CASE NO. 10-1137
ORAL ARGUMENT IS REQUESTED

In The
United States Court of Appeals
For The Tenth Circuit

ERICA HOFFMAN; GARY HOFFMAN; SANDRA HOFFMAN,

Plaintiffs – Appellees,

v.

FORD MOTOR COMPANY, a Delaware corporation,

Defendant – Appellant.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
CASE NO. 1:07-CV-00081-REB-CBS
HONORABLE ROBERT E. BLACKBURN

BRIEF OF APPELLEES

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STATEMENT OF RELATED CASES

Other than the previously dismissed appeal by Ford mentioned in Ford's Brief on Appeal (Op.Brf at V), there are no prior or related appeals.

STATEMENT OF SUBJECT MATTER AND APPELLATE JURISDICTION

Plaintiffs adopt Ford's Statement of Jurisdiction. (Op.Brf at VI.)

STATEMENT OF THE ISSUES

1. The trial court did not abuse its discretion in admitting the trial testimony of Plaintiffs' expert, Dr. Craig Good ("Good"). Good's opinions were based on sound scientific principles and reliable testing methods accepted by the engineering community. The trial court followed well-established law under Fed.R.Evid. 702 and *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993), in finding Good's testimony to be relevant and reliable.

2. The opening brief fails to describe most of the significant evidence which supported the jury's verdict for Plaintiffs. Ford focuses on one component of Plaintiffs' evidence – Good's testimony. Even if the jury ignored Good's testimony, the verdict would have been for Plaintiffs. Other evidence established that Erica Hoffman was wearing her seat belt when the crash began. Ford's own internal safety standard required that its buckles must remain latched during a rollover. Because the buckle Erica Hoffman was wearing was defective, it unlatched during the rollover and she was ejected from the car. She became a quadriplegic at age 17.

STATEMENT OF THE CASE

On March 14, 2006, seventeen-year-old Erica Hoffman was a front seat passenger in a 1999 Mercury Cougar driven by her friend and classmate, Shannon Cvancara. They were on their way to school in Weld County, Colorado, and both were wearing their seatbelts. Shannon lost control of the vehicle on a gravel road, causing the vehicle to roll multiple times along a concrete culvert at initial speeds of 50 miles per hour. During the rollover, Erica's seatbelt buckle came unlatched, and she was thrown from the vehicle. She sustained a catastrophic neck injury which resulted in permanent quadriplegia. Shannon, whose seatbelt did not fail, remained inside the vehicle for the duration of the rollover and sustained only minor injuries.

Erica and her parents, Sandra and Gary Hoffman, sued Ford Motor Company,[1] the manufacturer of the 1999 Mercury Cougar, based on the defectively designed seatbelt that failed to withstand the foreseeable forces of the rollover and inertially unlatched, resulting in Erica's injuries. A jury trial was held in the U.S. District Court for the District of Colorado from April 6-20, 2009. On April 28, 2009, the jury found in favor of Plaintiffs and awarded them a total of $18,030,000 in damages. The jury assigned liability as follows: 40% to Shannon Cvancara, 10% to Erica Hoffman, 25% to TRW, and 25% to Ford, resulting in a net award of $4,500,000 to Erica and $7,500 to Erica's parents against Ford.

[1] Plaintiffs also sued TRW Vehicle Safety Systems, which settled before trial. Plaintiffs settled with Cvancara pre-suit.

Before, during, and after trial, Ford repeatedly objected to the opinions of Plaintiffs' automobile restraint design expert, Dr. Craig Good ("Good"). Ford claimed that because Good tested discrete components of the restraint system instead of conducting full-vehicle rollover tests, and because he could not testify to the precise amount of g force (the force acting on a buckle as a result of acceleration and gravity) exerted on the actual buckle at the moment it released during the crash, his testimony should be excluded in its entirety. Ford also claimed that Good failed to prove that the phenomenon of inertial unlatch, a situation where a seatbelt comes unbuckled due to forces generated during a car accident, actually exists in the "real world."

The trial court carefully considered these arguments in Ford's briefing on its F.R.E. 702 motion, its oral Fed.R.Civ.P. 50 motion at the close of Plaintiffs' evidence, at the close of all evidence, and again after Ford filed a post-trial motion for judgment as a matter of law. Each time, after a complete analysis of the facts and law, the court disagreed with Ford, finding Good's testimony to be scientifically reliable and admissible under the law of this circuit. Significantly, at trial, Plaintiffs presented ample evidence outside of Good's testimony that supported the jury's verdict in their favor. Judgment was entered against Ford on March 8, 2010.

STATEMENT OF FACTS

Ford's Statement of Facts would lead this Court to believe that Dr. Good's laboratory testing was the sole and defining element of Plaintiffs' case, and without it, Plaintiffs could not possibly have prevailed at trial. In reality, Good's testimony was but one piece of Plaintiffs' evidence that allowed the jury to find in their favor. Below is a more complete summary of the evidence that was presented to the jury and the events that took place in the District Court.

A. Plaintiffs' Expert Witnesses' Credentials

Plaintiffs brought four eminently qualified expert engineers to testify before the jury about their opinions that Erica Hoffman was wearing her seatbelt on the day of the accident and that the passenger seatbelt in the 1999 Mercury Cougar was defective. Plaintiffs also called another experienced accident reconstruction engineer as a percipient witness concerning his observations of the 1999 Mercury Cougar shortly after the accident. The qualifications of Plaintiffs' experts underpinned the reliability of their testimony upon which the jury relied in finding in Plaintiffs' favor. Ford did not challenge the qualifications or credentials of any of Plaintiffs' experts.

Good testified about his evaluation of the performance of the seatbelt restraint system in the subject vehicle. His opinion was derived from his specialized knowledge and experience about the biomechanical and mechanical

engineering requirements of seatbelt buckles, seatbelt buckle design, specification, failure, and inertial unlatch.

Good has a Ph.D. in mechanical engineering with a specialty in injury biomechanics from the University of Calgary, where he spent seven years developing his thesis, *Biomechanics of Occupant Motion Subject to Motorized Shoulder Belt Pretentioning*. (App. at 2334:18-22.) His research focused on the next generation of seatbelt restraints, which were designed to put an occupant in the best position to withstand forces of impact by using a motorized shoulder pretensioner that pulls the occupant back in the seat. (App. at 2335:24-25, 2336:1-6, 2336:9-20.) Particularly significant is Good's use of actual human passengers as opposed to crash dummies. (App. at 2336:21-23.) Using the research from these human studies, Good developed a multi-dynamic computer program that writes equations and detailed instructions and assists others in the engineering field concerning dynamic forces. (App. at 2339:17-25, 2340:1.)

Good also holds bachelor's and master's degrees in mechanical engineering from the University of Waterloo in Canada, where the focus of his two-year thesis was multi-body dynamics, or the study of mechanical systems and objects and how they move in response to forces. (App. at 2335:17-20, 2338:1-4.) While obtaining these degrees, Good was a teaching assistant for undergraduate courses and an instructor for a graduate level course in biomechanics. (App. at 2340:15-22.)

In addition to being an educator and researcher, Good has published 13 papers in peer reviewed journals, two of which – *The Evolution of Positive Locking Mechanism in End Release Buckles* and *Buckle Stalk Acceleration Amplification Observed in Automotive Seatbelts* – relate directly to the pertinent issue of seatbelt design in the present case. (App. at 2341:4-15.) The process for publication in his field is intense: in addition to researching, writing, and evaluating the results and explaining his conclusions, Good's proposed publications were distributed to several researchers in his field who reviewed and approved the articles before publication. (App. at 2346:2-18.) He has been selected to be a peer reviewer for journals including *Traffic Injury Prevention* and *Computer Methods in Biomechanics*, as well as the Society of Automotive Engineers and the Canyon Multi-Disciplinary Road Safety Conference. (App. at 2346:22-25, 2347:1-5.)

After obtaining his master's degree, Good accepted a position in computer-aided engineering at Breed Technologies in Michigan, a seatbelt restraint supplier who manufactured seatbelts, airbags, seatbelt retractors, and seatbelt systems for automakers, including Ford and General Motors. (App. at 2341:18-23.) His responsibilities included analyzing the dynamic function of seatbelts and seatbelt components, including the design and analysis of the D-ring carrier and adjustable turning loop of seatbelt buckles. (App. at 2343:11-15.)

Through his work at Breed Technologies, Good is named on two patents for seatbelt buckles, one of which is an anti-unlatch buckle. (App. at 2343:15-25, 2344:1.) He also has worked with Federal Motor Vehicle Safety Standards 208 and 209, which deal with occupant crash protection and requirements for seatbelt buckle and retractor hardware. (App. at 2344:14-25, 2345:1-4.) At the time he provided his testimony at trial, Good was employed at Collision Analysis, where his responsibilities included motor vehicle accident reconstruction, injury biomechanics, and product safety systems analysis. (App. at 2355:4-20; Supp. App. at 358, Exhibit 345.)

Dr. Mariusz Ziejewski ("Ziejewski") provided expert testimony in biomechanics. (App. at 2167:17-19.) He based his opinions on his knowledge, experience, and years of research in engineering, human physiology, human anatomy, and impact biomechanics. (App. at 2154:24-25, 2155:1, 2156:15-18.)

Ziejewski has a master's degree in bioengineering and bachelor's degrees in mechanical engineering and life sciences. (App. at 2152:22-25, 2153:1-5, 2154:13-16.) After serving in the Polish Army, Ziejewski was invited by the dean of the College of Engineering at North Dakota State University to be one of twelve Polish professors to complete an exchange program in the United States. (App. at 2153:17-23, 2154:10-12.) Ziejewski graduated from North Dakota State University with a Ph.D. in engineering. (App. at 2154:13-16.)

After obtaining his doctorate, Ziejewski became a professor in the Mechanical Engineering Department at North Dakota State University. (App. at 2152:3-4.) He is currently the director of both the Impact Biomechanics Laboratory and the Automotive Systems Laboratory. (App. at 2152:4-6.) As Director of the Impact Biomechanics Laboratory, Ziejewski teaches students the effects on the human body when dealing with forces in excess of what it can normally handle. (App. at 2156:15-17.) As Director of the Automotive Systems Laboratory, he teaches students different aspects related to automotive engineering and conducts research in the automotive field, such as how structures deform, absorb energy, and dynamically change shape. (App. at 2157:1-6.) At the time of his testimony, Ziejewski was teaching two courses: a graduate level course in impact biomechanics dealing with the effect of forces on the human body, and a senior level graduate course in vehicle dynamics dealing with automotive crashworthiness. (App. at 2158:1-12.)

Ziejewski is also an adjunct associate professor in the Department of Medicine in the Neuroscience Department at the University of North Dakota. (App. at 2152:7-9.) He teaches medical students impact biomechanics as it relates to the trauma of excess forces on the human body. Aside from teaching, the majority of his time is spent conducting research. (App. at 2158:13-24.)

Ziejewski has been involved with projects for the United States Air Force and the Department of Defense. (App. at 2159:20-23.) For the Department of Defense, Ziejewski is developing a diagnostic tool for discovering traumatic brain injuries by studying soldiers returning from Iraq and Afghanistan with previously-undiagnosed brain injuries. (App. at 2159:24-25; 2160:1-10.) For the U.S. Air Force, Ziejewski was selected to participate in a 14-year program at the Armstrong Aerospace Research Medical Laboratory studying how small females respond to sudden acceleration and vertical forces during airplane ejections. (App. at 2160:14-25, 2161:8-14.)

Ziejewski is a member of numerous organizations, including the Society of Automotive Engineers, the International Brain Injury Society, the North American Brain Injury Association and the American Society for Testing and Materials. (App. at 2163:10-22; Supp.App. 343, Exhibit 344.)

David Bilek is a forensic engineer licensed in mechanical engineering. (App. at 1719:6-8.) He holds a Bachelor of Science in mechanical engineering technology from Metro State College of Denver. (App. at 1720:2-5.) This degree differs from a standard mechanical engineering degree in that it emphasizes practical application and requires increased laboratory work and thorough testing. (App. at 1720:20-25.)

Bilek is currently the president of Mechanical Systems Analysis, Inc., where he has worked for the past 26 years. (App. at 1720:6-8, 1721:4-5.) Most his work involves people injured in vehicle accidents. (App. at 1725:16-17.) Bilek has testified in 40-50 trials, where he was qualified as an expert in accident reconstruction and occupant kinematics. (App. at 1723:10-16, 1724:21-22.) Bilek has investigated over 1,000 accidents, half of which involved rollovers. (App. at 1720:9-13.) His responsibilities when investigating an accident include failure analysis and analyzing the mechanics of a rollover. (App. at 1720:14-17, 1722:24-1723:5.)

In addition to his educational and professional experience, Bilek is a member of the American Society of Mechanical Engineers, the Society of Automobile Engineers, and the National Association of Professional Accident Reconstructionists. (App. at 1728:3-7.) He is published in SORS, an accident reconstruction group. (App. at 1728:12-14.)

Olof Jacobson holds a bachelor's degree in mechanical engineering from the University of Colorado and a master's degree in applied mechanics from the Colorado School of Mines. (App. at 2012:8-14.) Jacobson has been performing automobile accident evaluations for over 18 years, and applied his 23 years of experience in engineering analysis to the development of his own business, Jacobson Forensic Engineering. (App. at 2012:17-23, 2014:1-4.)

Scott Stoeffler holds a bachelor's degree in chemistry from the University of Michigan and a master's degree in forensic science from the University of Boston. (App. at 2623:25, 2624:1-2.) He spent 11 years working for the Michigan State Police crime laboratory as a trace evidence examiner, where his responsibilities included analysis of fibers, paint, glass, and plastic. (App. at 2624:2-4, 2625:24-25, 2626:5-9.) For the past 12 years, Stoeffler has worked for McCrone Associates as both a microscopist and an educator. (App. at 2623:15-17, 2624:4-5, 2625:7-10.) As a microscopist, Stoeffler analyzes small samples of trace evidence – most commonly paint samples like the one in the present case – as they relate to product failure, product contamination, small-particle identification, and materials analysis. (App. at 2623:17-18, 2624:4-13, 2625:18-21.) Stoeffler also teaches forensic scientists and other scientists in the industry various techniques to analyze small particle trace evidence. (App. at 2625:6-15.)

In addition to his professional and educational experience, Stoeffler is a member of the Midwestern Association of Forensic Scientists, the American Board of Criminalistics, the Midwest Microscopy and Microanalysis Society, and a scientific working group for materials analysis, which is a national group of trace evidence examiners. (App. at 2624:16-23.) He has been published and given presentations in the area of pigment analysis. (*Id*.)

B. Plaintiffs' Evidence that Erica Was Belted at the Start of the Rollover

Plaintiffs presented eight lay witnesses who stated that Erica Hoffman always wore her seatbelt and was belted at the time of the accident:

- Erica Hoffman testified that there was no doubt in her mind that she was wearing her seatbelt on the day of the accident. (App. at 1955:16-25, 1956:1.) She testified that she was in the habit of always wearing her seatbelt. (App. at 1954:23-25.) Erica stated that her parents were adamant about enforcing a household rule that everyone wear a seatbelt whenever they were in a car. (App. at 1955:10-15.)
- Erica's father, Gary Hoffman, also testified that Erica always wore her seatbelt, and that he was adamant about the family rule that everyone wear a seatbelt at all times while riding in any vehicle. (App. at 1990:1-7.)
- Shannon Cvancara, driver of the 1999 Mercury Cougar, testified that she enforced a rule that all passengers in her car must wear seatbelts, and that Erica always wore her seatbelt. (App. at 2267:11-17.) Shannon also testified that Erica was wearing her seatbelt at the time of the accident. (App. at 2267:7-9.)
- Shannon's mother, Susan Cvancara, testified that it was her policy to require all passengers in Shannon's car to wear seatbelts. (App. at 2314:21-23.)
- Pastor Richard Groh testified that when he visited Erica in the hospital shortly after the accident, he saw bruising and red marks from Erica's right shoulder across her torso and a strap mark across her waist that he described as "unmistakably" the markings of a seatbelt. He stated that he saw what appeared to

be a red buckle mark on Erica's right arm. (Supp.App. at 1; Pastor Groh video deposition at 13:22-15:3.) Pastor Groh also testified that whenever he was in the car with Erica, she would wear her seatbelt and remind him to wear his. (Supp.App. at 1; Groh video deposition at 20:20-25.)

- Sandra Hoffman, Erica's mother, testified that Erica's habit was to always wear her seatbelt, and that the family enforced a rule that Erica wear her seatbelt when riding in a vehicle. (App. at 2679:16-19.) Mrs. Hoffman also testified that while she was helping bathe Erica in the hospital a few days after the accident, she observed a square red mark on Erica's arm similar to the one described by Pastor Groh. (App. at 2688:8-13, 2688:19-21, 2689:7-13.)
- Ashley Patterson, Erica's friend, testified that Erica always wore her seatbelt in her presence, that Erica's family adamantly enforced their seatbelt rule, and that Erica remembered wearing her seatbelt on the day of the accident. (App. at 2757:11-20.)
- Assistant Pastor Brian Stork testified that when he and his wife visited Erica in the hospital a few days after the accident, his wife saw red marks across Erica's right shoulder. (App. at 2771:16-22.)

Plaintiffs also presented expert witness testimony that showed, based on scientific evaluation of the evidence at the crash scene and the damaged vehicle, that Erica was belted at the start of the rollover:

- David Bilek, Plaintiffs' accident reconstructionist, testified that numerous pieces of evidence found on the damaged vehicle indicated that Erica's right arm became entangled in her seatbelt as she was thrown out the window, and that entanglement was not possible had Erica been unbelted. Bilek testified that smudges of red paint on the webbing of Erica's seatbelt lined up with marks on the outside of the front passenger door where red paint was rubbed off, suggesting that Erica was entangled in the belt when she was thrown from the vehicle, causing the webbing to rub between her body and the outside of the door. (App. at 1787:9-25, 1789:19-25, 1797:5-24.) He testified that there was no exposed red paint on the inside of the vehicle. (App. at 1807:13-17.) He ruled out the possibility that the paint on the belt resulted from accidental overspray at the time the vehicle was painted during manufacture. (App. at 1793:20-25, 1873:8-15.) Bilek discussed diagonal marks on the seatbelt webbing that lined up with marks on the vehicle's interior vinyl trim near the right windowsill, showing the path of the belt as it was pulled outside entangled with Erica. (App. at 1806:13-1807:12.) He testified that a seatbelt stop button attached to the belt webbing, which was designed to prevent the buckle latch from sliding to the floor when the belt was stowed, had been ripped off. (App. at 1791:20-1792:9.) This evidence strongly established Erica was wearing her seatbelt because the only force that could have caused this was from someone initially wearing a seatbelt. Bilek stated that, because the stowed position of the passenger seatbelt was behind Erica's seat, her arm could not have

become entangled in the belt had she been unbelted at the start of the crash. (App. at 1805:7-16.) He also testified that had Erica been unbelted, she would have been ejected from the vehicle much earlier in the roll sequence, and her body would have been found further east of the vehicle than where it was actually found. (App. at 1871:6-13.) Bilek further testified that there was no evidence of Erica's body hitting the interior of the vehicle (App. at 1804:19-24), as would be expected had she been unbelted during the rollover and careening around the inside of the vehicle. Ford did not object to any of this testimony. (Supp.App. at 15-16 Exhibits 7G; 7G1; 7H; Supp.App. at 17-39 Exhibits 9; 9-010; 9-022; 9-023; 9-025; 9-034; 9-044; 9-045; 9-051; Supp.App. at Exhibits 9A; 9B; 9F; 9H; 9I; 9K; 9M; 9N; Supp.App. at 40, Exhibits 11; 11-B; Supp.App. at 42, Exhibits 104G; 104G2; 104I; 104P; Supp. at 331, Exhibit 235-1.)

- Olof Jacobson, a forensic engineer, testified as a percipient witness. He was the first forensic engineer to examine the vehicle after the crash. (App. at 2016:4-6.) Jacobson testified about the red paint smudges on the belt webbing and the matching spots of abraded red paint on the outside of the door. (App. at 2023:7-9, 2025:20-24.) He testified about puckering and striations on the belt webbing (App. at 2026:24-2027:15), indicating crash loading. He testified about the lack of any hair, blood, or tissue on the interior of the vehicle. (App. at 2048:22-2049:2.) Ford did not object to any of Jacobson's testimony.

- Ziejewski, Plaintiffs' biomechanics expert, also testified about the abundant evidence that led him to conclude that Erica was belted at the start of the rollover. He discussed the red paint smudges on Erica's seatbelt and how they lined up with the spots of missing red paint on the door. (App. at 2183:15-17, 2184:4-6.) He testified that the broken seatbelt stop button, which held the buckle latch plate in place when the belt was stowed, was consistent with Erica being entangled on her way out the window. (App. at 2184:8-20.) He testified that, had Erica been unbelted from the start of the rollover consistent with Ford's theory, there would have been evidence of her body slamming around the inside the vehicle, such as hair, blood, or tissue; there was no such evidence. (App. at 2186:23-24, 2192:19-22, 2232:2-11, 2251:1-12.) He explained in detail his examination of the passenger-side interior roof liner, looking for a spherical-shaped indentation that would indicate that Erica's head had hit the roof with significant force; he found no evidence of this either. (App. at 2193:20-2195:10.) He testified that the damage to the latch plate of Erica's belt indicated that the belt had been loaded with the weight of Erica's body during the rollover. (App. at 2216:19-2217:8.) He testified that bruising can take a while to appear, so the fact that the initial medical responders did not observe "seatbelt marks" on Erica was not indicative of Erica failing to wear her seatbelt. (App. at 2226:21-25.) Ziejewski stated that the combination of each of these pieces of evidence led him to his conclusion that

Erica was belted at the start of the rollover. (App. at 2213:4-18, 2224:4-6.) Ford did not object to this testimony by Ziejewski.

- Good, Plaintiffs' expert in restraint design and performance, systematically evaluated all of the evidence to test his hypothesis that Erica was belted. He testified that white "loading marks" on the latch plate of Erica's belt, when compared to similar but more extensive loading marks on the driver's side latch plate, indicated that Erica's belt was loaded for only part of the rollover until the buckle unlatched and she was thrown from the vehicle. (App. at 2366:7-2370:4, 2371:25-2373:1; Supp.App. at 332-337, Exhibits 235-116; 235-119; 235-123; 235-124; 235-046; 235-051.) He also noted that the seatbelt stop button that held the buckle latch in place on the belt webbing had been torn off. (App. at 2373:22-2374:9; Supp.App. at 338, Exhibits 235-110; 235-087.) Good testified that the fact that the red paint smudges on the belt matched the paint on the outside of the door signified that Erica dragged the belt out the window while partially entangled in it. (App. at 2399:12-18, 2401:1-23, 2405:13-25, 2406:23-2407:9.) He stated that there was no red paint on the interior of the car, and that the paint spots on the belt could not have been caused by accidental overspray when the vehicle was painted. (*Id.*) He testified that the paint on the belt was a significant finding, basing this opinion on a peer-reviewed scientific article co-authored by Ford's biomechanical expert, Elizabeth Raphael. (App. at 2407:2-9, 2407:13-2408:4.) Good noted that there was no tissue or blood inside the vehicle. (App. at 2358:21-23.) He testified

that the position of the passenger seatbelt when not in use was behind the passenger's right shoulder. (App. at 2382:2-8, Supp.App at 331, Exhibit 235-1.) He explicitly stated that there was physical evidence that Erica was wearing her seatbelt during the rollover (App. at 2505:11-15), and opined that, based on his scientific evaluation of the evidence of the crash, Erica was belted at the time of the rollover. (App. at 2362:4-17, 2362:18-2369:22.) Ford did not object to this testimony. (Supp.App. at 327-330, Exhibits 234-091; 234-093; 234-094; 234-099.)

- Scott Stoeffler, Plaintiffs' paint analyst, testified that the layers of the paint and primer on the belt webbing matched the paint on the door of the vehicle. (App. at 2631:18-22, 2652:14-21.) Ford did object to this testimony, but was overruled.

Ford attempted to rebut Plaintiffs' extensive evidence that Erica was buckled by adducing testimony from medical personnel who attended Erica the day of the accident but did not record any chest bruising. Plaintiffs refuted this evidence during cross-examination, repeatedly showing that these witnesses' failure to note bruising in their reports did not mean bruising was not there:

- William Onken, a paramedic who responded to the accident, acknowledged that, although he did not observe bruises on Erica at the scene of the crash, bruising can take time to emerge. (App. at 2793:4-14, 2793:15-2794:10, 2800:2-5.) He also admitted that, although Erica suffered a spleen injury in the accident, he failed

to detect any bruising near her spleen during his medical inspection. (App. at 2795:7-25, 2796:1-7.)

- Chip Brownlee, a paramedic who attended Erica at the accident scene, admitted that he spent less than 10 minutes with her. (App. at 2821:10-2822:4.) He also admitted that he failed to observe any evidence of bruising on Erica's pelvis, though it was later revealed that she had fractured her pelvic region. (App. at 2818:9-2819:1.)
- Dr. Charles Cole, the emergency room physician who treated Erica on the day of the accident, testified that he did not note bruises anywhere on Erica because he was more concerned with her major spinal cord injury. (App. at 2915:14-23.) He stated that his goal was to stabilize the trauma patient and get her to a CT scan as quickly as possible, so he did not do a head-to-toe evaluation with a fine-tooth comb. (App. at 2917:6-15.) He also testified that he had not seen seatbelt injuries very often in his career. (App. at 2917:2-5.)
- Dr. Joseph Tyburczy, the trauma surgeon who treated Erica after the accident, testified that, unless he observed a seatbelt mark that was indicative of a more serious injury, he would not have noted it in his report. (App. at 2925:7-16, 2936:21-2937:5.) He stated that though he examined Erica daily during the course of her hospital stay, he did not do a head-to-toe examination looking for minor injuries and small bruises because he was more concerned with her major injuries. (App. at 2929:8-17.)

- Jamie Miskol, a flight nurse who treated Erica at the accident scene, testified that looking for seatbelt marks is not high on her priority list during her evaluation of a trauma patient. (App. at 3257:15-20, 3271:18-22.) She said that when there is a significant injury such as a neck fracture, she would not continue to inspect the patient for seatbelt marks. (App. at 3258:7-20.) She stated that the purpose of her evaluation is to identify and provide lifesaving care, not to "check every little scratch and abrasion." (App. at 3268:23-3269:22.) She also stated that bruising can take time to appear, depending on the patient. (App. at 3269:23-3270:8.)

C. Plaintiffs' Evidence that Ford Violated its Own Internal Safety Standard

Plaintiffs introduced evidence that, at the time the subject 1999 Mercury Cougar was manufactured, Ford had in place the following Worldwide Design Requirement requiring its buckles to resist inertial unlatch:

> The buckle shall be easily releasable even with the belt being under tension.[2] Self-release shall not occur either with the belt slack or under the influence of inertia. The buckle, when slack or under tension, shall remain closed whatever the position of the vehicle.

(App. at 335, Supp.App. at 198, Exhibit 169.) Ford had similar safety requirements in place for over two decades before the 1999 Mercury Cougar was built. (Supp.App. at 46-219, Exhibits 130, 165, 166, 172, 173, 175, 176.) Plaintiffs argued that this safety standard showed that Ford knew about the

[2] The first sentence of this safety standard enables post-accident release of victims by emergency responders.

potential for seatbelt buckles to inertially unlatch, and undermined Ford's argument that inertial unlatch is not a "real world" phenomenon.

Plaintiffs presented testimony from their experts and Ford and TRW corporate representatives that Ford did not tell TRW about this requirement, and that the subject buckle did not meet the standard:

- Ford's corporate representative, William Ballard, admitted that Ford's Worldwide Design Requirement for a buckle to remain latched applied to rollover accidents. (Supp.App. at 8, William Ballard video deposition at 25:2-18.) He also stated that the requirement was applicable to situations when a buckle is under no tension from the belt webbing. (*Id.* at 66:1-22, 71:1-17.) Ballard admitted that this requirement was not provided to TRW, the manufacturer of the buckle in the 1999 Mercury Cougar. (*Id*. at 19, 102:8-103:6, 103:21-104:8, 105:3-5, 105:9-106:12.)
- TRW's corporate representative, Jeffrey Jenkins, similarly testified that Ford's Worldwide Design Requirement was not provided to TRW, and that no one at TRW had ever seen it before this litigation. (Supp.App. at 6, Jeffrey Jenkins video deposition at 19:12-20:17.)
- Craig Good testified that, based on the testing he conducted showing the susceptibility of the 1999 Mercury Cougar buckle to come unlatched when subjected to the foreseeable forces of a rollover, the subject buckle did not meet

Ford's Worldwide Design Requirement or FMVSS 209. (App. at 2476:18-2477:21; 2567:3-13.)

- Ford's seatbelt expert, Michael Klima, admitted that an auto manufacturer's violation of its own internal safety standard is "something that would need to be investigated." (App. at 3454:15-3455:9.) He explicitly acknowledged that if Erica Hoffman was belted at the start of the rollover and the buckle unlatched during the rollover, then that buckle would not comply with Ford's Worldwide Design Requirement. (App. at 3456:16-20.)

D. Plaintiffs' Evidence that Erica's Seatbelt Inertially Unlatched

Independent from the evidence that Erica was belted when the accident began, and that she ultimately became unbelted and was thrown from the vehicle during the accident, Plaintiffs introduced expert testimony showing how Erica's belt inertially unlatched:

David Bilek presented a detailed accident reconstruction based on the structural damage to the Mercury Cougar and evidence from the accident scene. (App. at 1733:18-1735:4, 1775:10-1777:3.) He explained how the vehicle rolled four and a half times, making hard contacts with the ground and slamming onto a concrete-lined ditch several times before it came to a rest. (*Id.*) The right rear wheel was nearly torn off (App. at 1764:10-25), the right rear suspension was bent and broken (App. at 1771:5-20), both front suspensions were broken, and the CV

joint had come off the transmission underneath the vehicle (App. at 1766:1-7). The left front wheel sustained significant damage resulting from "hard contact." (App. at 1769:12-22.) This damage showed that the vehicle impacted on its wheels during the rollover hard enough to break the suspension and wheels. (App. at 1767:5-10.) He also described how the vehicle slammed into the concrete culvert hard enough to break pieces off the concrete. (App. at 1741:19-1743:14, 1744:9-23, 1774:4-6, 1776:22-1777:3.) (Supp.App. at 32-39, Exhibits 9Z; 9DD; 9FF; 9II; 9JJ; 9DDD; 9FFF; 9GGG; 9III.)

Bilek testified that the primary forces during a rollover are generated by the ground impacts, as opposed to centrifugal forces. (App. at 1783:3-6, 1785:25-1786:3.) He testified that a human body inside a vehicle moves down towards the direction of the force as the vehicle slams into the ground. (App. at 1785:9-17.) He also testified that it is not possible to quantify or accurately estimate the exact g forces on the buckle during the actual rollover. (App. at 1780:18-25, 1852:21-1853:3.)

Ziejewski testified that when a vehicle hits the ground on its undercarriage, the passengers are forced down into their seats, unloading their seatbelts and causing the belts to become slack. (App. at 2217:15-21.) He described the impact of the wheel rim and axle into the ground as having "large accelerations and large forces." (App. at 2217:22-25.) Significantly, he testified that the forces of the

vehicle slamming into the ground on its wheels could reach "a couple hundred g's easily." (App. at 2251:22-24.) He opined, based on his biomechanical expertise, that Erica's seatbelt was defective because it inertially unlatched due to these forces. (App. at 2218:22-2219:4.)

Ziejewski also testified that it is "extremely difficult if not impossible" to duplicate the exact forces of a specific rollover accident in a test environment. (App. at 2218:2-21.) He likened a rollover accident to bouncing a football – like a car, a football bounces and spins unpredictably because the ball is angled, not round like a soccer ball, so it is impossible to predict how it will rotate after each impact with the ground. (*Id.*)

Good explained to the jury the concept of inertial unlatch of a seatbelt buckle, describing how crash forces acting upon a vehicle can activate the release mechanism of the buckle, causing it to unlatch. (App. at 2411:6-2413:18.) When the tires strike the ground during a rollover, strong forces are transmitted through the buckle stalk into the buckle itself. **(**App. at 2412:25-2413:18, 2511:2-10.) During a rollover, when the vehicle slams onto its wheels and the passengers are forced down into their seats, unloading their seatbelts, the belt webbing is slack and under low or no tension. (App. at 2424:10-2425:17.) That is when the buckle is most susceptible to unlatching. (*Id.*)

Good testified that a rollover is a random, non-repeatable event, and therefore laboratory testing cannot replicate the exact conditions of a real-world rollover. (App. at 2373:10-16, 2478:5-17.) The precise g forces experienced during the crash necessarily remain unknown; no accelerometer devices were present in the Mercury Cougar. (App. at 2485:25-2486:4.) Good also testified that very few instrumented full-vehicle rollover tests have been conducted. (App. at 2474:23-2475:1, 2572:6-9.)

Good described the internal components of the subject buckle, and stated that the latch locking component measured about two millimeters, or 60/1000ths of an inch, between the locked and unlocked position. (App. at 2429:21-25, 2430:24-2432:21.) He showed the jury how small that measurement is with a set of calipers. (App. at 2432:22-2434:3.) He explained that subject buckle is an end-release type, disengaging in normal use by pressing the button downward. (App. at 2565:17-20.) He explained that the significant forces during a rollover could easily vibrate the components inside the buckle lock, causing it to travel the short distance into the unlocked position, resulting in inertial unlatch. (App. at 2432:11-16.)

Good explained in detail his test methodology. He conducted bench tests (also known as component tests) of buckles, rather than testing an entire vehicle or a buckle mounted inside a vehicle. (App. at 2438:3-14.) He tested 18 new and

salvaged buckles of the type installed in the subject 1999 Mercury Cougar. (App. at 2443:11-18, 2496:8-20.) He removed the stalks from the test buckles in order to minimize variables and isolate the effects of the g forces on the buckle itself. (App. at 2515:25-2516:2, 2517:10-16, 2600:4-11.) He removed the stalk because it can amplify the forces on the buckle by a factor of 1.36 to 2.37, a phenomenon explained in a scientific paper he and colleagues published in a peer-reviewed journal. (App. at 2513:14-16, 2516:24-2517:2, 2518:6-8, 2599:1-9.)

Good also tested the buckles without the belt webbing, as if the belt was slack, because this was the worst-case scenario during the rollover when the buckle was most susceptible to inertial unlatch. (App. at 2443:24-2444:6.) He explained that engineers test for a worst-case scenario because doing so allows them to calculate a margin of safety for product design. (App. at 2579:15-24.)

Good attached the test buckles to a pneumatic shock machine and applied forces similar to the forces that would be experienced in a rollover. (App. at 2439:17-2442:19; Supp.App. 340, Exhibits 238-005; 238-032; 238-035.) He began each test by applying a certain g force level, then to increase or decrease the level of gs to determine the lowest threshold of inertial unlatch for each buckle. (App. 2447:1-2448:17.) He tested the buckles at various angles, from 0 to 45 degrees, to account for the possible impact locations during a rollover. (App. at

2446:1-5, 2577:22-2578:21.) This included vertical positioning of the buckle to simulate the vehicle slamming down onto its wheels. (App. 2445:15-24.)

Good found that the new buckles inertially unlatched between 133 and 435 gs when positioned vertically, and that the salvage buckles inertially unlatched at a range of between 152 and 515 gs when positioned vertically. (App. at 2446:6-11, 2472:19-22, 2501:25-2502:12.) When he tested the buckle that had released at 133 gs in the vertical direction and tilted it 45 degrees, the release threshold dropped to 124 gs. (App. at 2449:6-12, 2473:22-2474:3.) When he tested a buckle that had not released at 473 gs in the vertical direction and tilted it 45 degrees, it released at just 149 gs. (*Id.*) Good explained that manufacturing variability between the buckles can cause this range of test results because no two buckles are identical. (App. at 2497:16-21.) In total, the buckles released in 87 out of 200 individual tests. (App. at 2446:21-23; Supp.App. at 221-326, Exhibits 223,224.)

Good testified, without objection, that Ziejewski's estimate of the g force range experienced in the Mercury Cougar during the rollover of 100 to 200 gs was reasonable. (App. at 2475:2-6.) There were several potential points during the rollover sequence when the Mercury Cougar impacted the ground that could have created sufficient forces to cause inertial unlatch. (App. at 2511:17-20, 2512:4-7.) The damage to the wheels and undercarriage of the Mercury Cougar indicated strong impacts with the ground on the wheels. (App. at 2577:5-18.) Based on the

release thresholds of the buckles he tested, the subject buckle was defective because it would not have been able to withstand these reasonably foreseeable g forces experienced during the rollover, and would have inertially unlatched. (App. at 2475:7-14, 2476:8-17.) He stated that the subject buckle would not have met Ford's Worldwide Design Requirement to stay latched when subjected to forces of inertia whatever the position of the vehicle and when the belt was slack. (App. at 2477:19-21.) Though Ford's lawyers pressed him to opine on the exact moment and angle at which Erica's buckle unlatched during the actual rollover, Good insisted that this would not be possible to a reasonable degree of engineering probability due to the random nature of rollover events. (App. at 2506:5-21, 2601:16-25.)

Good also testified about testing of a buckle from a 1994 Ford Mondeo, an alternative buckle design used in Europe a few years before the 1999 Mercury Cougar was manufactured. (App. at 2461:3-19.) The Mondeo buckle was tested to 1066 gs and did not inertially release. (App. at 2461:7-9.) This was because the Mondeo buckle was designed with a counterweight mechanism specifically designed to resist inertial unlatch. (App. 2461:20-2462:19) Ford chose to not use this mechanism for its American vehicles.

Good also discussed patents for buckles designed to prevent inertial unlatch. He described the technology of belt pretensioners and how anti-unlatch buckles are

used with pretensioner belts due to the strong forces of the webbing pulling up on the buckle when the pretensioner fires during an accident. (App. at 2468:17-2469:11.) He stated that he found approximately 80 seatbelt patents from before the subject Mercury Cougar was manufactured dealing with inertial unlatch, the earliest dating back to 1959. (App. at 2464:3-17.) These 80 patents included several held by TRW. (App. at 2464:18-2465:6, 2467:7-2468:1.) Good stated that a pretensioner-type anti-unlatch buckle could have been used in the subject 1999 Mercury Cougar. (App. at 2470:5-12.)

Ford's expert witnesses and corporate representatives also provided testimony to bolster Plaintiffs' evidence that Erica's seatbelt inertially unlatched:

Ford's engineering expert Klima testified that full vehicle rollover testing is uncommon as compared to other types of vehicle testing. (App. at 3284:15-3285:10, 3294:15-3295:13, 3332:15-3333:13.) He described a rollover event as "random and chaotic," "not predictable," and "not a repeatable science." (App. at 3414:15-3415:12.) He acknowledged that inertial release can occur in a crash environment (App. at 3312:18-3313:13), and that seatbelt designers test for this phenomenon (App. at 3333:14-3334:13). He discussed his experience with inspections of real world crashes in which buckles did release and occupants were ejected from their vehicles. (App. at 3456:16-3457:13.)

Klima admitted that component testing, like that used by Good, is used in the engineering community to isolate the forces on a test buckle to determine the inertial unlatch threshold because "it gets more complicated when you put it on attachment and put it in vehicle position." (App. at 3296:15-3297:13, 3301:24-3302:12, 3307:14-3308:4, 3414:15-3415:12.) He discussed how component testing allows for some variance in test results. (App. at 3330:17-3331:13.) He described testing upon which he relied, similar to Good's, in which the buckle was subjected to different accelerations to determine when it would inertially release. (App. at 3306:16-3307:13.) During a slam-down on the wheels, the forces act downward on the buckle's press button. (App. at 3321:15-19.) He admitted that during a rollover, there can be moments of little or no tension on the belt webbing. (App. at 3433:15-3434:12.) He admitted that as a vehicle is tumbling during a rollover event, "[i]t can land in any number of orientations." (App. 3436:1-3.) He repeatedly testified that he has conducted testing that contemplates a worst-case scenario. (App. at 3348:18-3349:13, 3355:15-3356:12, 3361:14-24.)

Though Ford's lawyers criticized Good for allegedly failing to connect his testing to real world circumstances, Klima made no attempt to connect his data from one of the tests upon which he relied – during which a vehicle was dropped from a standstill three feet in the air onto a concrete pipe – to a real world rollover accident. (App. at 3355:15-3356:12.) In fact, he acknowledged that the drop test

was not similar to an object rolling along a ditch at more than 40 miles per hour, such as the subject Mercury Cougar. (App. at 3428:19-3429:10.) Even so, this test revealed vertical forces as high as 151 gs. (App. at 3356:14-21.) Klima admitted that an instrumented rollover test he presented to the jury actually showed forces of over 200 gs measured on the buckle head. (App. at 3438:20-3439:11.) **Therefore, Ford's own expert established that the g forces generated in a crash were sufficient to cause the inertial unlatch of Erica's seatbelt.** No other instrumented rollover test was presented at trial by either party.

E. The Trial Court Conducted a Thorough Analysis of the Facts and Law in Admitting Dr. Good's Testimony, Consistent with Established Precedent

Ford first challenged Good's testing and opinions in its Joint *Daubert* Motion to Exclude Opinions and Testimony of Craig Good. (App. at 66, Dkt. #159.) Ford argued that Good's opinions were unreliable and irrelevant because he: 1) removed the belts before testing the buckles; 2) removed the stalks before testing the buckles; 3) did not test the buckles at the exact angle at which the subject buckle was mounted inside the 1999 Mercury Cougar; and 4) did not compare his test data with data from the actual rollover on March 14, 2006 or from other rollover tests. (*Id.* at 10-13.)

The trial court denied Ford's motion in its Order Denying 702 Motions. (App. at 402, Dkt. #240.) The court stated, in two pages of its ten-page order, the

standard of review to which it adhered in considering Ford's *Daubert* motion. (*Id*. at 1-3.) The court discussed Rule 702 and numerous cases decided by the U.S. Supreme Court and the 10th Circuit describing the pertinent factors. (*Id*.) Notably, the court stated that for an expert opinion to be reliable, it must be based on scientifically sound methodology. (*Id*. at 2-3.) The court indicated that it was guided by these principles in exercising its broad discretion to allow Good's testimony at trial. (*Id*. at 3.)

The court then made detailed findings about why Good's testimony was both relevant and scientifically reliable. (*Id*. at 6-9.) The court described Good's credentials and testing methods. (*Id.* at 6-7.) It responded to Ford's four specific complaints about Good's testimony by noting that the law does not require that an expert's testing be identical to the subject accident in order to be relevant and admissible. (*Id.* at 7-8.) Good's testing methods were substantially similar to the subject accident such that his opinions were not based on "rank speculation or subjective belief." (*Id.* at 9.) Ford's arguments went to the weight, not the admissibility, of Good's opinions. Thus, Ford's motion was denied. (*Id*. at 9-10.)

The trial court next considered Ford's arguments against Good's testimony when Ford moved, under F.R.C.P. 50, for judgment as a matter of law at the conclusion of Plaintiffs' case at trial. (App. at 2718:15-2723:20.) After hearing arguments, the court issued a detailed ruling denying Ford's motion. (App. at

2729:12-2734:24.) The court analyzed each element of Plaintiffs' claims and properly applied the governing legal authority. (App. at 2729:15-2734:4.) It concluded that none of Plaintiffs' evidence was incredible as a matter of law, genuine issues of material fact existed as to the elements of Plaintiffs' claims, and there was a legally-sufficient evidentiary basis for a reasonable jury to find for Plaintiffs. (App. at 2734:5-19.)

The trial court again considered Ford's complaints about Good's testimony in Ford's post-trial motion for judgment as a matter of law or for new trial. (App. at 3480:1-3481:20; (App. at 416, Dkt. #296.) As in its previous rulings, the court applied the proper legal analysis. (App. at 1470, Dkt. #310.) The court again found that none of Plaintiffs' evidence was incredible as a matter of law, and that there was a legally-sufficient basis for the jury to find for Plaintiffs. (*Id*. at 2-3.) The court noted that Ford's argument for a new trial was essentially a motion for reconsideration of its pre-trial *Daubert* motion to exclude Good's testimony; the court again rejected the same arguments from Ford. (*Id*. at 3.)

SUMMARY OF THE ARGUMENT

Ford's lawyers attempt to couch this appeal as a *Daubert* challenge to Good's methodology, but his *methodology* was never challenged. Ford's own experts supported the component testing methods that Good used. None of Ford's witnesses contended that Good's methods were flawed or contrary to accepted engineering techniques. Ford simply dislikes Good's results showing that Erica's buckle had the potential to unlatch. *Daubert* does not provide a legal challenge to scientifically-conducted test results merely because the results disfavor one party.

Ford inaccurately recounts the expert testimony, and extracts out-of-context "sound bites" from the record, to create a misleadingly incomplete description of the evidence. For example, Ford derides the instrumented rollover test showing 207 gs of force presented by its own engineering expert Klima by arguing that since that force occurred in a different direction from the forces pushing Erica Hoffman down into her seat, that test cannot buttress Plaintiffs' case. However, the jury realized that due to the unpredictable nature of a 360-degree rollover, force could be exerted in any direction, and Klima's own test proved that forces high enough to cause inertial unlatch can and do occur in actual rollovers. Ford does not want this Court to look at the "big picture" that the jury saw – that forces high enough to cause the subject buckle to unlatch could and did occur during the March 14, 2006 rollover. (Supp.App. at 368, Exhibit 617 pages 479-81.)

The trial court properly adhered to the law in allowing Good's testimony, applied the proper legal standard, carefully considered the evidence,, and did not shift the burden to Ford. The court thrice considered Ford's arguments, and always applied the law to the facts in a detailed manner.

"Scientific method" is defined as: 1) the recognition and formulation of a problem; 2) the collection of data through observation and experiment; 3) and the formulation and testing of hypotheses. Merriam-Webster 1026 (15th ed. 1981) Good adhered to these principles as he conducted his testing and scientific observations. He was presented with the problem of determining how Erica Hoffman was ejected from the vehicle during the rollover accident, collected data from photographs, measurements, and accident reconstructions, and tested buckles from the 1999 Mercury Cougar to evaluate the hypothesis that Erica's seatbelt inertially unlatched.

Ford wants to isolate Good's testimony and ignore all other expert and lay witness testimony that provides the complete picture of Plaintiffs' case. Good's testimony was not the only evidence about inertial unlatch. All of Plaintiffs' experts, and some of Ford's witnesses, contributed important pieces of evidence to support the jury's finding that Erica's buckle inertially unlatched. Thus, Ford could not have been prejudiced by any alleged error in the admission of Good's testimony.

Ford seemingly argues that because Plaintiffs' witnesses did not testify in Ford's favor, the entirety of their testimony is incredible as a matter of law. A trial is not a college lecture where each piece of evidence is presented in a sequential, organized manner. Jurors piece the evidence together. They can draw evidentiary inferences. By viewing all the evidence, as Plaintiffs have presented here, this Court can see how any reasonable jury could find in favor of Plaintiffs.

ARGUMENT

A. Standard of Review

Ford asks this Court to reverse the trial court's admission of Craig Good's testimony over Ford's objection in its F.R.E. 702 motion. The appellate court begins its review of a Rule 702 decision by determining whether the trial court properly exercised its gatekeeper role in admitting expert testimony; *i.e.*, whether the trial court correctly applied Rule 702 and *Daubert*. *Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 883 (10th Cir. 2005). This is a *de novo* review. *Id.*

The appellate court then considers whether the trial court's decision to admit the expert testimony was proper. *Id.* This review is conducted under an abuse of discretion standard, and the appellate court will not disturb the trial court's ruling unless it was "arbitrary, capricious, whimsical or manifestly unreasonable or when [it is] convinced that the district court made a clear error of judgment or exceeded the bounds of permissible choice in the circumstances." *Id.* (quoting *Dodge v. Cotter Corp.*, 328 F.3d 1212, 1223 (10th Cir. 2003)). Under both prongs of a 702 ruling review, the appellate court recognizes that the trial court has wide discretion in deciding how to perform its gatekeeping function and in making its ultimate determination to admit or exclude testimony. *Norris*, 397 F.3d at 883 (quoting *Bitler v. A.O. Smith Corp.*, 391 F.3d 1114, 1120 (10th Cir. 2004)).

In the case of *U.S. v. Call*, 129 F.3d 1402, 1404 (10th Cir. 1997), the trial court's order expressly evaluated the testimony in light of the *Daubert* standard. The trial court noted that "nothing in *Daubert* would disturb the settled precedent that polygraph evidence is neither reliable nor admissible to show that one is truthful." Accordingly, this Court concluded that the trial court did apply *Daubert*, and consequently the trial court was affirmed. In addition, when reviewing the trial court's gatekeeping role in *Norris*, this Court stated that it was not necessarily concerned with the trial court's "exact conclusions reached to exclude or admit expert testimony." The trial court must make some reliability determination on the record; however, "we recognize the wide latitude a district court has in exercising its discretion to admit or exclude expert testimony." The district court "has wide discretion both in deciding how to assess an expert's reliability and in making a determination of that reliability." *Norris* at 884. Here, the trial court followed the governing rule and well-established applicable caselaw in issuing its Order Denying 702 Motions. (App. at 402, Dkt. #240 at 1-3.) Plaintiffs' response to Ford's motion included a detailed Affidavit of Craig Good rebutting Ford's arguments. (App. at 317.). The court responded to Ford's four specific objections to Good's testing methodology, and found that Good's tests were substantially similar to the subject accident such that his resulting opinions were relevant.

(App. at 402, Dkt #240 at 7-9.)

The court followed federal law governing Rule 702 and *Daubert*, and its decision to admit Good's scientifically-sound testimony was in not "arbitrary, capricious, whimsical or manifestly unreasonable" or beyond the "bounds of permissible choice." The court exercised care and consideration in denying Ford's motion:

> As part of his investigation, Good conducted laboratory tests in which he subjected eighteen sample buckles to various degrees of shock using a pneumatic shock machine in order to quantify the threshold at which the buckle would inertially unlatch. The buckles were tested at angles of 0, 15, 30, and 45 degrees. From these tests, Good determined a threshold range for inertial release of 133 to 435 g, with reduced thresholds as the angle of the buckle increased. He then compared the laboratory results with real world data. However, because "there is a lack of buckle acceleration data from real-world rollover collisions suitable for comparison," Good relied on data from planar crashes, which showed inertial unlatch in the range of 100 to 200 g. Based on this and other evidence, Good ultimately concluded that Erica Hoffman was wearing her seat belt at the time of the crash, that her seatbelt buckle was susceptible to inertial unlatch, and that the buckle "most probably inertially unlatched causing Ms. Hoffman to be ejected."

Id. at pgs. 6-7.

The court also considered the similarity between the tests Good conducted and the actual crash:

> Of course, "substantial" does not mean "identical," and clearly it is impossible to know, much less replicate, the conditions of the actual accident that is the subject of the lawsuit….The question, then, is whether Good's tests describe circumstances so dissimilar to those that might have been anticipated to occur in Erica Hoffman's accident as to be unreliable and irrelevant to the issues before the jury. Yet other than accusing Good of having concocted a "worst case scenario"

> by virtue of his various testing choices, defendants make no effort to quantify the differences between Good's laboratory results and real world rollover crashes. Stated differently, although defendants insist that the variables they identify matter, they do not show how much they matter, much less that they matter enough to completely undermine the reliability and relevance of Good's opinions such that his testimony must be excluded in toto. Where the test is substantial similarity, such proof is relevant. Nor is this a case in which Good's testing methods are so patently inadequate that his conclusions are nothing more than rank speculation or subjective belief.….Essentially, the alleged deficiencies defendants identify go to the weight, not the admissibility, of Good's expert opinion.

Id. pgs. 8 and 9.

Thus, the trial court performed a *Daubert* gate-keeping analysis, and satisfied the Daubert requirements by determining the reliability of Good's work.

Next, Ford seeks reversal of the trial court's denial of its Fed.R.Civ.P. 50(b) motion for judgment as a matter of law. An appellate court reviews *de novo* a district court's denial of a Rule 50(b) motion under the same standard applied in the district court. *Tyler v. RE/MAX Mountain States, Inc.*, 232 F.3d 808, 812 (10th Cir. 2000). A party is entitled to judgment as a matter of law only if there is no legally sufficient evidentiary basis for the claim. *Hampton v. Dillard Dept. Stores, Inc.*, 247 F.3d 1091, 1103 (10th Cir. 2001). The appellate court reviews all the evidence in the record, construing it most favorably to the nonmoving party. *Tyler*, 232 F.3d at 812. The appellate court does not weigh the evidence or make determinations about the credibility of witnesses. *Id.*

Here, Plaintiffs presented ample evidence for the jury to find in their favor. Ford incorrectly claims that Good's testimony "must be disregarded." (Op.Br. at 12.) The law requires the Court to consider all the evidence in the record and to construe it in the light most favorable to Plaintiffs. *Tyler*, 232 F.3d at 812. When this Court considers Good's testimony in the light most favorable to Plaintiffs, it can determine that the jury was reasonable to believe his opinion that Erica's seatbelt buckle unlatched during the rollover. Further, even without Good's testimony, this Court can find more than sufficient evidence supporting the jury's verdict, including Ziejewski's opinion that, from a biomechanical perspective, Erica's buckle was defective because it did not stay latched during the rollover, as well as Ford's violation of its internal safety standard requiring its buckles to stay latched during rollovers.

Finally, Ford seeks to vacate the jury's verdict and reverse the trial court's denial of Ford's motion for new trial under Fed.R.Civ.P. 59. A denial of a motion for new trial is reviewed for abuse of discretion. *Unit Drilling Co. v. Enron Oil & Gas Co.*, 108 F.3d 1186, 1193 (10th Cir. 1997). In deciding whether to grant a new trial, the appellate court reviews the trial court's admission of evidence for abuse of discretion. *United States v. Quintana*, 70 F.3d 1167, 1170 (10th Cir. 1995). A jury verdict will be set aside only if the error prejudicially affects a substantial right of a party. *Hinds v. General Motors Corp.*, 988 F.2d 1039, 1049 (10th Cir.

1993). An error is prejudicial only "if it can be reasonably concluded that with or without such evidence, there would have been a contrary result." *Id.*

Here, Ford's arguments for reversing the trial court's denial of its motion for new trial do not reveal an abuse of discretion. The trial court carefully considered Ford's arguments against admitting Good's testimony and nevertheless deemed it reliable and admissible. (App. at 402, Dkt. #240.) Even if this Court were to find that Good's testimony was admitted in error, the error would not be prejudicial to Ford because there was more than enough other evidence for the jury to find in Plaintiffs' favor. This Court does not make independent findings of reliability; it examines the record and decides if the trial court abused its discretion in admitting the evidence. In reviewing the trial court's performance of its gatekeeping function, this Court must look to "other competent evidence" and determine whether it is " 'sufficiently strong' to permit the conclusion that the improper evidence had no effect on the decision." *Lillie v. United States*, 953 F.2d 1188, 1192 (10th Cir. 1992). As stated above, there was substantial evidence besides Good's testimony that Erica was belted before the accident, and that her belt inertially unlatched during the rollover.

B. Craig Good's Testimony was Scientifically Sound and Reliable

Federal Rule of Evidence 702 governs the admissibility of expert testimony. The touchstone of Rule 702 is reliability: the testimony must be based on sufficient

facts or data applied to reliable scientific principles and methods in a reliable way. *Id.*

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the U.S. Supreme Court established five factors to assist federal courts in analyzing the reliability of scientific evidence under Rule 702: 1) whether the technique can and has been tested; 2) whether the technique has been subjected to peer review; 3) the known or potential error rate of the technique; 4) the existence and maintenance of standards controlling the technique's operation; and 5) whether the technique has gained general acceptance in the scientific community. *Id.* at 593-95. Not all these factors always must be considered, and the list is non-exhaustive. *Id.* at 594. The trial judge has broad discretion in deciding how to assess an expert's reliability, including what procedures to utilize in making that assessment, and in making the ultimate determination of reliability. *Kumho,* 526 U.S. at 152, 119 S. Ct. 1167; *see also Hynes v. Energy West, Inc.*, 211 F.3d 1193, 1203-05 (10th Cir. 2000). The appellate court reviews either exercise of discretion for abuse. *Id*. at 1209.

Good's test methodology was grounded in well-established principles of science and engineering. His testing techniques were based on similar tests conducted by other experts in the field. (App. at 2435:22-2436:11.) His component testing methods are widely used by engineers and scientists in the automotive industry, as acknowledged by even Ford's expert witness. (App. at

3296:15-3297:13, 3301:24-3302:12, 3307:14-3308:4, 3414:15-3415:12.) His studies have been published in peer-reviewed journals. (App. at 2341:4-15, 2346:2-18, 2346:22-25, 2347:1-5.)

Ford has made no effort to dispute these facts with evidence. Ford criticizes Good's removal of the belt webbing and stalk during his tests, but that is precisely how component testing is conducted. Nor has Ford attempted to replicate Good's tests to formulate an argument that his results or methods were flawed.

Good began his analysis with the undisputed fact that Erica Hoffman ended up outside the vehicle after the rollover, and was presented with the problem of determining how she got there. His first step was to examine the physical evidence left in and on the vehicle. He found that the white marks on Erica's latch plate indicated that the plate was subjected to significant loading forces of an occupant during a crash, indicating that Erica was wearing her seatbelt for at least a portion of the rollover. (App. at 2366:7-2370:4, 2371:25-2373:1.) He found that the red paint smudges on the belt webbing and matching abraded red paint on the outside of the door indicated that the belt rubbed against the door's exterior during the rollover, meaning that Erica was entangled in the belt as she was ejected out the car window. (App. at 2399:12-18, 2401:1-23, 2405:13-25, 2406:23-2407:9.) He found that the broken plastic stop button had been ripped off the belt webbing due to Erica rubbing against it as she went out the window. (App. at 2373:22-2374:9.)

He determined that the position of the seatbelt behind the passenger when stowed made it impossible for Erica to become entangled had she not been wearing her seatbelt at the start of the crash. (App. at 2382:2-8.) He found that the lack of any blood or tissue inside the vehicle indicated that Erica was belted during the beginning of the rollover, otherwise her body would have been slammed around inside the vehicle until she was ejected. (App. at 2358:21-23.) From such evidence, Good concluded Erica was wearing her seatbelt at the beginning of the crash. (App. at 2362:4-17, 2362:18-2369:22.)

Good next determined how Erica became unbelted during the rollover. He considered the three possible scenarios for when a buckle unlatches: false latch, inadvertent unlatch, and inertial unlatch. (App. at 2415:2-6.) His tests showed that false latch and inadvertent unlatch could not have occurred with this buckle. (App. at 2415:2-2418:15.) These facts are undisputed; Ford made no claim that either of these other possibilities was the cause of the buckle unlatch in this case.

Good then examined the remaining possibility of inertial unlatch. He experimented to test the effect of crash pulses on buckles that were the same as the one installed in the 1999 Mercury Cougar. (App. at 2439:17-2442:19.) Ford complains that Good did not test the actual buckle worn by Erica Hoffman during the wreck. (Op.Brf at 7.) Good did not test the actual buckle because it had been through a serious accident and would not yield reliable test results, and neither did

Ford. For his testing, Good removed all other component parts from the buckles – namely, the stalks and the webbing – in order to isolate the test results to evaluate the forces on the buckles alone. (App. at 2443:24-2444:6, 2515:25-2516:2, 2517:10-16, 2600:4-11.) These methods were established protocol that had been used many times before in the engineering community. (App. at 2437:14-18)

Ford complains that removing the stalks was not representative of the seatbelt in the actual vehicle environment, and that testing without belt webbing created a "worst case scenario" of no belt tension, where inertial unlatch would be most likely to occur. (Op.Brf at 6.) Because Good's tests were done without a stalk, there were fewer gs on the test buckles than would have been experienced by Erica's buckle during the rollover; this was demonstrated in Good's peer-reviewed study indicating that stalks amplify forces on buckles by 1.36 to 2.37 times the force at the floor pan. (App. at 2513:14-16, 2516:24-2517:2, 2518:6-8, 2599:1-9.) Thus, 100 gs at the floor pan would equal 136 to 237 gs at the buckle head. As such, Good's removal of the stalks in his testing for this case benefitted Ford. Further, Good explained in detail why testing that predicts a worst-case scenario is sound engineering. (App. at 2579:15-24.) Good's testing without belt tension replicated Ford's Worldwide Design Requirement, which required the buckle to stay latched no matter the amount of tension on the belt. (App. at 335, Supp.App. at 198, Exhibit 169.) Significantly, Ford's engineering expert Klima agreed with

Good's testing methods. (App. at 3296:15-3297:13, 3301:24-3302:12, 3307:14-3308:4, 3414:15-3415:12), and discussed testing, on which Klima himself relied, that similarly encompassed a worst-case scenario. (App. at 3348:18-3349:13, 3355:15-3356:12, 3361:14-24.)

Ford also complains that Good did not conduct testing "of any kind" to test all of the possible factors present in a rollover simultaneously. (Op.Brf at 8.) But Good explained, and Klima and Ford's engineer Ballard agreed, that component or bench testing is an acceptable and reliable manner of testing different elements of a single event. (App. at 2438:1-19, 3296:15-3297:13, 3301:24-3302:12, 3307:14-3308:4, 3414:15-3415:12 .) Moreover, Good, and Klima, testified that full-vehicle instrumented rollover testing is rare. (App. at 2474:23-2475:1, 2572:6-9; 3284:15-3285:10, 3294:15-3295:13, 3332:15-3333:13.) Ford unreasonably argues that Good failed to conduct a full-vehicle rollover test for this case, when manufacturers in the auto industry and the federal government rarely conduct these costly and unnecessary tests.

Good applied different levels of force to the buckles to determine the level at which each buckle unlatched. (App. 2447:1-2448:17.) This method yielded a range of unlatching g forces, between 124 and over 500 gs. (App. at 2446:6-11, 2449:6-12, 2472:19-2474:3, 2501:25-2502:12.) Ford complains that Good did not explain why the forces at which the buckles released "varied so widely." (Op.Brf

at 7.) Ford presented no standard for an acceptable range based on sound engineering. Moreover, Good explained that slight manufacturing discrepancies between each buckle can account for the differences. (App. at 2497:16-21.) Indeed, 60/1000ths of an inch – the distance between latched and unlatched in the subject buckle (App. at 2429:21-25, 2430:24-2432:21) – is a tiny margin of safety. Since there are such fine tolerances, minute manufacturing differences can significantly affect the ability of a particular buckle to stay latched when subjected to varying g forces. App. at 2497:16-21

Finally, Good looked at estimates of the g forces experienced during rollover crashes as measured in previous testing and other expert opinions. (App. at 2475:2-6.) He found that rollover forces between 100-200 gs were reasonably foreseeable. (*Id.*) (Ford's expert Klima testified about rollover testing that showed crash forces above 200 gs. (App. at 3438:20-3439:11.)) Good determined that the lowest unlatch threshold for the buckle – 124 gs – was well within the range of forces experienced by Erica's buckle during the rollover. (App. at 2475:7-14, 2476:8-17.) Therefore, Good opined that Erica's buckle likely inertially unlatched. (*Id.*)

Ford argues that Good failed to connect his testing to the actual crash or to real world conditions because he could not testify to the exact inertial unlatching threshold of the buckle (Op.Brf at 7), or estimate the actual acceleration forces on

the buckle during the crash. (*Id.* at 9). All the experts in this case, including Ford's, testified that it is impossible to measure these exact forces because the sequence of a particular rollover cannot be replicated. (App. at 1780:18-25, 1852:21-1853:3, 2218:2-21, 2373:10-16, 2478:5-25, 2485:25-2486:4, 3414:15-3415:12.) Moreover, Good did connect his testing to the actual rollover that occurred in this case by testing the same type of buckle as the one used in the Mercury Cougar. (App. at 2443:11-18, 2496:8-20.) Good was not required to explicitly explain to the jury why using the same buckle types correlated his testing to the subject rollover – the jurors could make this obvious connection on their own. Further, both Good and Ziejewski testified that the forces in the subject rollover could have easily exceeded several hundred gs sufficient to cause the buckle to inertially unlatch. (App. at 2251:22-24, 2475:2-6.) Also, Ford's expert Klima testified about rollover testing in which forces up to 207 gs occurred. (App. at 3438:20-3439:11.) Good's tests revealed that the buckles released at forces as low as 124 gs. (App. at 2449:6-12, 2473:22-2474:3.) The jury could easily connect the expert testimony about potential rollover g forces to the actual g forces measured on Cougar buckles to conclude that Erica Hoffman's buckle was capable of unlatching during the rollover.

Ford's argument challenging Good's testimony is contrary to *Daubert*, and its criticisms of the methodology are not supported by any engineering experts or

scientific evidence. Regardless of the results Good reached, and the fact that Ford disagrees with them, his methodology was based on reliable engineering. Ford's asserted differences between the testing and the accident likewise are of no consequence. Dissimilarities between experimental and actual conditions go to the weight of the evidence, not its admissibility. *Four Corners Helicopter v. Turbomeca*, 979 F.2d 1434, 1441-42 (10th Cir. 1992). For example, in *Frazier v. Honeywell*, 518 F. Supp. 2d 831, 835-36 (E.D. Tex. 2007), the court denied the defendant manufacturer's Rule 50 Motion after the jury found for plaintiffs in an inertial unlatching case. One of defendant's arguments was that the court erred in admitting test videos, because the tests were not sufficiently similar to the actual car accident. The court ruled that "Honeywell's arguments go to the weight of the evidence and not its admissibility. The threshold for admissibility of evidence is a low one." 518 F. Supp. 2d at 838. The court also stated that "Honeywell was free to – and did in fact – cross examine the Fraziers' expert on the level of similarity between the videos and the conditions of the accident." *Id.* at 838-39. The same analysis applies here. In its Pretrial Order, this Court concluded that Ford's objections to Good's testimony "go to the weight, not the admissibility, of Good's expert opinions."(App. at 410, Dkt. #240 at 9.) The Court also wrote that "[a]ny alleged shortcomings in those opinions can be more than adequately addressed by cross-examination and competing evidence." *Id*. Ford raised the alleged

shortcomings during cross-examination, and also adduced its own competing evidence. The jurors were properly instructed to treat expert testimony like other evidence, and to decide for themselves what weight – if any – to give it. The verdict shows that the jurors found Plaintiffs' evidence more compelling; that was their prerogative. Ford disagrees with the jury's evaluation of the evidence, but under our system of justice the jury's assessment controls.

Aside from challenging Good's methodology, Ford's appeal sets forth several other "red herring" arguments that it believes show that the jury could not possibly have found in Plaintiffs' favor. First, Ford declares that its evidence purporting to show that inertial unlatch does not occur in the real world was undisputed. (Op.Brf at 2.) To the contrary, Plaintiffs presented evidence through its own experts that inertial unlatch is a "real world" phenomenon. (App. at 2411:6-2413:18, 2424:10-2425:17.) Plaintiffs also cross examined Ford's witnesses to expose the fallacy of this argument. (App. at 3312:18-3313:13, 3456:16-3457:13.) Most significantly, Plaintiffs presented evidence of Ford's Worldwide Design Requirement requiring its buckles to remain latched during a rollover. (App. at 335, Supp.App. at 198, Exhibit 169.) In addition, Good testified at length about approximately 80 patents dating back to the 1950s for buckles specifically designed to resist inertial unlatch. (App. at 2464:3-17.) If inertial unlatch only occurs in laboratories and never in the real world, then Ford would

not have established a safety requirement that its buckles resist unlatching during a rollover, and so many patents would not have been granted for anti-inertial unlatch buckles. The jury concluded that Ford's argument is wrong.

Next, Ford states that its expert Klima testified "without contradiction" that the highest recorded vertical force in any published rollover test is 50 gs. (Op.Brf at n.1.) This testimony was not uncontradicted. To the contrary, Klima's own testimony during cross-examination impeached this claim when he revealed the results of the same test where instruments measured forces of 207 gs. (App. at 3438:20-3439:11.) 50 gs was the maximum force recorded in the vertical direction in that particular test; in a separate "bounce" during the same rollover, the instruments measured a force of 207 gs. (App. at 3438:7-3439:8.) This evidence corroborates Good's and Ziejewski's testimony that the subject buckle easily could have experienced several hundred gs during the rollover. (App. at 2251:22-24, 2475:2-6.)

Ford attempts to distinguish the measurement showing 207 gs by saying that this force occurred in a different direction from the downward force most likely to cause the buckle to release when the belt is slack; i.e., on the roof of the vehicle as opposed to the undercarriage. (Op.Brf at 9). However, because a rollover is by nature a random event in which unlatching force can be exerted in any direction,

the existence of 207 gs in the testing dispels Ford's argument regardless of the direction in which the unlatching force occurred here. In the bouncing pattern in Klima's test, the unlatching force happened in the lateral direction. In another random bouncing pattern, it can happen in another direction.

Essentially, Ford asks this Court to conclude that during a rollover, there can only be certain forces in certain directions, and that 207 gs could not occur in a vertical direction in a rollover crash. The evidence was to the opposite effect. Ford's defense at trial was that Plaintiffs could not show that there were forces available in a rollover accident high enough to cause inertial unlatch at the g force levels found to cause buckles to release in Good's testing. Ford's *lawyers*, not Ford's *experts*, claim that unlatching forces can occur only at certain angles during a rollover. In reality, as the experts in this case testified repeatedly, rollovers are unrepeatable events; therefore, a force that occurs in any direction in a test could also occur in a different direction depending on how the vehicle bounces along the ground during the rollover sequence.

C. Craig Good's Testimony was Properly Admitted

It is within the discretion of the trial court to determine how to perform its gatekeeping function under *Daubert*. *See Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999). This discretion applies both in deciding how to assess an expert's reliability, including what procedures to utilize in making that assessment, as well

as in making the ultimate determination of reliability. *Kumho Tire*, 526 U.S. at 152. A *Daubert* hearing is not specifically mandated. *Goebel v. Denver & Rio Grande W. R.R. Co.*, 215 F.3d 1083, 1087 (10th Cir. 2000).

The district court need not "recite the Daubert standard as though it were some magical incantation," or apply all of the reliability factors suggested in *Daubert* and *Kumho*. *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999). An appellate court will not disturb the district court's ruling unless it is "arbitrary, capricious, whimsical or manifestly unreasonable" or when it is convinced that the district court "made a clear error of judgment or exceeded the bounds of permissible choice in the circumstances." *Atlantic Richfield Co. v. Farm Credit Bank of Wichita*, 226 F.3d 1138, 1163-64 (10th Cir. 2000).

Here, Ford demands a "magical incantation" by the trial court that is not required by law. The trial court repeatedly evaluated Ford's arguments, and each time issued careful orders rejecting them. (App. at 402, Dkt. #240; App. at 1470, Dkt. #1470.) Simply because Ford disagrees with the result does not mean the trial court acted in an arbitrary and capricious manner.

Ford complains that the trial court denied its Rule 702 motion and its Rule 50 motions without conducting a hearing. (Op.Brf at 1, 3.) The trial court was not required to conduct a hearing; neither the federal rules, the local rules, nor the trial court's own rules so require. (Fed.R.Civ.P. 78(b); D.C.COLO.LCivR 7.1G; REB

Civ.Practice Standard V.H.1.) Ford itself did not request a hearing. And, Plaintiffs provided a detailed affidavit from Good. Therefore the absence of a hearing does not indicate that the trial court abused its discretion. Furthermore, with respect to Ford's Rule 50 motion, the trial court heard oral argument twice – once when Ford made its oral motion at the close of Plaintiffs' case and a second time when Ford renewed its motion at the close of the evidence. (App. at 2718:15-2723:20, 3480:1-3481:20.)

Ford states that the trial court's sole reason for denying its 702 motion with respect to Good was because "Ford had failed to 'quantify' the differences between Good's test conditions and the conditions in real-world rollovers or how much they matter." (Op.Brf at 1-2.) This statement grossly mischaracterizes the trial court's Order by isolating, out-of-context, one sentence from the court's ten-page order. Essentially, Ford argued that engineers should not be able to testify about an opinion unless exact forces can be replicated in lab or field tests. However, the trial court recognized that due to engineers' inability to accurately measure forces through a lab-created rollover, engineers must be able to use their judgment and expertise to re-create relevant testing and estimate forces of the event. (App. 402, Dkt. #240.)

Further, the trial court spent two pages of its order explicating the law of Rule 702 and the well-established standards that the court then followed. (App. at

402, Dkt. #240 at 1-3.) The court made specific and detailed findings about Good's qualifications, test methods, and conclusions. (*Id.* at 6-7.) The court had over 350 pages of exhibits in connection with the Rule 702 briefing. It detailed the caselaw regarding substantial similarity, and ultimately determined that Good's tests were substantially similar to the subject crash so as to make them reliable and admissible. (App. at 402, Dkt. #240, at 7-9.) The circumstances that amounted to an abuse of discretion in Ford's cited caselaw do not exist in this case. The trial court in *Goebel v. Denver & Rio Grande W. R.R. Co.*, 215 F.3d 1083, 1088 (10th Cir. 2000), did not make "a single explicit statement on the record to indicate that the district court ever conducted any form of *Daubert* analysis whatsoever." *Id.* at 1088. The trial court denied the motion in limine with no explanation, and denied the contemporaneous trial objection with a one-sentence order. *Id.* It referred only to its previous denial of the motion in limine when denying the post-trial motion for judgment as a matter of law. *Id.* This court was unable to determine if the trial court had "fully considered" the motion in limine, whether it was referring to the expert's qualifications or his reasoning and methodology. *Id.* Based on these facts, the appellate court determined that the trial court had improperly admitted the expert's testimony. *Id.* In *Dodge v. Cotter Corp.*, 328 F.3d 1212 (10th Cir. 2003), the district court limited the length of the parties' *Daubert* briefing and appendix to 20 pages. *Id.* at 1229. It considered only the lawyers' arguments

instead of expert testimony or reports. *Id.* This court found that the lower court's "unreasonable limitation on the information available" when making its *Daubert* ruling exceeded the bounds of permissible choice. *Id.*

None of these circumstances exist in this case. The trial court gave thorough consideration to Ford's Rule 702 motion and entered a carefully crafted written order. (App. at 402, Dkt. #240.) It carefully considered Ford's oral Rule 50 motions at trial and read from a pre-prepared document outlining its view of the evidence and the controlling caselaw. (App. at 2729:12-2734:24.) It found that none of Plaintiffs' witnesses were incredible as a matter of law, and that there was sufficient evidence for the jury to decide the factual disputes in the case. (*Id.*) It re-considered the arguments from Ford's post- trial motion for judgment as a matter of law, and again issued an order detailing the pertinent law and reasons for denying Ford's motion. (App. at 1470, Dkt. #1470.)

D. The Jury Could Have Found in Plaintiffs' Favor Even Without Dr. Good's Testimony

The jurors were provided with substantial evidence of defect in the subject buckle outside of Good's testing from which they could have reasonably found for Plaintiffs. Plaintiffs' biomechanics expert Ziejewski opined that the buckle was defective; it should not have unlatched under the foreseeable forces that occur during a rollover. (App. at 2218:22-2219:4.) Ziejewski's opinion was not premised on Good. It was independent.

Ford's Worldwide Design Requirement dictated that the buckle could not unlatch during a crash, no matter what the position of the vehicle and level of belt tension. (App. at 335, Supp.App. at 198, Exhibit 169.) Ford made no effort to prove a different standard controlled, that it provided this standard to TRW, or that it attempted to make this standard part of the design requirements for the subject belt. Ford does not dispute that if Erica's belt came unfastened due to inertial forces during the rollover, it was not in compliance with this requirement.

Since Ziejewski's opinion that a buckle should not unlatch under the foreseeable forces of a rollover is nearly identical to Ford's own Worldwide Design Requirement, Ford is hard-pressed to argue that his opinion was based upon "junk science" about a phenomenon that does not occur in the real world. Indeed, it defies credulity that Ford would have established a safety standard for its vehicles for something that only occurs in laboratories. Since the jury found that the buckle unlatched during the rollover event, its finding of defect is supported by Ziejewski's opinion and Ford's breach of its own Worldwide Design Requirement.

CONCLUSION

The trial court carefully considered Ford's pre-trial Rule 702 motion and entered a well-reasoned order in compliance with the law. It considered Ford's Rule 50 motion at the conclusion of Plaintiffs' evidence and outlined the evidence and the controlling Supreme Court and Tenth Circuit authority. It specifically

found that none of Plaintiffs' witnesses were incredible as a matter of law and that there was sufficient evidence for the jury to decide the factual disputes in the case.

The jury decided that Erica was belted prior to the crash, and there was substantial direct and circumstantial evidence that she was belted. It is undisputed that if the belt came unfastened due to inertial forces, it was not in compliance with Ford's World Wide Safety Standards. TRW made several buckles which would have met Ford's Standard, however, it is undisputed that Ford did not provide its World Wide Standard to TRW and did not make it part of the design requirements for the subject belt. The Court found Good's tests to be substantially similar to the actual rollover such that the testimony would assist the jury in understanding his opinions. The court stated that Ford's numerous complaints about Good's methodology did not undermine the reliability and relevance of his testimony. (*Id*.) Ford's objections are to the weight not the admissibility of the evidence. Therefore, the Court properly admitted Good's testimony.

Plaintiffs-Appellees Erica Hoffman and her parents, Gary and Sandra Hoffman respectfully request the Court Affirm the Judgment entered on the jury's verdict.

Respectfully Submitted,

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Dated: July 26, 2010

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I hereby certify that on this 26th day of July, 2010, I caused this Brief of Appellees to be filed electronically with the Clerk of the Court using the CM/ECF System, which will send notice of such filing to the following registered CM/ECF users:

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I further certify that on this 26th day of July, 2010, I caused the required number of bound copies of the Brief of Appellees and Supplemental Appendix to be filed via UPS Next Day Air with the Clerk of the Court and a copy of the Supplemental Appendix to be served, via UPS Next Day Air, upon counsel for the Appellant, at the above addresses.

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