Mr. Bloch has compared and evaluated various vehicle body structures and features as to their "**crashworthiness**" - how well or how poorly they protect vehicle occupants from severe injury or death in collisions. Areas of specialization include:

**Rollover – Roof Crush**  
**Truck Underride & Conspicuity**  
**Fuel Tank – Fire**  
**Side Impact – Intrusion**

**Seatback Failure**  
**Airbag-Caused Injuries**  
**Ineffective Seatbelts**  
**Occupant Ejection – Door Latch**

He has testified at **Congressional Hearings**, and in many TV newsmagazine reports on vehicle safety issues, including his own *Auto Safety Reports* on KABC TV News in Los Angeles, to inform the at-risk public about vehicle safety concerns.



Mr. Bloch has consistently analyzed crash test reports and films from U.S. and foreign automakers, and from the **National Highway Traffic Safety Administration (NHTSA)**. These crash tests show how vehicles and their occupants perform in front impacts, side impacts, rear impacts, rollovers, and truck underride crashes. He served as **crash test coordinator** for a few crash tests, including a 63 mph car-to-car test in 1975 to assess safer performance of a forward-of-axle fuel tank system he designed.

In **Product Liability** cases across the nation, he has testified on behalf of the injured plaintiffs, in cases where he evaluates and describes what he believes are the accident vehicle's needless "**design defects**" that caused the severity of injury or death.

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## **OVERVIEW of SOME RELEVANT ACTIVITIES**

**Served as Research Editor of ROAD TEST Magazine**, in the 1965-1968 era, concerned with evaluating design and safety features of U.S. and foreign cars.

**Served as invited judge to evaluate Research in Accident Prevention**, for the National Safety Council, 1968 and 1971.

**Submitted testimony or testified in-person at U.S. Congressional Hearings and DOT Hearings on motor vehicle safety**, concerning: Fuel tank hazards. Weak seat hazards. Energy-absorbing bumper systems. NHTSA's defect investigations. Needless delay in implementing airbags. Unsafe seatbelt designs. Truck underride hazards. (1971-1997)

**Lectured at colleges, universities, and professional groups nationally...** including the Society of Automotive Engineers (SAE), trial lawyer seminars, plus the British Safety Council and the *First World Congress on Product Liability*, in London. (from 1970 thru the present)

**Taught a seminar series at the University of Maryland**, College of Engineering, on "**Auto Safety Design & Vehicle Crashworthiness**", a series of 4 sessions presented as guest lecturer, 1994.

**Presented "Auto Safety Reports" on KABC-TV Channel 7 News, Los Angeles**, typically twice weekly for seven years (1978-1985), often based on his on-going concurrent professional consulting work in vehicle safety & crashworthiness; plus test drive reports, defect investigations, court cases.

**Auto Safety Expert Consultant to ABC Network News "20/20" and "Primetime Live"** and interviewed as auto safety expert for seven featured reports on:

- (1) **"Beyond the Pinto": Fuel Tank Fire Hazards (1978) (Won Emmy Award)**
- (2) **Volkswagen "Ejector Seat" Failure (1979) (Won Emmy Award)**
- (3) **Pickup Truck In-Cab Fire Hazard (1981)**
- (4) **Kentucky Schoolbus Fire Hazard (1988)**
- (5) **Bad Seatbelts: Slack & Automatics (1991)**
- (6) **Truck Underride Hazard: Decapitation (1992)**
- (7) **Roof Crush in Rollovers (1992)**

**Appeared on "Inside Edition", "Good Morning, America", "Dateline NBC"**, 1992, on the fire hazards of GM pickups with vulnerable side-mount fuel tanks outboard of the main frame rails.

**Appeared on ABC "Nightline" and "World in Action" (England)** in 1997 on airbag dangers to children, noting some needlessly unsafe design features; and showing 1973 Chevrolet Impala sedan that had been equipped by GM in 1973 with dual-mode "*softer*" and "*firmer*" airbags.

**Appeared on ABC "Primetime Live"** on September 3, 1997, Bloch's analysis of the Princess Diana tragic crash in the Paris tunnel, pointing out that a simple guardrail would have deflected the Mercedes away from impacting the concrete pillar, and all occupants would have survived.

**Auto Safety Expert Consultant to CBS Network News and "Public Eye with Bryant Gumbel"**, on safety stories (1997-98), including Why Some Airbag Designs are More Injurious to Children, and on Truck Underride & Visibility Hazards... lack of any side guards on trailers, lack of rear guards on trucks, and lack of reflective tape to make trucks and trailers more perceivable (conspicuous) at night, including a night demonstration without any tape and then repeated with reflective tape.

**Consulted to Automotive Safety Devices, Inc.**, on the performance and upgrading of their inertially-responsive safety seat system; and crash test demonstrations, 1967-1969.

**Consulted to Inca Manufacturing Corp.** on performance & upgrading of their energy-absorbing Belleville spring-washer-piston system as an energy-absorbing bumper for motor vehicles; 1971.

**Conceived and built the "Bio-Medical Automobile"**, to demonstrate the feasibility of having resuscitative, diagnostic, and life-support medical equipment accompany doctors and paramedics, including into remote rural communities; 1970-1971.

**Performed studies of how reflective materials can enhance visibility or “conspicuity” of motor vehicles at night.** Project “*Auto-Glo*” in 1967. Demonstrations of reflective tape on rear and sides of trailers for “conspicuity” perception-of-danger-ahead safety enhancement, 1992-99.

## **COURT-QUALIFIED as an AUTO SAFETY EXPERT**

For more than 30 years, 1971 through 2003, Byron Bloch has repeatedly qualified in Federal and State Courts across the nation as an independent “Auto Safety Expert” in motor vehicle “defective design” cases. The central focus is the allegation that the accident vehicle was needlessly unsafe and defectively designed, and thereby either caused the accident, or caused the severity of injuries or death to the vehicle’s driver or passengers. In addition to depositions, examples of such trial testimony include:

**Bratton vs. Chrysler, 1971, Texas...** on occupant movements and forces (kinematics) during the rear-impact collision.

**Biehle vs. Ford, 1974, California...** on the design of pickup trucks with the inside-the-cab fuel tank and protruding filler tube and vulnerably exposed filler cap.

**Dawson vs. Chrysler, 1978, New Jersey...** On the crashworthiness of unitized body structures in side impacts (of a Dodge police car). This became an appellate court “landmark case” on crashworthiness.

**Seese vs. Volkswagen, 1979, New Jersey...** Inadequate window retention to prevent occupant ejection in rollover accidents, and inadequate roof structure that allows “matchboxing” distortion.

**Mistich vs. Volkswagen, 1991, Louisiana...** The VW Beetle “ejector seat” defect, causing seat failure in rear impacts. Plaintiff verdict and Bloch expertise were affirmed by the Louisiana Supreme Court.

**Winningham vs. Trailmobile, 1992, California...** Lack of reflective material to enhance truck’s conspicuity at night, and lack of effective underride guard to prevent cars from crashing deeply under rear of trailers.

**Carmona vs. Kidron, 1994, Florida...** Lack of an effective underride guard to prevent a small pickup from going under the rear of a large truck equipped with a tuck-under liftgate.

**Carpenter vs. General Motors, 1994, Texas...** Slack and spool-out hazards of GM’s door-mounted seatbelts, and roof structure defects that encourage buckling down into the driver’s “survival space”.

**Jenkins vs. Hyundai, 1994, California...** Lack of effective restraint by a shoulder-belt-only design, and roof structure defects that encourage buckling down into the driver’s “survival space”.

**Carland vs. Ryder Truck Rental, 1994, Minnesota...** Lack of reflective tape to make the Ryder truck more conspicuous in the dark of night, and the lack of an adequate rear underride guard.

**Kelleher vs. Strick, 1995, Illinois...** Lack of an effective underride guard to prevent a passenger vehicle from penetrating beneath the rear of a large trailer.

**Detillier vs. Lufkin, 1995, Louisiana....** Lack of an effective underride guard to prevent a passenger vehicle from penetrating beneath the rear of a large trailer.

**Mullins vs. Mack Truck, 1997, Kentucky....** Lack of any rear underride guard device on a coal dump-truck, and failure of truck cab-chassis manufacturer to warn or coordinate with vehicle body builder to provide a rear underride guard.

**Loayaza vs. Volkswagen, 1997, California....** Hazardous location of fuel tank and vulnerable easily-separable filler tube assembly in VW Beetle front luggage compartment, lack of firewall barrier, and inadequate side impact protection.

**Balascio vs. Andrus Trucking, 1997, California....** Lack of reflective material on back of parked trailer to enable it to be perceived at night.

**Kanoff vs. Jaguar Cars / Ford, 1998, Pennsylvania....** Airbag system defects, including crash sensors triggering in underbody minor impact, high-force driver airbag, and failure to warn. Fully qualified as auto safety expert after *Daubert Hearing* in court.

**Rodriguez-Olvera, et.al. vs. Salant Corp, 1999, Eagle Pass, Texas....** 1983 schoolbus used to transport factory workers overturned onto its side and ensuing fire burned 14 entrapped passengers to death. Testified on lack of roof hatch escape exits, emergency exit windows, flammable seat materials, and no fire extinguisher, and the feasibility and cost of retrofitting these safety measures.

**Continued....**

**Waters vs. Wilson Trailers, 1999, Lexington, Kentucky....** Lack of backup lights or backup alarm on tractor-trailer, resulting in worker being crushed to death against loading dock at night.

**Maravilla vs. Lufkin Industries, 2000, Laredo, Texas....** Lack of any side guards to prevent the underride of a car beneath the open side of a long, tall trailer, which thereby crushed into the car's "survival space". Jury found defective design of the Lufkin trailer, and that Lufkin Industries acted with malice. A Daubert-Robinson Hearing confirmed Bloch's expertise as an expert in vehicle safety design and truck underride.

**Caleb vs. Strick Trailers, 2000, Philadelphia, Pennsylvania....** Minimal support for vertical struts of rear guard, which broke away when impacted by Toyota passenger car, which then continued to underride beneath the rear of the parked trailer.

**Perry vs. Chemical Leaman Tank Lines, Inc., Pennsylvania** Lack of conspicuity measures (reflective tape) on side of large tanker-trailer in the dark of night, to make it more visible to oncoming drivers.

**Simms vs. Ford Motor Company, 2001, Ellicott City, Maryland.** Plaintiff Simms sought equitable reimbursement for the cost of installing a retrofit safety fuel tank, including an internal fuel cell bladder, in his "classic" Ford Mustang. I testified about the dangers of the Mustang's "drop-in" fuel tank, and Ford's knowledge of its leakage problems in rear impacts. Ford was ordered to reimburse Simms.

**Pourcho vs. BMW, 2002, Detroit, Michigan.** Failure of seatbelt in 1992 BMW 7-series sedan to protect driver in low-speed impact, and lack of automatic pre-tensioner to tighten belt at start of crash.

**Jackson vs. Heartland Express, 2003, Montgomery, Alabama.** Rearward protruding load of lumber increased truck underride hazard of flatbed trailer, and use of the truck's Jake Brake engine-compression retarder does not cause any brake lights to come on and warn following drivers.

**Kraybill – Simmons vs. DaimlerChrysler, 2004, Philadelphia, Pennsylvania.** Rear impact to a 1978 Dodge multi-passenger B-Van caused an immediate fuel-fed fire that engulfed the vehicle and occupants.

I testified about the unsafe fuel tank location in the rear "crush zone", with a filler tube that easily pulled out of its insertion hole at the bottom side of the tank, thereby allowing the gasoline to continuously pour out.

## **PRIOR CORPORATE EXPERIENCE**

After graduating from UCLA, Mr. Bloch was initially employed in company staff positions, including:

**Industrial Electronic Engineers, Inc.** (1963-1964) *Product Planning Coordinator...* between research and development, engineering, production, marketing, and corporate management. The company manufactured technical control and display components and assemblies.

**Dunlap and Associates, Inc.** (1961-1963) *Staff Industrial Designer and Human Factors Engineer...* worked on various military weapons systems, such as Polaris missile launch control. Dunlap is one of America's foremost human factors engineering consulting firms.

## **COLLEGE EDUCATION**

(Name of University, Dates Attended, and Major Field of Study)

**Northwestern University,** Science Engineering, 1955-57.

**University of Kansas,** Industrial Design, 1957-58.

**University of California, Los Angeles (UCLA),** Industrial Design, 1958-60.

**University of California, Los Angeles (UCLA),** Industrial Design, 1961-63.

Graduate Program, including Human Factors Engineering. All required courses were completed, Advanced to Candidacy.

## **COLLEGE DEGREE**

**Bachelor of Arts**, from the College of Applied Arts, UCLA, 1960.  
Emphasis was in Industrial Design, including Human Factors Engineering.

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**12th Annual World Traffic Safety Symposium, New York City, April 20, 2001.**

**Lifetime Achievement Award** presented to Byron Bloch *“For twenty-five years of dedication and persistence in stimulating auto safety improvements.”*

**PUBLICATIONS and PRESENTATIONS**

**“Ford Police Car Fire Hazards – How It Happened, and What’s the Remedy ?”**

presentation at the PCNY Annual Convention, of the Police Conference of New York, Inc., May 2003, in Binghamton, New York.

**“Ford Police Car Fire Hazards – How It Happened, and What’s the Remedy ?”**

presentation at the NAPO Legal Rights and Legislative Seminar, of the National Association of Police Organizations, May 2003, in Washington, D.C.

**“Auto Safety Defects You Shouldn’t Overlook”** presentation at the Professional Investigators and Security Association Symposium, March 2003, in Williamsburg, Virginia.

**“Commercial Vehicle Related Accidents”** presentation at the session on Vehicle Design - Safe Cars of the Future, at *The First European Summit on SAFE Highways of the Future*, sponsored by Traffic Technology International, in Cannes, France, January 2001.

**“Protecting Our Children in Crashes.... Lessons from What Really Happened”** presented at the 10th Annual World Traffic Safety Symposium, on airbags, school buses, and how safer designs emerge by learning from actual accidents, in New York, April 2000.

**“The Truck Underride Hazard... Truck Safety Defects That Crush Cars and Decapitate Their Occupants”** presented at the 1999 Pennsylvania Bar Institute Seminar Series on *Goliaths of the Highways: Truck Accident Litigation*, Sept.-Oct. 1999, in Phila., Pitts., etc.

**“The Ethics of Compassion in Car Design”** presented at the 9th World Traffic Safety Symposium, on design solutions to vehicle safety issues, in New York, April 1999.

**“Unlocking the Mysteries of Car Crash Murder”** presented at the 1999 Northeast Super Conference, of the National Association of Legal Investigators, in Atlantic City, April 1999.

**“Auto Safety Defects You Shouldn’t Overlook”**, presented at National Association of Legal Investigators (NALI), National Convention in Baltimore, Maryland, June 1998.

**“Improved Crashworthy Designs for Truck Underride Guards”**, published and presented at the 16<sup>th</sup> *International Technical Conference on the Enhanced Safety of Vehicles*, U.S. Dept. of Transportation, June 1998, in Windsor, Canada.

**“Advanced Designs for Side Impact and Rollover Protection”**, published in the 16<sup>th</sup> *International Technical Conference on the Enhanced Safety of Vehicles*, U.S. Dept. of Transportation., June 1998, in Windsor, Canada.

**“The Coming Revolution in Airbag Technology”**, published in the 16<sup>th</sup> *International Technical Conference on the Enhanced Safety of Vehicles*, U.S. Dept. of Transportation., June 1998, in Windsor, Canada.

**“Side Impact Protection in Vehicle Design”**, presented at the Federal Highway Administration (FHWA) Turner-Fairbanks Research Center, May 1997, in McLean, Virginia.

**“Underride Guards: Is the New NHTSA Regulation Good Enough?”**, paper presented at the Society of Automotive Engineers (SAE) *TOPTEC Symposium on Heavy Vehicle Underride Protection*, April 1997, in Palm Springs, California.

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**“Truck Underride Tragedies”**, *TRIAL Magazine*, Feb. 1993. Co-authored article, on the history and technical principles of truck underride cases.

**“Ten Auto Defects You Shouldn’t Overlook”**, *EXPERTS-At-LAW Magazine*, May 1990. Truck underride, roof crush, side impact, seat backrests, fuel tanks, seatbelts, etc.

**“Busing: The Ultimate Disaster”** (Kentucky Accident), *EXPERTS-AT-LAW Magazine*, March 1990. Safety defects that caused 27 needless burn deaths in schoolbus collision accident.

**“Interview with Byron Bloch”**, *Corporate Crime Reporter*, June 5, 1989. Discussion of vehicle safety defect issues, fuel tanks, roof crush, airbags, and historical overview.

**“Seiner Sache Sicher”**, interview in *AUTO MOTOR UND SPORT* (German), Nov. 1983. How and why Mr. Bloch presents auto safety information to the public via television in Los Angeles.

**“Checklist for Selecting the Best Car”** (Safety), *AUTO EXPO ‘83 Magazine*, Los Angeles, 1983. Overview of some basic safety points to look for in selecting a car.

**ROAD TEST Magazine**, Research Editor, various articles with emphasis on safety, including the *“On the Choppin’ Bloch”* columns, 1965-68.

**“An Overview of Safety in Automobile Design”**, *Annual Symposium of Human Factors Society*, at UCLA, June 1966. (Version also published in *ROAD TEST Magazine*.) Discussion of the leading causes of car crash injuries, with correlation to vehicle design features, including seatbelts, head restraints, and structural crashworthiness.

## **PROFESSIONAL MEMBERSHIPS**

Society of Automotive Engineers (SAE)  
Industrial Designers Society of America (IDSA)  
American Society of Safety Engineers (ASSE)  
Washington Automotive Press Association (WAPA)

## **TESTIMONY and SUBMISSIONS TO GOVERNMENTAL BODIES**

**DOT Commercial Motor Vehicle Safety Workshop**, of the U.S. Dept. of Transportation, July-August 1999. Participant to assess future scenarios and potential solutions to help reduce commercial truck and bus fatalities from 5,300 annually in half by the year 2010.

**NHTSA Side Impact Airbags Public Meeting**, April 1999, in Washington, D.C. Presentation on need for systems approach, including vehicle body structure, side window glass-plastic, wrap-around seats, seatbelt pre-tensioners, crash tests with matrix of dummies, need for vehicle rollover tests, comparative information on side airbag performance, warning labels.

**Safety Maximization within the Global Harmonization of Motor Vehicle Safety Standards**. Presentation at NHTSA Public Meeting on Global Harmonization, Feb. 1999. Need to focus on strongest standards internationally re: truck underride, vehicle conspicuity, seat strength, side windows to prevent ejection, dynamic rollover tests, fuel tank protection, etc.

**Occupant Crash Protection, Requirement for Advanced Airbags**. Submission to NHTSA Docket 98-4405, Dec. 1998. Recommendations for crash test matrix, various dummies, crash thresholds, to help ensure safer airbag systems for children and adults of all sizes.

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**NHTSA Smart Air Bag Public Meeting**, Feb. 1997, in Washington, D.C. Presentation about dual-mode softer/firmer airbags, 1973 GM ACRS dual-pressure airbags, tethers to control shape, need to modify crash sensor actuation thresholds, and crash testing protocol.

**Air Bag Deactivation and Depowering of Air Bags, Submission to NHTSA Docket 74-14,**

February 1997. Noted opposition to allowing mass deactivation of airbags, and discussed safer alternatives such as on-off switches with warning lights, raising the crash threshold that actuates airbags, having variable airbag inflation tailored to crash severity and occupant size.

**Rear Impact Guards / Rear Impact Underride Protection for Heavy Trucks and Trailers, Submission to NHTSA Docket 1-11,**

June 1992.. Urgent need to adopt underride guard FMVSS (after 25 year delay) with guard height at 16-to-18 inches above ground, apply to trailers *and* trucks, need for *side* underride guards, enhanced conspicuity, retrofit of existing trucks and trailers with underride guards.

**Rollover Prevention, Submission to NHTSA Docket 91-68,** April 1992. Recommended use of dynamic vehicle rollover testing with crash dummies; and noted roof structure defects and the need for stronger roof structures to minimize intrusion into occupant “*survival space*”.

**“Automotive Safety: Are We Doing Enough to Protect America’s Families”**

Hearing before the select Committee on Children, Youth, and Families, U.S. House of Representatives. December 4, 1991. Testimony on hazardous seatbelt designs and truck underride hazard and 20+-year delay, urging that NHTSA finally mandate underride guards. (A new regulation ensued, requiring safer rear underride guards for new trailers as of Jan. 1998.)

**Testimony in Support of Mandatory Requirements for Airbags,** Hearing by U.S. Dept. of Transportation, NHTSA, in Los Angeles, November 28-29, 1983. Pointed out basis for implementing safety airbags, the prior needless delay, and feasible technology since 1973.

**Failures of NHTSA to Conduct Safety Defect Investigations in an Expeditious & Open**

**Manner,** U.S. House of Representatives, Subcommittee Hearings, March 1983. Noted examples of safety defect investigations that could and should have proceeded, with recommendations to improve NHTSA’s defect investigation processes.

**“Seat Design and Fuel Tank Systems... Defect Dilemmas in Need of Attention”**

Safety Defects Conference, National Motor Vehicle Safety Advisory Council, DOT, Oct. 1973. Pointed out weak seats and unsafe fuel tanks, and urged upgrade of FMVSS 207 and 301, including the need for rear-impact crash tests to evaluate seat and fuel tank performance.

**Volkswagen “Ejector Seat” Epidemic, and Pinto-Vega Fuel Tank Hazards**

Hearings on Amendments to Motor Vehicle Safety Act, U.S. House Subcommittee., April 1973. Pointed out epidemic of VW Beetle seat failures in rear impacts and need to upgrade FMVSS 207 to require rear-impact crash testing for seat evaluation, also presented Pinto-Vega-etc. fuel tank - fire case examples and the need to upgrade FMVSS 301 to require rear-impact crash testing.

**The Inca Energy-Absorbing Bumper System**

Hearings of Committee on Commerce, U.S. Senate, Washington, D.C., May 1971. Presentation of principles, designs, and low-speed crash tests of energy-absorbing bumper system based on Inca design using stacked Belleville spring-washers in pistons.

**Please also refer to the website at  
[www.AutoSafetyExpert.com](http://www.AutoSafetyExpert.com)  
for further background information  
and overview of vehicle safety defects.**

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