On-Site Rollover Investigation
Dynamic Science, Inc. (DSI), Case Number DS09020
2009 Ford Escape XLT
Arizona
February 2009

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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16. Abstract

This on-site rollover investigation focused on the dynamics of a 2009 Ford Escape XLT sport utility vehicle that was involved in a crash that resulted in a rollover. The crash occurred in February 2009 in Arizona. The subject vehicle was being driven by a 36-year-old female. The other vehicle was a 2006 Volkswagen New Beetle that was being driven by a 33-year-old female. The second occupant in the Volkswagen was an 8-year-old female. The crash site was a three-leg intersection that comprised an east/west roadway and a north/south roadway. The Ford was traveling eastbound and the Volkswagen was traveling northbound. The intersection was controlled by posted stop signs for traffic entering the east/west roadway from the crossing street. As the Ford traversed the intersection the Volkswagen failed to stop at the stop sign. The Volkswagen initiated a right turn into the eastbound travel lane and impacted the right side of the Ford. The driver of the Ford lost control of the vehicle and the Ford initiated a four-quarter turn, left side leading turn-over type rollover. The Ford was equipped with frontal air bags, seat-mounted side air bags, and combination rollover/side impact inflatable curtain (IC) air bags. During the crash, the left and right IC air bags and the left seat-mounted side air bag deployed. The driver of the Ford sustained minor injuries and was transported to a local hospital. Both vehicles were towed due to damage. The Ford was later declared a total loss by the insurance company.

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Background

This on-site rollover investigation focused on the dynamics of a 2009 Ford Escape XLT sport utility vehicle (**Figure 1**) that was involved in a vehicle-to-vehicle crash and subsequent rollover. The crash occurred in February 2009 in Arizona. The subject vehicle was being driven by a 36-year-old female and the other vehicle was a 2006 Volkswagen New Beetle that was being driven by a 33-year-old female. The second occupant in the Volkswagen was an 8-year-old female. The police report stated that her seat position was unknown and her restraint usage was a lap and shoulder belt.

Figure 1. Subject vehicle, 2009 Ford Escape XLT

The crash site was a three-leg intersection that comprised an east/west roadway and a north/south roadway. The Ford was traveling eastbound and the Volkswagen was traveling northbound. The intersection was controlled by posted stop signs for traffic entering the east/west roadway from the crossing street. As the Ford traversed the intersection the Volkswagen failed to stop at the stop sign. The Volkswagen initiated a right turn into the eastbound travel lane and its front end impacted the right side of the Ford. The driver of the Ford lost control of the vehicle and the Ford initiated a four-quarter turn left side leading rollover.

The Ford was a Certified Advanced 208-Compliant (CAC) vehicle and was equipped with advanced dual-stage frontal air bags, combination rollover/side impact inflatable curtain (IC) air bags[1], seat-mounted side air bags, and dual safety belt pretensioners for the front row seats. The frontal air bags were certified by the manufacturer to meet the advanced air bag requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 208. During the crash, the left and right IC air bags and the left seat-mounted side air bag deployed.

The driver of the Ford sustained minor injuries and was transported to a local hospital. Both vehicles were towed due to damage. The Ford was later declared a total loss by the insurance company. The Volkswagen was removed by its owner, its post-crash status of the was unknown, and the vehicle was not inspected.

This on-site rollover investigation was initiated by the National Highway Traffic Safety Administration (NHTSA) during a review of General Estimates System (GES) police reports. On March 20, 2009 DSI was forwarded the police report with instructions to locate the subject vehicle and obtain cooperation. DSI located the subject vehicle and obtained permission from the insurance company to inspect the vehicle. The case was assigned on April 24 and the vehicle inspection was completed on April 27, 2009.

[1] http://www.fleet.ford.com/showroom/2009fleetshowroom/2009-escape.asp

The Ford's Event Data Recorder (EDR) was supported by the Bosch Crash Data Retrieval (CDR) software and efforts were made to image the crash data from the vehicle. Attempts to image the vehicle's crash data via the Data Link Connector (DLC) were unsuccessful due to the absence of the vehicle's ignition key.

Summary

Crash Site

The crash site was a three-leg intersection that comprised an east/west roadway and a north/south roadway (**Figure 2**). The intersection's west leg contained one eastbound lane and one westbound lane that were separated by a painted median. The intersection's east leg contained one eastbound lane, one westbound through lane, and a westbound left turn lane. The intersection's south leg contained one southbound lane and two northbound lanes. The inboard northbound lane was a left turn only lane. The outboard northbound lane curved right and intersected the eastbound lane (**Figure 3**).

Figure 2. Crash site, other vehicle northbound approach

Figure 3. Crash site, subject vehicle eastbound approach

All roadway surfaces within the intersection were of asphalt composition and were bordered with solid white fog lines. Lateral to the outboard lanes were gravel shoulders. The northbound roadway alignment was straight and the profile was level. The alignment for the east/west roadway was straight and its profile was a positive grade for eastbound travel. Profile measurements of the eastbound lane were taken at the following intervals: in approach to the intersection (pre-crash), at the area of the vehicle to vehicle impact (Event 1), at the area of the rollover (Event 2), and at the area of final rest for the Ford. At 122 m (200 ft) west of the intersections southwest corner apex, the grade was positive 4.1 percent; at 61 m (100 ft) west of the intersection, the grade was positive 4.3 percent. The eastbound roadway achieved a maximum positive slope of 4.9 percent at 15 m (50 ft) west of the intersection. The profile then decreased in slope within the intersection. At the area of the Event 1 and the trip point, which was 23 m (75 ft) east of the southwest corner, the grade was a positive 2.8 percent. At 61 m (100 ft) east of the area of impact, the eastbound grade was a positive 2.3 percent.

The intersection was controlled by posted stop signs and a painted surface stop line for northbound traffic that was turning either left or right onto the east/west roadway. One posted stop sign was

located within a painted median between the two northbound lanes and another was posted on the southeast corner of the intersection. A white painted stop line spanned both northbound lanes at the intersection.

The posted speed limit for both roadways was 72km/h (45 mph). At the time of the crash the conditions were daylight, the weather was clear and the roadway was dry. The crash occurred at 1138 hours.

Pre-Crash

The Ford was traveling eastbound and traversed the intersection at a driver estimated speed of less than 64 km/h (40 mph). The Volkswagen was negotiating a northbound-to-eastbound right curve at a police estimated speed of 64km/h (40 mph). The driver of the Volkswagen failed to stop at the posted stop sign, entered the intersection, and then entered the eastbound travel lane.

Crash

The front left corner of the Volkswagen impacted the right side of the Ford in the passenger zone. The Ford initiated a clockwise rotation, its left side tires engaged the roadway, and the vehicle initiated a left side leading turn-over type rollover. The vehicle rolled about its longitudinal axis for four quarter-turns, then came to final rest on its wheels in the westbound lane and facing west.

For the Ford in the vehicle-to-vehicle impact, the Missing Vehicle algorithm of the WinSMASH program computed a Total Delta-V of 6 km/h (3.7 mph); the longitudinal and lateral components were -3.9 km/h (-2.4 mph) and -4.6 km/h (-2.9 mph), respectively. The results generated by WinSMASH appear reasonable. The vehicle sustained minor right side damage and its post-impact trajectory supports the results.

For the Volkswagen, the program computed a Total Delta-V of 8 km/h (5.0 mph); the longitudinal and lateral components were 1.4 km/h (0.9mph) and 7.9 km/h (4.9 mph), respectively. The results for the Volkswagen should be considered borderline.

Post-Crash

The driver of the Ford exited the vehicle without assistance through the front row left door. When emergency services arrived, she was fitted with a cervical collar and placed on a back board. She was ground transported by ambulance to an area hospital that could administer advanced trauma care. The destination hospital was not the nearest facility. The driver stated during the interview that the time en route to the hospital was approximately 25 minutes. She signed in to the hospital emergency department at 1243 hours, 65 minutes post-crash. At the hospital, her initial Glasgow Coma Score (GCS) was 15 and she complained of head and neck pain. The driver was treated for minor injuries and released after approximately two hours. The Ford was towed due to damage and was later declared a total loss by the insurance company.

Vehicle Data - 2009 Ford Escape XLT

The 2009 Ford Escape XLT was identified by the Vehicle Identification Number (VIN): 1FMCU03G59Kxxxxxx. The vehicle's date of manufacture was August 2008 and the odometer reading was 9,400 km (5,841 mi). The vehicle was equipped with a 3.0-liter, 6-cylinder engine, automatic transmission, front wheel drive, daytime running lights, variable power steering, and a tilt steering wheel. The braking system consisted of front ventilated disc brakes and rear drum brakes, a standard antilock braking system (ABS), Electronic Stability Control (ESC), Roll Stability Control (RSC) and traction control. The fuel system included a single nonmetallic fuel tank.

The vehicle manufacturer's recommended tire size was P235/70R16 and the recommended cold tire pressure was 221 kPa (32 psi) for the front and the rear. The vehicle was equipped with Michelin Radial X tires of this size and the manufacturer's recommended maximum tire pressure was 276 kPa (40 psi). The tires were manufactured in week 27 of 2008. The vehicle was equipped with a tire pressure monitoring system. The specific tire information was as follows:

Position	Measured Pressure	Measured Tread Depth	Restricted	Damage
LF	221 kPa (32 psi)	8 mm (10/32 in)	No	None
LR	241 kPa (35 psi)	9 mm (11/32 in)	No	None
RR	193 kPa (28 psi)	9 mm (11/32 in)	No	None
RF	234 kPa (34 psi)	8 mm (10/32 in)	No	None

The Ford's interior was configured with seating for five occupants. The front row seating consisted of outboard bucket seats with adjustable head restraints. The second row seating consisted of a 60/40 split bench seat with folding backs and adjustable head restraints.

Vehicle Damage - 2009 Ford Escape XLT

Exterior Damage

The Ford sustained direct and induced damage to the right side door panels during the vehicle-to-vehicle impact. The direct damage to the right side began 40 cm (15.7 in) forward of the rear axle, extended 95 cm (37.4 in) forward, and ended 125 cm (49.2 in) aft of the front axle. The Field L began 37 cm (14.6 in) forward of the rear axle, extended 106 cm (41.7 in) forward, and ended 117 cm (46.1 in) aft of the front axle. Six crush measurements were taken at mid-door level as follows: C_1 = 0 cm, C_2 = 5 cm (2.0 in), C_3 = 6 cm (2.8 in), C_4 = 6 cm (2.8 in), C_5 = 3 cm (1.2 in), C_6 = 0 cm. Maximum lateral crush measured 6 cm (2.8 in) and was located at C_3 (**Figure 4**). The Collision Deformation Classification (CDC) for the first impact was 02RPEW1.

The Ford's Sill Height measured 50 cm (19.7 in), the Height of Max Door Crush measured 66 cm

(26.0 in), and the Door Sill Differential (DSD) measured 4 cm (1.2 in).

Figure 4. Right side crush measurement

The vehicle sustained direct and induced damage to the left and right sides and roof during the rollover. Direct damage to the left side began 62 cm (24.4 in) aft of the rear axle, extended forward 369 cm (145.3 in), and ended 307 cm (120.1 in) forward of the front axle. Vertically, the direct damage began at the sill, extended upward 120 cm (47.2 in), and ended at the roof side rail. The direct damage to the right side began 71 cm (28.0 in) aft of the rear axle, extended 392 cm (154.3 in) forward, and ended at the front right bumper corner. Vertically, the direct damage began 7 cm (2.8 in) above the sill, extended upward 113 cm (44.5 in), and ended at the roof side rail. Direct damage to the top began on the roof at 28 cm (11.0 in) forward of the rear axle, extended forward 295 cm (116.1 in), and ended at the leading edge of the hood. The direct damage was distributed laterally across the top from roof side rail to roof side rail, and measured 112 cm (44.1 in).

Figure 5. Windshield header vertical crush measurement

The maximum lateral crush was located on the right roof side rail between the A- and B-pillars, at 138 cm (54.3 in) forward of the rear axle, and measured 16 cm (6.3 in). The maximum vertical crush was located at the windshield header, 50 cm (19.7 in) right of the vehicle's longitudinal centerline, and measured 22 cm (8.7 in) (**Figure 5**). The CDC for the rollover impact was 00TDDO3.

Interior Damage

The Ford sustained moderate interior damage as a result of intrusions and occupant loading and contacts. The second row left side door was jammed shut. The windshield was holed and the front row left and right side glass was disintegrated. Additionally, the rear view mirror was displaced from the windshield. The passenger compartment sustained vertical and lateral intrusions to the front and second rows.

Manual Restraints

The Fords's front row seating was equipped with 3-point manual lap and shoulder safety belts with sliding latch plates and adjustable D-ring anchorage assemblies. The safety belts were configured with dual buckle and retractor pretensioners. The driver's safety belt had an Emergency Locking Retractor (ELR) and the passenger's safety belt had a switchable ELR/Automatic Locking Retractor (ALR).

The driver's seat track was set between the middle and full-forward position and the seat back was slightly reclined. The driver's safety belt anchorage was in the full-up position. The latch plate exhibited light scratches indicating historical usage. The safety belt D-ring, the webbing, and the latch plate exhibited evidence of occupant loading (**Figures 6 - 8**).

The safety belt webbing exhibited evidence of occupant loading on both sides of the webbing. On the back side, an abrasion that measured 5 x 10 cm (2.0 x 3.9 in) was located 155 cm (61.0 in) above the lower anchorage. The abrasion resulted from contact between the belt webbing and the D-ring. The plastic D-ring exhibited abrasion where it was contacted by the belt webbing. An area of webbing that included a group of striations was located 15 cm (5.9 in) above the abrasion. The striations measured 12 cm (4.7 in) in length and resulted when the occupant loaded the webbing.

On the front side of the safety belt webbing, an abrasion that measured 4 x 5 cm (1.6 x 2.0 in) was located 75 cm (29.5 in) above the lower anchorage. The abrasion resulted from contact with the plastic latch plate cover. The latch plate cover exhibited abrasion that correlated with the damage to the safety belt webbing. At 70 cm (27.5 in) above the abrasion the webbing was stretched due to contact with the D-ring when the belt was loaded.

With the safety belt in the buckled position, abraded areas of the belt passed over the D-ring and the sliding latch plate, and a stretched area was within the area of the driver's torso. Based on evidence of loading to the safety belt webbing, latch plate and the D-ring, it was determined that the driver was using the manual lap and shoulder belt at the time of the crash. The safety belt buckle and retractor pretensioners did not actuate.

The front row right passenger safety belt anchorage was set to the full-up position. The latch plate exhibited light scratches indicating historical usage.

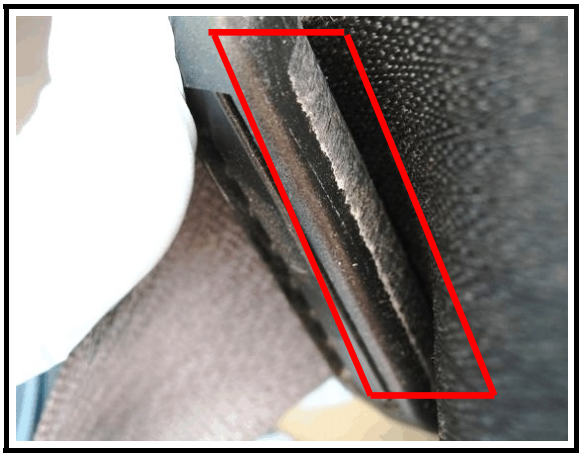

Figure 6. Occupant loading evidence, safety belt D-ring

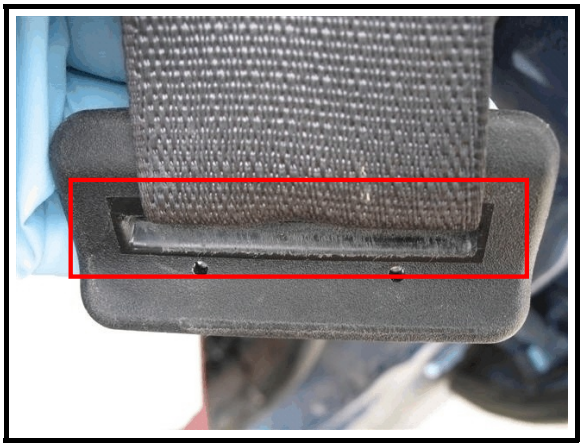

Figure 7. Occupant loading evidence, safety belt latch plate

Figure 8. Occupant loading evidence, safety belt webbing

The second row seats were equipped with 3-point manual lap and shoulder belts. The outboard belts were equipped with non adjustable anchorages that were located on the C-pillars. The center position belt retractor was integrated into the seat back. The three retractors were switchable ELR/ALR. The safety belt latch plates were scratched indicating historical usage. A locking clip was present on the right safety belt that was used to install a child restraint system (CRS).

Supplemental Restraint System

The Supplemental Restraint System (SRS) included an air bag control module (ACM), driver and passenger frontal air bags, side impact inflatable curtain (IC) air bags, seat-mounted side air bags, front and side impact sensors, and seat belt pretensioners for the front row. The driver of the vehicle stated during the interview that the air bags were original to the vehicle and had not been serviced.

Figure 9. Deployed left IC and seat-mounted air bags

The Ford's frontal air bags were Certified Advanced 208 Compliant (CAC); the advanced dual-stage frontal air bags were designed to deploy according to several factors. The vehicle was equipped with a system of components designed to adjust deployment of the frontal air bags and enhance protection for front row occupants. An electronic crash severity sensor provides the ACM with an early indication of the severity of an impact. The driver's seat position sensor tells the ACM where the driver's seat is relative to the steering wheel. If the seat is closer to the steering wheel, a lower power air bag deployment is activated. Safety belt usage sensors monitor whether the safety belts are buckled. If the safety belt pretensioners actuate, they gradually allow the safety belts to loosen, thus reducing force on the occupant and allowing the occupant to then engage the deployed air bag. A front passenger sensing system uses a front passenger seat weight sensor and safety belt tension sensor to detect the presence of a properly seated occupant and then determine whether the frontal air bag should deploy. This system recognizes three conditions: when the seat is empty, when a small person is present, or when an adult in seated in the seat. The "Passenger Air Bag Off" lamp on the IP is illuminated when the air bag is disabled for a small person or CRS.[2]

The driver's air bag module was located in the steering wheel hub and the passenger's air bag module was in the middle instrument panel. The vehicle's front sensor determined that the driver's frontal bag should not inflate, based on longitudinal deceleration and occupant weight. The passenger seat was unoccupied and due to the weight recognition function of the SRS the deployment was suppressed.

The driver's seat-mounted side air bag and the left and right IC air bags deployed during the rollover (**Figure 9**). The seat-mounted side air bag deployed from a module in the outboard aspect of the

[2] http://www.ford.ca/app/fo/en/our_company/safety/safety_systems

driver's seat back. The air bag was triangular in shape and round at the forward aspect. It was constructed of two panels stitched together around its perimeter. The air bag's maximum height measured 26 cm (10.2 in) and its maximum width measured 30 cm (11.8 in). The air bag was configured with a single vent port and no tether. The left seat-mounted side air bag was located generally at shoulder level for a seated driver. The upper aspect of the air bag overlapped the bottom aspect of the IC air bag by 10 cm (3.9 in). There was no evidence of occupant loading or damage to the air bag.

The left and right IC air bags deployed from modules located in the roof side rails above the front and second rows. They were constructed of smooth nylon sheeting and were configured without vent ports. Patterns and seams were thermally sealed into the material. The IC air bags measured 147 cm (57.9 in) horizontally and 45 cm (17.7 in) vertically. At the leading end, a 40 cm (15.7 in) tether connected the IC air bags to the A-pillars. At the trailing end, a 36 cm (14.2 in) tether attached the IC air bags to the roof rail/C-pillar junction. In their post-deflated state, the longitudinal area of coverage began at the upper aspect of the A-pillar and ended at the C-pillar. The IC air bags covered approximately two thirds of the front row side glass and all of the second row side glass. The vertical area of coverage extended from the roof side rail to approximately 10 cm (3.9 in) below the bottom of the side window glazing. They did not extend longitudinally into the vehicle's cargo area.

The left IC air bag exhibited an area of damage on the upper inboard aspect consisting of five vertically oriented linear scuff marks that were approximately 3 cm (1.2 in) in length and covered a14 cm (5.5 in) section of the air bag. Their location on the air bag was above head level and lateral to the driver's seated position. The driver indicated during the interview that her head probably contacted the air bag. However, the scuffs were uniform in nature and presented evidence of module or roof cladding contact versus occupant contact. The left IC air bag exhibited no further contact evidence or damage. The right IC air bag was unremarkable.

Rollover Discussion - 2009 Ford Escape XLT

The Ford had a Static Stability Factor (SSF) of 1.13. The SSF of a vehicle is an at-rest calculation of its rollover resistance, which is based on its track width and center of gravity. The vehicle had a rollover resistance rating of 3 out of 5 stars, and had a 23% chance of rollover.[3] The Ford was equipped with several features designed to enhance handling, braking, and stability in an effort to improve rollover avoidance.

The Ford was equipped with the manufacturer's Roll Stability Control (RSC) technology, which utilizes gyroscopes to detect when a vehicle is cornering too sharply or maneuvering in such a way as to induce a trip rollover. The system applies braking to the wheels on the outside of the turn, which then induces understeer and improves stability. The Ford's ESC functions when the tires lose traction and then spin. The system works by momentarily decreasing engine power to help regain tire traction.

At impact with the Volkswagen, the Ford initiated a clockwise rotation in response to the 2 o'clock direction of force that was applied rearward of the vehicle's center of gravity. The driver lost control

[3] www.safercar.gov

of the Ford after Event 1. The driver did not consciously apply the brakes, steer the vehicle or attempt any evasive maneuvers that she was able to recall. The Ford rapidly rotated clockwise approximately 40 degrees to a point at which the roadway's opposing lateral forces against the left side tires induced a left side leading turn-over type rollover. The vehicle rolled about its longitudinal axis for four quarter-turns, then came to rest on its wheels. The left, right and top planes contained direct damage flow patterns that were consistent with a single rollover impact to each plane. The vehicle came to final rest in the westbound travel lane and facing west. The estimated roll distance was 12.2 m (40.0 ft) and the positive 2.8 - 2.3 percent uphill grade of the roadway diminished the vehicle's roll distance somewhat.

The roadway was dry at the time of the crash, and the Ford's tires were in good condition and were properly inflated. The vehicle's ESC was not a factor since the vehicle'stires did not spin. The RSC was probably activated during the vehicle's clockwise rotation, but there was insufficient time and distance between the two events for the anti-roll technology to counteract
the vehicle's lateral movement.

Vehicle Data - 2006 Volkswagen New Beetle

The 2006 Volkswagen New Beetle was identified by the VIN: 3VWRW31C36Mxxxxxx. The Volkswagen was a two-door hatchback equipped with seating for four occupants. The vehicle was equipped with a 2.5-liter, 5-cylinder engine, front wheel drive, ABS, 4-wheel anti-lock brakes, electronic stability control, traction control, daytime running lights, power steering, collapsible steering wheel with tilt and telescoping functionality, and active front row head restraints. The vehicle manufacturer's recommended tire size was P205/55R16.

Occupant Demographics - 2009 Ford Escape XLT

	Driver
Age/Sex:	36 years/Female
Height:	173 cm / 68 in
Weight:	68 kg / 150 lb
Seat Type:	Bucket with adjustable head restraint
Seat Track Position:	Between middle and full-forward
Manual Restraint Usage:	Lap and shoulder belt used
Restraint Usage Source:	Vehicle inspection
Air Bag:	Frontal, not deployed; Seat-mounted side air bag and IC air bag, deployed
Eyewear:	None
Alcohol/Drug Involvement:	None
Type of Medical Treatment	Transported, treated, and released

Occupant Kinematics - 2009 Ford Escape XLT

Driver

The 36-year-old female driver was seated in an upright posture and was restrained by the vehicle's 3-point manual lap and shoulder belt. Her seat track was set between the middle and full-forward position and her seat back was slightly reclined. During the interview the driver stated that she was actively steering the vehicle, her hands were at the 3 and 9 o'clock positions, her right foot was on the accelerator, and her left foot was on the floor. The vehicle was traveling in the eastbound lane at a driver-estimated speed of less than 64 km/h (40 mph).

At impact with the Volkswagen, the driver was displaced slightly forward and to the right in response to the 2 o'clock direction of force. The Ford initiated a clockwise rotation and rapidly reached its trip point. The driver continued to be displaced right in response to the vehicle's rotation. The driver sustained a cervical strain as a result of impact forces from the vehicle-to-vehicle contact. Her right elbow contacted the center console. The console was deformed 1 cm (0.4 in) to the right and the contact resulted in an abrasion to her right elbow.

The vehicle initiated a left side leading turn-over type rollover and the left and right IC air bags and left seat-mounted side air bag deployed. During the rollover, the driver loaded the safety belt resulting in load marks to the webbing, latch plate and D-ring, and the driver sustained a chest abrasion. The driver indicated during the interview that her head probably contacted the left IC air bag; while no loading evidence was observed on the air bag, the medical records indicated she sustained a contusion to her left face and complained of a headache. The front row left side glass disintegrated and the driver was contacted by flying glass resulting in a minor scalp laceration. The attending physician in the emergency room removed one kernel of glass that was embedded in her posterior scalp. At some point, the driver's left foot contacted a foot control that resulted in a minor laceration to the exposed skin on the top of her foot.

The driver was ground transported to a local hospital, where she was treated and released. She did not miss any days from her work due to her injuries.

Occupant Injuries - 2009 Ford Escape XLT

Driver

The injury data was obtained from the driver's medical records and the interview.

Injury	OIC Code	Injury Mechanism	Confidence Level
Laceration, minor, posterior scalp	190602.1,6	Flying glass	Certain
Contusion, left face	290402.1,2	IC air bag	Probable
Cervical strain	640278.1,6	Impact forces	Probable

Abrasion, chest	490202.1,4	Safety belt webbing	Certain
Abrasion, right elbow	790202.1,1	Center console	Probable
Laceration, minor, right foot	890602.1,1	Foot controls	Probable

Attachment 1. Scene Diagram