EA12-005

FORD

2/18/2013

APPENDIX C2

LAWSUIT 1

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FORD

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APPENDIX C2

LAWSUIT 1

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Attorney for Petitioner

IN THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF MARICOPA

ARMANDO RIVERA, a single man, and as natural parent for MONSERRAT RIVERA, a minor child, SOPHIA DIAZ, as next of kin for ARCELIA DIAZ and INEZ ASTORGA, deceased single adults, JAIME ROBERTO PEREZ, as natural parent for JAIME PEREZ, a minor child,	**CV. 2005-017559**
Plaintiffs,	
v.	**FIRST AMENDED COMPLAINT**
FORD MOTOR COMPANY, a foreign corporation; LEDEZMA AUTO SALES, an Arizona Corporation; LORENZO FAVELA and JANE DOE FAVELA, husband and wife, JOHN DOES I-X, JANE DOES I thru X, BLACK CORPORATIONS I-X; WHITE CORPORATIONS I-X;	**(Tort-Product Liability-Negligence, Wrongful Death)**
Defendants,	

For Their cause of action, Plaintiffs allege as follows:

PARTIES, JURISDICTION AND VENUE

1. Plaintiff, ARMANDO RIVERA, was at all times mentioned herein a single man and a resident of Maricopa County, Phoenix, Arizona. Plaintiff MONSERRAT RIVERA was at all times mentioned herein a minor child and a resident of Maricopa County, Phoenix, Arizona.

2. Plaintiff SOPHIA DIAZ was at all times mentioned herein a single woman and a resident of Maricopa County, Phoenix, Arizona. Sophia Diaz is the daughter of the deceased INEZ ASTORGA, and the sister and next of kin to the deceased ARCELIA DIAZ.

3. Plaintiff JAIME ROBERTO PEREZ was at all times mentioned herein a single man, the natural parent of deceased minor child JAIME PEREZ, and a resident of Maricopa County, Phoenix, Arizona. JAIME PEREZ was at all times mentioned herein a minor child and a resident of Maricopa County, Phoenix, Arizona.

4. Defendant FORD MOTOR COMPANY ("Ford") is a Delaware corporation duly authorized to do business and doing business in the State of Arizona.

5. Defendant LEDEZMA AUTO SALES is an Arizona corporation duly authorized to do business and doing business in the State of Arizona.

6. Defendants LORENZO FAVELA and JANE DOE FAVELA were at all times described herein a married couple and upon information and belief, residents of El Paso, Texas.

7. JANE DOE FAVELA is a fictitiously-named defendant whose true identity is presently unknown to plaintiffs. Plaintiffs will amend this Complaint when the true identity of JANE DOE FAVELA becomes known to them.

8. All acts of the FAVELA Defendants alleged herein were

performed on behalf and in furtherance of their marital community.

9. Defendants JOHN DOES and JANE DOES I-X, inclusive, BLACK and WHITE CORPORATIONS I-X, inclusive, are parties who may have liability in the suit but whose true names are not known at this time. When the true identities of these fictitiously-named Defendants are known, leave of Court will be sought to amend this Complaint accordingly.

10. The actions of Defendants described herein have caused damages in a sufficient amount to satisfy the minimum jurisdictional amount established for the filing of this action in this Court.

11. Venue is proper in this Court under A.R.S. sec.12-401(10).

BACKGROUND

12. On May 28, 2005, at approximately 12:00 Noon, Plaintiff, ARMANDO RIVERA, was lawfully operating a 1998 Ford Explorer motor vehicle on Interstate 17 at or near its intersection with Rose Garden Lane, in Phoenix, Arizona. The Explorer was being used in a reasonably foreseeable manner as a passenger vehicle.

13. On said date, Plaintiffs MONSERRAT RIVERA, ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ were traveling as passengers inside the Ford Explorer operated by ARMANDO RIVERA.

14. On said date, Plaintiff RIVERA slowed and ultimately stopped for a traffic backup on the Interstate, when his

Explorer was struck in the rear by a Ford Pick Up truck being driven by Defendant LORENZO FAVELA.

15. At the time of the collision the Ford Explorer caused puncture or rupture of the Explorer's gas tank, punctured/perforated upon information and belief by components, resulting in spillage of gasoline which immediately ignited engulfing the passenger compartment of the Ford Explorer in flames.

16. At the time of the collision the Ford Explorer caused puncture or rupture of the Explorer's gasoline tank. Upon information and belief, the gasoline tank on the Explorer was punctured/perforated by components of the Ford Explorer, resulting in spillage of gasoline which immediately ignited, engulfing the passenger compartment of the Explorer in flames.

17. There were several passerbyes and witnesses at the scene, and several of them successfully extricated Plaintiffs MONSERRAT RIVERA, ARMANDO RIVERA and ARCELIA DIAZ from the burning vehicle. Irrespectively, ARMANDO RIVERA and ARCELIA DIAZ sustained catastrophic injuries, with severe burns over nearly ninety percent of their bodies. Additionally, MONSERRAT RIVERA sustained significant injuries and burns of a lesser degree.

18. Despite best efforts of emergency medical personnel and state of the art Burn Unit medical treatment, ARCELIA DIAZ died three days after the accident from burns sustained therein.

19. INEZ ASTORGA and JAIME DIAZ were injured, yet fully conscious and alive after the initial impact of the Defendant FAVELA's vehicle. However, despite the best efforts of witnesses and bystanders, both were burned alive after the Explorer's gasoline tank exploded.

COUNT I

STRICT PRODUCTS LIABILITY

(DEFENDANTS FORD MOTOR AND LEDEZMA AUTO)

20. Plaintiffs hereby incorporate all preceding paragraphs as though fully set forth herein.

21. Defendants Ford and Ledezma are sellers within the meaning of A.R.S. sec.12-681(7) of the product which is the subject of this action.

22. Ford is a manufacturer of the subject product within the meaning of A.R.S. sec. 12-681(1).

23. Ford manufactured a 1998 Explorer Sports Utility Vehicle (the Explorer), Vehicle Identification Number 1FMYU22X5WUA79238 which is the subject matter of this action.

24. Ford designed, engineered, manufactured, marketed and sold the subject Explorer and other Explorers as family vehicles, suited for travel and transportation of every normal everyday use by the general public.

25. At some point prior to 1998, Ford sold the Explorer in the State of Arizona to **Ledezma Auto**. Ledezma, in turn, sold it to Armando Rivera for use as a primary means of family transportation.

26. Ford and Ledezma knew that the Explorer would be used by Armando Rivera or another member of the genera public without substantial change in condition, and the Explorer was, in fact, in substantially the same condition on May 28, 2005, as when it wa sold.

27. The Explorer was in a defective and unreasonably dangerous condition when put to the use for which it had been designed, manufactured, distributed, assembled, and sold by Defendants Ford and Ledezma Auto and was also defective and unreasonably dangerous because of the failure of the Defendants Ford and Ledezma Auto to provide a suitable warning of the dangers inherent in the fuel system design.

28. Defendants Ford and Ledezma Auto are strictly liable in tort for placing a defective and unreasonably dangerous product, the Explorer, into the stream of commerce, which product proximately caused the deaths of ARCELIA DIAZ, INEZ ASTORGA, and JAIME PEREZ, as well as the serious burns of ARMANDO RIVERA and MONSERRAT RIVERA.

29. As a direct and proximate result of the fault of the Defendants Ford and Ledezma Auto, ARCELIA DIAZ, INEZ ASTORGA, and minor child JAIME PEREZ are deceased, after being fully conscious and suffering the torment of being burnt alive.

30. As a direct and proximate result of the fault of the Defendants Ford and Ledezma Auto, ARMANDO RIVERA has suffered severe, disabling and permanent injuries, and has incurred and will continue in the future to incur substantial expenses for

his medical care.

31. As a direct and proximate result of the fault of the Defendants Ford and Ledezma Auto, ARMANDO RIVERA has endured and will continue to endure great physical pain and suffering, mental anguish, and anxiety.

32. As a direct and proximate result of the fault of the Defendants Ford and Ledezma Auto, the minor child MONSERRAT RIVERA has suffered significant and painful burns and injuries.

33. The acts and conduct of Ford as alleged herein were performed with reckless indifference and demonstrated both an awareness of, and a conscious disregard of, a substantial and unjustified risk that significant harm would occur to persons like Arcelia Diaz, Inez Astorga, Jaime Diaz, Armando Rivera and Monserrat Rivera. Ford pursued a course of conduct to serve its own pecuniary interests despite knowing it was inevitable or highly probable that signficant harm to persons like Arcelia Diaz, Inez Astorga, Jaime Diaz, Armando Rivera and Monserrat Rivera would follow. Plaintiffs are therefore entitled to recover punitive damages from Ford.

COUNT II

NEGLIGENCE AND WRONGFUL DEATH

(DEFENDANT FORD)

34. Plaintiffs hereby incorporate all preceding paragraphs as though fully set forth herein.

35. Defendant Ford had a duty to exercise due care in the design, manufacture, engineering, marketing, and sale of the

Explorer and in warning of unreasonably dangerous conditions and propensities that existed with the Explorer.

36. Defendant Ford breached these duties in designing, manufacturing, engineering, marketing, selling and failing to warn about the subject Explorer and its defective and unreasonably dangerous condition.

37. Prior to their deaths, ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ were all in good health and were capable of working and earning income. Their next of kin are entitled to the fair monetary value of the decedents, including, but not limited to, compensation for the loss of the reasonably expected net income, services, protections, care, assistance, society, companionship, comfort, guidance, counsel, and advice of the decedent and to the reasonable medical, funeral, and burial expenses incurred.

38. As a direct and proximate result of Defendant Ford's negligence, ARCELIA DIAZ, INEZ ASTORGA and JAIME DIAZ died excruciating deaths by literally being burned alive inside the Explorer. ARMANDO RIVERA and MONSERRAT RIVERA both suffered multiple injuries and severe burns.

39. As a direct and proximate result of the negligence of Defendant Ford, ARMANDO RIVERA and MONSERRAT RIVERA have suffered severe, disabling and permanent injuries, and have incurred and will continue to incur substantial expenses for their medical care.

40. As a direct and proximate result of the negligence of

Defendant Ford, ARMANDO RIVERA and MONSERRAT RIVERA have endured and will continue in the future to endure great physical pain and suffering, mental anguish, and anxiety.

41. As a direct and proximate result of the negligence of Defendant Ford, ARMANDO RIVERA has incurred and will continue in the future to incur loss of income and diminished earning capacity.

42. As a direct and proximate result of the negligence of Defendant Ford, the family and next of kin of ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ have each suffered, and will continue to suffer, the loss of consortium, love, society, affection, companionship, care, protection, and guidance of ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ.

43. The acts and conduct of Defendant Ford as alleged herein were performed with reckless indifference and demonstrated both an awareness of, and a conscious disregard of, a substantial and unjustified risk that significant harm would occur to people like Arcelia Diaz, Inez Astorga, Jaime Diaz, Armando Rivera and Monserrat Rivera. FORD pursued a course of conduct to serve its own pecuniary interests despite knowing it was inevitable or highly probable that significant harm to people like the above listed persons would follow. Plaintiffs are therefore entitled to recover punitive damages from Ford.

COUNT III

NEGLIGENCE AND WRONGFUL DEATH

(DEFENDANT LORENZO FAVELA)

43. Plaintiffs hereby incorporate all preceding paragraphs as though fully set forth herein.

44. Defendant Lorenzo Favela negigently and recklessly operated his vehicle in violation of the traffic laws which caused the collision resulting in injuries to Plaintiffs by; (1) failing to keep a proper lookout and being inattentive, and/or (2)failing to avoid a collision with Plaintiffs' vehicle; and/or (3) failure to control the speed of his vehicle, and speeding in excess of the posted speed limits; and/or (4) was otherwise negligent, careless and reckless.

45. Prior to their deaths, ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ were all in good health and were capable of working and earning income. Their next of kin are entitled to the fair monetary value of the decedents, including, but not limited to, compensation for the loss of the reasonably expected net income, services, protections, care, assistance, society, companionship, comfort, guidance, counsel, and advice of the decedent and to the reasonable medical, funeral, and burial expenses incurred.

46. As a direct and proximate result of the negligent, reckless, and careless conduct of LORENZO FAVELA and the collision he caused, Plaintiffs ARMANDO RIVERA and MONSERRATT RIVERA sustained serious injuries and burns to a large

percentage of their bodies. These injuries have been extremely painful to both ARMANDO and MONSERRAT RIVERA, has interferred with their ability to enjoy life and to perform everyday tasks. By reason thereof, ARMANDO and MONSERATT RIVERA have incurred and will incur medical expenses and other consequential damages relating to said injuries.

47. As a direct and proximate result of the negigent, reckless and careless conduct of LORENZO FAVELA, and the collision he caused, Plaintiffs ARCELIA DIAZ, INEZ ASTORGA and minor child JAIME PEREZ lost their lives. While all three survived the initial vehicle impact, INEZ ASTORGA and JAIME PEREZ burned to death at the scene of the accident. Plaintiff ARCELIA DIAZ survived five extremely painful days in the hospital's burn unit before also succumbing to the horrific burn injuries.

48. As a direct and proximate result of the negligence of Defendant Favela, the family and next of kin of ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ have each suffered, and will continue to suffer, the loss of consortium, love, society, affection, companionship, care, protection, and guidance of ARCELIA DIAZ, INEZ ASTORGA and JAIME PEREZ.

WHEREFORE, Plaintiffs pray judgment for damages as follows:

A. For damages for personal injuries;

B. For damages for wrongful death, including the loss of love, society, affection, companionship, care,

protection and guidance;

C. For past and future pain and suffering;

D. For past and future medical expenses;

E. For past and future lost wages and loss of earning capacity;

F. For loss of consortium;

G. For loss of income and services;

H. For punitive damages against Defendants Ford Motor Company and Lorenzo Favela;

I. For costs incurred herein;

J. For pre- and post-judgment interest as allowed by law; and

K. For such other and further relief as may be just and proper.

DATED THIS 20th Day of September, 2006.

Douglas S. Younglove
DOUGLAS S. YOUNGLOVE, P.L.L.C
Attorney for Plaintiffs

Copy of the foregoing
mailed this 20th day of
September, 2006, to:

Ronald W. Collett
JONES, SKELTON & HOCHULI, P.L.C.
2901 N. Central Avenue
Phoenix, Arizona 85012
Attorney for Defendants

By

LAW OFFICES OF
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P.O. Box 10766
Phoenix, Arizona 85064-0766
(602) 434-2623/(602) 283-4019-Fax

SEP 2 [illegible] 2005

September 13, 2005

VIA U.S. MAIL:

Office of General Counsel
FORD MOTOR COMPANY
Parklane Towers-West Suite 300
3 Parklane Blvd.
Dearborn, MI. 48121-6234

Re: Our Clients: [redacted]

Date of Loss: May 28, 2005

Dear Sir or Madam:

This is notify you that the above referenced clients and/or their next of kin have retained this office for representation regarding their respective wrongful death and personal injury claims. Please direct all further communication with regard to these claims to us.

These claims result from a horrific and tragic automobile accident which occurred on May 28th of this year. My clients were all traveling in a 1999 Ford Explorer when it was rear ended by another Ford vehicle, a 2002 Ford F150 Pick up truck. The impact caused the Explorer's rear axle to puncture the Explorer's fuel tank, resulting in an explosion and consuming fire. Three of my clients, [redacted] while surviving the initial impact, were subsequently burned to death in the resulting fire. Mr. [redacted] and his minor daughter, [redacted], suffered severe and disfiguring injuries, but survived.

We believe the facts will show that this gas tank puncture and resulting explosion/fire could have easily and inexpensively been prevented by the installation of the plastic shields utilized in the Crown Victoria retrofits, and that your company was in possession of this cost/risk analysis and information at the time the 1999 Explorers were manufactured.

Enclosed please find a copy of the Arizona Department of Public Service's accident report detailing the facts of this case. We are in the process of gathering and compiling all pertinent information to assist your evaluation of these claims, and will be forwarding this information along with our demands for compensation and resolution in the near future. Meanwhile, we would appreciate your acknowledgment of these claims. If you have any questions, please do not hesitate to contact us at the above listed numbers.

Thank you in advance for your cooperation in this situation.

Sincerely,

Douglas S. Younglove
Attorney at Law

DSY/eam

JUN 23 2005 30

ADOT USE ONLY

1 POLICE ONLY - FORWARD COPY TO:
ADOT TRAFFIC RECORDS SECTION 064R
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

YEAR MONTH DAY	HOUR	NCIC NO.	OFFICER ID NO.	Agency Report Number
2005/05/28	12 55	0799	04292	2005-027759

Total No. of Sheets 31

COMPLETE THE FOLLOWING SUPPLEMENT IF ANY ○ (circle) AND ANY ◇ (diamond) ARE CHECKED

2 Total Units 4 | Total Injuries 7 | Total Fatalities 3 | Estimated Total Damage Compared to Limit ☑ Over ☐ Under | ☑ Fatal ☐ Hit/Run ☐ Govt. Prop. | ☑ Persons Transported for Immediate Medical Care? ☑ Tow Away at Least One (1) Vehicle from Scene? | District or Grid No. 1 0 0 2

3 LOCATION
On Highway/Road/Street: I-17 | ☑ Inside ☐ Outside | City: PHOENIX | County: MARICOPA
Intersecting Street, Road / M.P. or R.P.: ☑ At ☐ From 214.9 NORTHBOUND | ☐ North ☐ South ☐ East ☐ West | ☐ Plus ☐ Minus | Distance | ☐ Measured ☐ Approximate | ☐ Miles ☐ Feet

4 TRAFFIC UNIT NO. 1

State	Class	End	DL# / SSN / BOTH	Driver / Pedestrian / Pedalcyclist	Name	Sex	Inj.
TX	C	-	[redacted]	☑ Driver	[redacted]	M	3

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number (w/Area Code)
-	[redacted]	[redacted]	El Paso	TX	[redacted]	

Plate Number	State	Year	Owner/Carrier Name (☑ Same as Driver)	Address	City	State	Zip Code
[redacted]	TX	1205	☑				

Body Style	◇ Bus (9 or more seats)	Make	Color	Year	VIN	Safety Device Code
P/U		FORD	GREEN	2002	1FTRX17292[redacted]	3-4

Removed to	Disabled / Not Disabled	Removed by	Orders of	Posted Speed Limit	Ofc Est Speed
TRI STAR TOW	☑ Disabled ☐ Not Disabled	[redacted]	DPS	65	70

Insurance Company	Telephone Number (w/Area Code)	Policy Number	Effective Date	Expiration Date
State Farm	[redacted]	[redacted]	04/25/2005	10/17/2005

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit	G.V.W. (Registered) of Power Unit Greater than 10k pounds? ◇ Yes ☐ No	HazMat Placard? ◇ Yes ☐ No	4-digit	1-digit	Was HazMat Cargo Released? ☐ Yes ☐ No

4 TRAFFIC UNIT NO. 2

State	Class	End	DL# / SSN / BOTH	Driver / Pedestrian	Name	Sex	Inj.
AZ	I	-	[redacted]	☑ Driver	[redacted]	M	4

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number (w/Area Code)
-	[redacted]	[redacted]	PHOENIX	AZ	[redacted]	

Plate Number	State	Year	Owner/Carrier Name (☑ Same as Driver)	Address	City	State	Zip Code
[redacted]	AZ	407	☑				

Body Style	◇ Bus (9 or more seats)	Make	Color	Year	VIN	Safety Device Code
2/DR SUV		FORD	WHT	98	1FMYU22X5WU[redacted]	3

Removed to	Disabled / Not Disabled	Removed by	Orders of	Posted Speed Limit	Ofc Est Speed
TRI STAR TOW	☑ Disabled ☐ Not Disabled	TRI STAR 623-561-2181	DPS	65	0

Insurance Company	Telephone Number (w/Area Code)	Policy Number	Effective Date	Expiration Date

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit	G.V.W. (Registered) of Power Unit Greater than 10k pounds? ◇ Yes ☐ No	HazMat Placard? ◇ Yes ☐ No	4-digit	1-digit	Was HazMat Cargo Released? ☐ Yes ☐ No

4 TRAFFIC UNIT NO. 3

State	Class	End	DL# / SSN / BOTH	Driver	Name	Sex	Inj.
AZ	D	-	[redacted]	☑ Driver	[redacted]	F	3

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number (w/Area Code)
-	[redacted]	[redacted]	Phoenix	AZ	[redacted]	

Plate Number	State	Year	Owner/Carrier Name (☑ Same as Driver)	Address	City	State	Zip Code
623EVF	AZ	807	☑				

Body Style	◇ Bus (9 or more seats)	Make	Color	Year	VIN	Safety Device Code
4 /DR		Dodge	Maroon	2000	1B3EJ46XZYN[redacted]	3-4

Removed to	Disabled / Not Disabled	Removed by	Orders of	Posted Speed Limit	Ofc Est Speed
TRI STAR TOW	☑ Disabled ☐ Not Disabled	TRI STAR 623-561-2181	DPS	65	0

Insurance Company	Telephone Number (w/Area Code)	Policy Number	Effective Date	Expiration Date
Geico	800-841-3000	[redacted]		

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit	G.V.W. (Registered) of Power Unit Greater than 10k pounds? ◇ Yes ☐ No	HazMat Placard? ◇ Yes ☐ No	4-digit	1-digit	Was HazMat Cargo Released? ☐ Yes ☐ No

Seating Position
07 04 01
08 05 02
09 06 03
10 Not in Passenger Compart
11 Motorcycle, Bus
12 Other
13 Unknown
14 Pedalcyclist

Safety Devices
1 - None used
2 - Lap belt
3 - Lap & shoulder
4 - Airbag deployed
5 - Child restraint
6 - Protective helmet
7 - Passive belt
8 - Passive & lap
9 - Other
0 - Unknown

Injury Severity Codes
1 - No injury
2 - Possible injury
3 - Non incapacitating injury
4 - Incapacitating injury
5 - Fatal injury
6 - Not Reported / Unknown

5 PASSENGERS

Unit No.	Seat Pos.	Saf. Dev.	Name	Address	City	State	Zip Code	Age	Sex	Inj. Sev.
1	03	3	[redacted]	[redacted]	El Paso	TX	[redacted]	16	M	4
2	03	3			Phoenix	AZ		32	F	5
2	04	3			Phoenix	AZ		6	M	5
2	05	0			Phoenix	AZ		59	F	5
2	06	5			Phoenix	AZ		2	F	3
3	03	3			Phoenix	AZ		11	M	3

6 Other Property Damage
Owner's Name | Address | City | State | Telephone Number (w/Area Code)

7 WITNESSES

	City	State		Age
[redacted]	Glendale 85302	AZ	[redacted]	31
	Glendale 85302	AZ		28
	Bakersfield 93308	CA		26

8

Photos Taken	Photographer's Name	ID Number	Agency Name	Investigation at Scene	Date Investigated	Time Investigated
☑ Yes ☐ No	D Leech	4292	AZ DPS	☑ Yes ☐ No	05/28/2005	13 15

Officer's Signature	Badge No.	Agency Name	Date Completed
D Leech	4292	Arizona Department of Public Safety	06/01/2005

9 - DIAGRAM

2005-027759

10 - DATE

NORTH

11 - SKIDDING OCCURRED

	VEHICLE 1	2	3
YES	☐	☐	☐
NO	☒	☒	☒

12 - CITATIONS

UNIT NO.	A.R.S. NO. OR CITY CODE
1	28-701-A

14 - PRIOR ACTION

☐ YES ☒ NO — RAN OFF ROADWAY PRIOR TO FIRST HARMFUL EVENT

☐ RIGHT ☐ LEFT UNIT NO.

15 - MANNER OF COLLISION
CHECK ONLY ONE (1)

1 ☐ SINGLE VEHICLE
2 ☐ ANGLE
3 ☐ LEFT TURN
4 ☐ RIGHT TURN
5 ☐ U-TURN
6 ☒ REAR-END
7 ☐ HEAD-ON
8 ☐ SIDESWIPE (SAME DIRECTION)
9 ☐ SIDESWIPE (OPPOSITE DIRECTION)
10 ☐ BACKING
11 ☐ NON-CONTACT MOTORCYCLE
12 ☐ NON-CONTACT NON-MOTORCYCLE
13 ☐ PEDESTRIAN
14 ☐ PEDALCYCLE
15 ☐ OTHER

13 - DESCRIBE WHAT HAPPENED

—

INJURED TAKEN TO / BY —

30 - TRAFFIC UNIT ACTION
CHECK ONE (1) PER UNIT

	1	2	3	
1	☒	☐	☐	GOING STRAIGHT AHEAD
2	☐	☒	☐	SLOWING IN TRAFFICWAY
3	☐	☐	☒	STOPPED IN TRAFFICWAY
4	☐	☐	☐	MAKING LEFT TURN
5	☐	☐	☐	MAKING RIGHT TURN
6	☐	☐	☐	MAKING U TURN
7	☐	☐	☐	ENTERING ALLEY OR DRIVEWAY
8	☐	☐	☐	LEAVING ALLEY OR DRIVEWAY
9	☐	☐	☐	OVERTAKING / PASSING
10	☐	☐	☐	CHANGING LANES
11	☐	☐	☐	BACKING
12	☐	☐	☐	AVOIDING VEHICLE, OBJECT, PEDESTRIAN
13	☐	☐	☐	ENTERING PARKING POSITION
14	☐	☐	☐	LEAVING PARKING POSITION
15	☐	☐	☐	PROPERLY PARKED
16	☐	☐	☐	IMPROPERLY PARKED
17	☐	☐	☐	DRIVERLESS MOVING VEHICLE
18	☐	☐	☐	CROSSING ROAD
19	☐	☐	☐	WALKING WITH TRAFFIC
20	☐	☐	☐	WALKING AGAINST TRAFFIC
21	☐	☐	☐	STANDING
22	☐	☐	☐	LYING
23	☐	☐	☐	GETTING ON OR OFF VEHICLE
24	☐	☐	☐	WORKING ON OR PUSHING VEHICLE
25	☐	☐	☐	WORKING ON ROAD
26	☐	☐	☐	OTHER
27	☐	☐	☐	UNKNOWN

16 - LIGHT CONDITION
CHECK ONLY ONE (1)

1 ☒ DAYLIGHT
2 ☐ DAWN OR DUSK
3 ☐ DARKNESS

	YES	NO	
1	☒	☐	STREET LIGHT
2	☐	☒	STREET LIGHT FUNCTIONING

17 - WEATHER CONDITIONS
CHECK ONLY ONE (1)

1 ☒ CLEAR
2 ☐ CLOUDY
3 ☐ SLEET / HAIL
4 ☐ RAIN
5 ☐ SNOW
6 ☐ SEVERE CROSSWINDS
7 ☐ BLOWING SAND, SOIL, DIRT, SNOW
8 ☐ FOG, SMOG, SMOKE

18 - ROAD SURFACE TYPE
CHECK ONLY ONE (1)

1 ☐ ASPHALT
2 ☒ CONCRETE
3 ☐ GRAVEL
4 ☐ DIRT
5 ☐ OTHER

19 - TYPE OF LOCATION
CHECK ONLY ONE (1)

1 ☐ INTERSECTION
2 ☐ JUNCTION AREA
3 ☒ NON-JUNCTION AREA
4 ☐ DRIVEWAY ACCESS
5 ☐ ALLEY ACCESS
6 ☐ ALLEY

20 - INTERSECTION RELATED

1 ☐ YES
2 ☒ NO

21 - SPECIAL CONDITION
CHECK ONLY ONE (1)

1 ☐ SCHOOL CROSSING
2 ☐ PEDESTRIAN CROSSWALK (STRIPED)
3 ☐ PEDESTRIAN CROSSWALK (NO STRIPPING)
4 ☐ BRIDGE
5 ☐ TUNNEL
6 ☐ RR CROSSING
7 ☐ GORE AREA
8 ☐ BIKE PATH
9 ☐ 2-WAY LEFT TURN LANE

22 - UNUSUAL ROAD CONDITION
CHECK ONLY ONE (1)

1 ☐ UNDER CONSTRUCTION, TRAFFIC ALLOWED
2 ☐ UNDER CONSTRUCTION, NO TRAFFIC ALLOWED
3 ☐ UNDER REPAIRS
4 ☐ HOLES, RUTS, BUMPS
5 ☐ OBSTRUCTION -
6 ☐ PROTECTED OBSTRUCTION -
7 ☐ UNPROTECTED OBSTRUCTION - UNLIGHTED
8 ☐ AT NIGHT
9 ☐ DEFECTIVE SHOULDERS
10 ☐ CHANGING ROAD WIDTH
WATER (STANDING OR
11 ☐ MOVING)

23 - TRAFFIC CONTROL DEVICES
LEGEND:
A - DEVICE OPERATIONAL
B - DAMAGED OR NON-FUNCTIONAL PRIOR TO ACCIDENT
CHECK ALL THAT APPLY

	A	B	
1	☐	☐	TRAFFIC SIGNAL
2	☐	☐	YIELD SIGN
3	☐	☐	STOP SIGN
4	☐	☐	WARNING SIGN
5	☐	☐	RAILROAD SIGNAL
6	☐	☐	FLASHING SIGNAL
7	☐	☐	FLAGMAN OR OFFICER

24 - NON INTERSECTION ROAD CHARACTER
CHECK ONLY ONE (1)

1 ☐ 2-WAY, STRIPED CENTERLINE
2 ☐ 2-WAY, NO STRIPE
3 ☐ 2-WAY, PAINTED MEDIAN
4 ☐ 2-WAY, RAISED MEDIAN
5 ☒ 2-WAY, CONCRETE BARRIER
6 ☐ 2-WAY, CABLE BARRIER
7 ☐ 2-WAY, DEPRESSED MEDIAN
8 ☐ 2-WAY, EXTENDED MEDIAN
9 ☐ 1-WAY STREET

25 - ROAD GRADE
CHECK ONLY ONE (1)

1 ☒ LEVEL
2 ☐ DOWNGRADE
3 ☐ UPGRADE
4 ☐ HILLCREST
5 ☐ DIP

26 - ROAD SURFACE CONDITION
CHECK ONLY ONE (1)

1 ☒ DRY
2 ☐ WET
3 ☐ SAND, MUD, DIRT, OIL, GRAVEL
4 ☐ SNOW
5 ☐ SLUSH
6 ☐ ICE
7 ☐ OTHER
8 ☐ UNKNOWN

27 - CONDITIONS INFLUENCING DRIVER
TWO (2) CHOICES PER PERSON MAY BE SELECTED

	1	2	3	
1	☒	☒	☒	NO APPARENT INFLUENCE
2	☐	☐	☐	HAD BEEN DRINKING
3	☐	☐	☐	USE OF ILLICIT DRUGS
4	☐	☐	☐	ILLNESS
5	☐	☐	☐	FELL ASLEEP / FATIGUED
6	☐	☐	☐	PHYSICAL IMPAIRMENT
7	☐	☐	☐	PRESCRIPTION DRUGS
8	☐	☐	☐	OTHER
9	☐	☐	☐	UNKNOWN

28 - VIOLATIONS / BEHAVIOR
TWO (2) CHOICES PER PERSON MAY BE SELECTED

	1	2	3	
1	☐	☒	☒	NO IMPROPER ACTION
2	☒	☐	☐	SPEED TOO FAST FOR CONDITIONS
3	☐	☐	☐	EXCEEDED LAWFUL SPEED
4	☐	☐	☐	FAILED TO YIELD RIGHT-OF-WAY
5	☐	☐	☐	FOLLOWED TOO CLOSELY
6	☐	☐	☐	RAN STOP SIGN
7	☐	☐	☐	DISREGARDED TRAFFIC SIGNAL
8	☐	☐	☐	MADE IMPROPER TURN
9	☐	☐	☐	DROVE IN OPPOSING TRAFFIC LANE
10	☐	☐	☐	KNOWINGLY OPERATED WITH FAULTY OR MISSING EQUIPMENT
11	☐	☐	☐	REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED
12	☐	☐	☐	PASSED IN NO PASSING ZONE
13	☐	☐	☐	UNSAFE LANE CHANGE
14	☐	☐	☐	OTHER UNSAFE PASSING
15	☒	☐	☐	INATTENTION
16	☐	☐	☐	DID NOT USE CROSSWALK
17	☐	☐	☐	WALKED ON WRONG SIDE OF ROAD
18	☐	☐	☐	OTHER
19	☐	☐	☐	UNKNOWN

29 - VEHICLE CONDITION
TWO (2) CHOICES PER PERSON MAY BE SELECTED

	1	2	3	
1	☒	☒	☒	NO APPARENT DEFECTS
2	☐	☐	☐	DEFECTIVE BRAKES
3	☐	☐	☐	DEFECTIVE STEERING
4	☐	☐	☐	DEFECTIVE HEADLIGHTS
5	☐	☐	☐	DEFECTIVE TAIL LIGHTS
6	☐	☐	☐	DEFECTIVE TURN-SIGNAL
7	☐	☐	☐	PUNCTURE OR BLOWOUT
8	☐	☐	☐	ONE OR MORE SMOOTH TIRES
9	☐	☐	☐	FIRE
10	☐	☐	☐	DEFECTIVE WINDSHIELD WIPER
11	☐	☐	☐	DEFECTIVE EXHAUST SYSTEM
12	☐	☐	☐	OTHER DEFECTS
13	☐	☐	☐	NO TRAILER BRAKES
14	☐	☐	☐	UNKNOWN

31 - VISION OBSCUREMENT
CHECK ONE (1) PER UNIT

	1	2	3	
1	☒	☐	☒	NOT OBSCURED
2	☐	☐	☐	BY PARKED / STOPPED VEHICLE
3	☐	☐	☐	BY MOVING VEHICLE
4	☐	☐	☐	BY BUILDING
5	☐	☐	☐	BY EMBANKMENT
6	☐	☐	☐	BY SIGNBOARD
7	☐	☐	☐	BY HILLCREST
8	☐	☐	☐	BY LOAD ON VEHICLE
9	☐	☐	☐	BY TREES, BUSHES
10	☐	☐	☐	BY HEADLIGHT
11	☐	☐	☐	BY SUN GLARE
12	☐	☐	☐	BECAUSE OF BAD WEATHER
13	☐	☐	☐	OTHER
14	☐	☐	☐	RAIN, SNOW, FOG ON WINDSHIELD
15	☐	☐	☐	WINDSHIELD OBSCURED - OTHER
16	☐	☒	☐	UNKNOWN

32 - DIRECTION OF TRAVEL
CHECK ONE (1) PER UNIT

	1	2	3			1	2	3	
1	☒	☒	☒	NORTH	5	☐	☐	☐	NW
2	☐	☐	☐	SOUTH	6	☐	☐	☐	NE
3	☐	☐	☐	EAST	7	☐	☐	☐	SW
4	☐	☐	☐	WEST	8	☐	☐	☐	SE
					9	☐	☐	☐	UNKNOWN

T USE ONLY

ARIZONA TRAFFIC ACCIDENT REPORT

REPORT ID

Agency Report Number: 2005-027759

1 POLICE ONLY - FORWARD COPY TO:
ADOT TRAFFIC RECORDS SECTION 064R
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

YEAR MONTH DAY	HOUR	NCIC NO.	OFFICER ID NO.
2005/05/28	12 55	0799	04292

Total No. of Sheets:

COMPLETE THE FOLLOWING SUPPLEMENT IF ANY ◇ (circle) AND ANY ◆ (diamond) ARE CHECKED

2 Total Units 4 | Total Injuries 7 | Total Fatalities 3 | Estimated Total Damage Compared to Limit: ◆ Over ☐ Under | ◆ Fatal ☐ Govt. ☐ Hit/Run | ◆ Persons Transported for Immediate Medical Care? ◆ Tow Away at Least One (1) Vehicle from Scene? | District or Grid No. 1 0 0 2

3 LOCATION

On Highway/Road/Street: I-17 | ◆ Inside ☐ Outside | City: PHOENIX | County: MARICOPA

Intersecting Street, Road / M.P or R.P. | ◆ At ☐ From MILEPOST 214.9 N/B | ☐ North ☐ South ☐ East ☐ West | ☐ Plus ☐ Minus | Distance | ☐ Measured ☐ Approximate | ☐ Miles ☐ Feet

4 TRAFFIC UNIT NO.

State	Class	End	DL# / SSN / BOTH	Driver / Pedestrian	Name	Sex	Inj.
MI	O	–	◆ DL# ☐ SSN ☐ BOTH B650307115724	◆ Driver	[redacted]	M	1

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number (w/Area Code)
–	[redacted]		Pinckney	MI	[redacted]	

Plate Number	State	Year	Owner/Carrier Name (Same as Driver)	Address	City	State	Zip Code
[redacted]	MI	06	☐ Same Driver [redacted]	[redacted]	Virginia Beach	VA	[redacted]

Body Style	Bus (9 or more seats)	Make	Color	Year	VIN	Safety Device Code
SUV	◇	Ford	Gold	2005	1FMZU73K05U[redacted]	3

Removed to		Removed by	Orders of	Posted Speed Limit	Ofc Est Speed
Destination	☐ Disabled ◆ Not Disabled	Driver	Driver	65	0

Insurance Company	Telephone Number (w/Area Code)	Policy Number	Effective Date	Expiration Date
Budget Rentals				

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit	G.V.W. (Registered) of Power Unit Greater than 10k pounds?	HazMat Placard?	4-digit	1-digit	Was HazMat Cargo Released?
				◇ Yes ☐ No	◇ Yes ☐ No			☐ Yes ☐ No

4 TRAFFIC UNIT NO.

State	Class	End	DL# / SSN / BOTH	Driver / Pedestrian	Name	Sex	Inj.
			☐ DL# ☐ SSN ☐ BOTH	☐ Driver ☐ Pedestrian			

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number (w/Area Code)

Plate Number	State	Year	Owner/Carrier Name (Same as Driver)	Address	City	State	Zip Code
			☐ Same as Driver				

Body Style	Bus (9 or more seats)	Make	Color	Year	VIN	Safety Device Code
	◇					

Removed to		Removed by	Orders of	Posted Speed Limit	Ofc Est Speed
	☐ Disabled ☐ Not Disabled				

Insurance Company	Telephone Number (w/Area Code)	Policy Number	Effective Date	Expiration Date

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit	G.V.W. (Registered) of Power Unit Greater than 10k pounds?	HazMat Placard?	4-digit	1-digit	Was HazMat Cargo Released?
				◇ Yes ☐ No	◇ Yes ☐ No			☐ Yes ☐ No

4 TRAFFIC UNIT NO.

State	Class	End	DL# / SSN / BOTH	Driver / Pedestrian	Name	Sex	Inj.
			☐ DL# ☐ SSN ☐ BOTH	☐ Driver ☐ Pedestrian			

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number (w/Area Code)

Plate Number	State	Year	Owner/Carrier Name (Same as Driver)	Address	City	State	Zip Code
			☐ Same as Driver				

Body Style	Bus (9 or more seats)	Make	Color	Year	VIN	Safety Device Code
	◇					

Removed to		Removed by	Orders of	Posted Speed Limit	Ofc Est Speed
	☐ Disabled ☐ Not Disabled				

Insurance Company	Telephone Number (w/Area Code)	Policy Number	Effective Date	Expiration Date

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit	G.V.W. (Registered) of Power Unit Greater than 10k pounds?	HazMat Placard?	4-digit	1-digit	Was HazMat Cargo Released?
				◇ Yes ☐ No	◇ Yes ☐ No			☐ Yes ☐ No

5 PASSENGERS

Seating Position: 07 04 01 / 08 05 02 / 09 06 03

10 Not in Passenger Compart; 11 Motorcycle, Bus; 12 Other; 13 Unknown; 14 Pedalcyclist

Safety Devices: 1 - None used; 2 - Lap belt; 3 - Lap & shoulder; 4 - Airbag deployed; 5 - Child restraint; 6 - Protective helmet; 7 - Passive belt; 8 - Passive & lap; 9 - Other; 0 - Unknown

Injury Severity Codes: 1 - No injury; 2 - Possible injury; 3 - Non Incapacitating Injury; 4 - Incapacitating injury; 5 - Fatal injury; 6 - Not Reported / Unknown

Unit No.	Seat Pos.	Saf. Dev.	Name	Address	City	State	Zip Code	Age	Sex	Inj. Sev.
3	06	3	[redacted]		Phoenix	AZ	[redacted]	13	M	3
4	03	3			Cave Creek	AZ		24	F	1
4	06	0			Ypsilanti	MI		–	M	1

6 Other Property Damage

Owner's Name	Address	City	State	Telephone Number (w/Area Code)

7 WITNESSES

Name	Address	City	State	Telephone Number	Age
[redacted]		Phoenix	AZ	[redacted]	28
		Anthem	AZ		35

8

Photos Taken	Photographer's Name	ID Number	Agency Name	Investigation at Scene	Date Investigated	Time Investigated
◆ Yes ☐ No	D Leech	4292	AZ DPS	◆ Yes ☐ No	05/28/2005	13 15

Officer's Signature	Badge No.	Agency Name	Date Completed
D Leech	4292	Arizona Department of Public Safety	06/02/2005

01-2704 R06/00 DPS 802-02704 Rev. 3/2001 Electronic Form (Version 2.3 Dated 10/15/2002)

EA12-005 000387LC

9 - DIAGRAM

2005-027759

INDICATE NORTH

N

N — N

N

11 - SKIDDING OCCURRED

	VEHICLE 1		
YES	[ ]	[ ]	[ ]
NO	[X]	[ ]	[ ]

12 - CITATIONS

UNIT NO.	A. R. S. NO. OR CITY CODE
1	28-701-A

14 - PRIOR ACTION

RAN OFF ROADWAY PRIOR TO FIRST HARMFUL EVENT

[ ] YES [X] NO

[ ] RIGHT [ ] LEFT UNIT NO.

15 - MANNER OF COLLISION

CHECK ONLY ONE (1)

1 [ ] SINGLE VEHICLE
2 [ ] ANGLE
3 [ ] LEFT TURN
4 [ ] RIGHT TURN
5 [ ] U-TURN
6 [X] REAR-END
7 [ ] HEAD-ON
8 [ ] SIDESWIPE (SAME DIRECTION)
9 [ ] SIDESWIPE (OPPOSITE DIRECTION)
10 [ ] BACKING
11 [ ] NON-CONTACT MOTORCYCLE
12 [ ] NON-CONTACT NON-MOTORCYCLE
13 [ ] PEDESTRIAN
14 [ ] PEDALCYCLE
15 [ ] OTHER

13 - DESCRIBE WHAT HAPPENED

INJURED TAKEN TO / BY

30 - TRAFFIC UNIT ACTION

CHECK ONE (1) PER UNIT

1 [ ] [ ] [ ] GOING STRAIGHT AHEAD
2 [ ] [ ] [ ] SLOWING IN TRAFFICWAY
3 [X] [ ] [ ] STOPPED IN TRAFFICWAY
4 [ ] [ ] [ ] MAKING LEFT TURN
5 [ ] [ ] [ ] MAKING RIGHT TURN
6 [ ] [ ] [ ] MAKING U TURN
7 [ ] [ ] [ ] ENTERING ALLEY OR DRIVEWAY
8 [ ] [ ] [ ] LEAVING ALLEY OR DRIVEWAY
9 [ ] [ ] [ ] OVERTAKING / PASSING
10 [ ] [ ] [ ] CHANGING LANES
11 [ ] [ ] [ ] BACKING
12 [ ] [ ] [ ] AVOIDING VEHICLE, OBJECT, PEDESTRIAN
13 [ ] [ ] [ ] ENTERING PARKING POSITION
14 [ ] [ ] [ ] LEAVING PARKING POSITION
15 [ ] [ ] [ ] PROPERLY PARKED
16 [ ] [ ] [ ] IMPROPERLY PARKED
17 [ ] [ ] [ ] DRIVERLESS MOVING VEHICLE
18 [ ] [ ] [ ] CROSSING ROAD
19 [ ] [ ] [ ] WALKING WITH TRAFFIC
20 [ ] [ ] [ ] WALKING AGAINST TRAFFIC
21 [ ] [ ] [ ] STANDING
22 [ ] [ ] [ ] LYING
23 [ ] [ ] [ ] GETTING ON OR OFF VEHICLE
24 [ ] [ ] [ ] WORKING ON OR PUSHING VEHICLE
25 [ ] [ ] [ ] WORKING ON ROAD
26 [ ] [ ] [ ] OTHER
27 [ ] [ ] [ ] UNKNOWN

16 - LIGHT CONDITION

CHECK ONLY ONE (1)

1 [X] DAYLIGHT
2 [ ] DAWN OR DUSK
3 [ ] DARKNESS

YES NO
1 [X] [ ] STREET LIGHT
2 [ ] [X] STREET LIGHT FUNCTIONING

17 - WEATHER CONDITIONS

CHECK ONLY ONE (1)

1 [X] CLEAR
2 [ ] CLOUDY
3 [ ] SLEET / HAIL
4 [ ] RAIN
5 [ ] SNOW
6 [ ] SEVERE CROSSWINDS
7 [ ] BLOWING SAND, SOIL, DIRT, SNOW
8 [ ] FOG, SMOG, SMOKE

18 - ROAD SURFACE TYPE

CHECK ONLY ONE (1)

1 [ ] ASPHALT
2 [X] CONCRETE
3 [ ] GRAVEL
4 [ ] DIRT
5 [ ] OTHER

19 - TYPE OF LOCATION

CHECK ONLY ONE (1)

1 [ ] INTERSECTION
2 [ ] JUNCTION AREA
3 [X] NON-JUNCTION AREA
4 [ ] DRIVEWAY ACCESS
5 [ ] ALLEY ACCESS
6 [ ] ALLEY

20 - INTERSECTION RELATED

1 [ ] YES
2 [X] NO

21 - SPECIAL CONDITION

CHECK ONLY ONE (1)

1 [ ] SCHOOL CROSSING
2 [ ] PEDESTRIAN CROSSWALK (STRIPED)
3 [ ] PEDESTRIAN CROSSWALK (NO STRIPPING)
4 [ ] BRIDGE
5 [ ] TUNNEL
6 [ ] RR CROSSING
7 [ ] GORE AREA
8 [ ] BIKE PATH
9 [ ] 2-WAY LEFT TURN LANE

22 - UNUSUAL ROAD CONDITION

CHECK ONLY ONE (1)

1 [ ] UNDER CONSTRUCTION, TRAFFIC ALLOWED
2 [ ] UNDER CONSTRUCTION, NO TRAFFIC ALLOWED
3 [ ] UNDER REPAIRS
4 [ ] HOLES, RUTS, BUMPS
5 [ ] OBSTRUCTION - PROTECTED
6 [ ] OBSTRUCTION - UNPROTECTED
7 [ ] OBSTRUCTION - UNLIGHTED AT NIGHT
8 [ ] DEFECTIVE SHOULDERS
9 [ ] CHANGING ROAD WIDTH
10 [ ] WATER (STANDING OR MOVING)
11 [ ] TEMPORARY LANE CLOSURE

23 - TRAFFIC CONTROL DEVICES

LEGEND:
A - DEVICE OPERATIONAL
B - DAMAGED OR NON-FUNCTIONAL PRIOR TO ACCIDENT
CHECK ALL THAT APPLY

A B
1 [ ] [ ] TRAFFIC SIGNAL
2 [ ] [ ] YIELD SIGN
3 [ ] [ ] STOP SIGN
4 [ ] [ ] WARNING SIGN
5 [ ] [ ] RAILROAD SIGNAL
6 [ ] [ ] FLASHING SIGNAL
7 [ ] [ ] FLAGMAN OR OFFICER

24 - NON INTERSECTION ROAD CHARACTER

CHECK ONLY ONE (1)

1 [ ] 2-WAY, STRIPED CENTERLINE
2 [ ] 2-WAY, NO STRIPE
3 [ ] 2-WAY, PAINTED MEDIAN
4 [ ] 2-WAY, RAISED MEDIAN
5 [X] 2-WAY, CONCRETE BARRIER
6 [ ] 2-WAY, CABLE BARRIER
7 [ ] 2-WAY, DEPRESSED MEDIAN
8 [ ] 2-WAY, EXTENDED MEDIAN
9 [ ] 1-WAY STREET

25 - ROAD GRADE

CHECK ONLY ONE (1)

1 [X] LEVEL
2 [ ] DOWNGRADE
3 [ ] UPGRADE
4 [ ] HILLCREST
5 [ ] DIP

26 - ROAD SURFACE CONDITION

CHECK ONLY ONE (1)

1 [X] DRY
2 [ ] WET
3 [ ] SAND, MUD, DIRT, OIL, GRAVEL
4 [ ] SNOW
5 [ ] SLUSH
6 [ ] ICE
7 [ ] OTHER
8 [ ] UNKNOWN

27 - CONDITIONS INFLUENCING DRIVER

TWO (2) CHOICES PER PERSON MAY BE SELECTED

1 [X] [ ] [ ] NO APPARENT INFLUENCE
2 [ ] [ ] [ ] HAD BEEN DRINKING
3 [ ] [ ] [ ] USE OF ILLICIT DRUGS
4 [ ] [ ] [ ] ILLNESS
5 [ ] [ ] [ ] FELL ASLEEP / FATIGUED
6 [ ] [ ] [ ] PHYSICAL IMPAIRMENT
7 [ ] [ ] [ ] PRESCRIPTION DRUGS
8 [ ] [ ] [ ] OTHER
9 [ ] [ ] [ ] UNKNOWN

28 - VIOLATIONS / BEHAVIOR

TWO (2) CHOICES PER PERSON MAY BE SELECTED

1 [X] [ ] [ ] NO IMPROPER ACTION
2 [ ] [ ] [ ] SPEED TOO FAST FOR CONDITIONS
3 [ ] [ ] [ ] EXCEEDED LAWFUL SPEED
4 [ ] [ ] [ ] FAILED TO YIELD RIGHT-OF-WAY
5 [ ] [ ] [ ] FOLLOWED TOO CLOSELY
6 [ ] [ ] [ ] RAN STOP SIGN
7 [ ] [ ] [ ] DISREGARDED TRAFFIC SIGNAL
8 [ ] [ ] [ ] MADE IMPROPER TURN
9 [ ] [ ] [ ] DROVE IN OPPOSING TRAFFIC LANE
10 [ ] [ ] [ ] KNOWINGLY OPERATED WITH FAULTY OR MISSING EQUIPMENT
11 [ ] [ ] [ ] REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED
12 [ ] [ ] [ ] PASSED IN NO PASSING ZONE
13 [ ] [ ] [ ] UNSAFE LANE CHANGE
14 [ ] [ ] [ ] OTHER UNSAFE PASSING
15 [ ] [ ] [ ] INATTENTION
16 [ ] [ ] [ ] DID NOT USE CROSSWALK
17 [ ] [ ] [ ] WALKED ON WRONG SIDE OF ROAD
18 [ ] [ ] [ ] OTHER
19 [ ] [ ] [ ] UNKNOWN

29 - VEHICLE CONDITION

TWO (2) CHOICES PER PERSON MAY BE SELECTED

1 [X] [ ] [ ] NO APPARENT DEFECTS
2 [ ] [ ] [ ] DEFECTIVE BRAKES
3 [ ] [ ] [ ] DEFECTIVE STEERING
4 [ ] [ ] [ ] DEFECTIVE HEADLIGHTS
5 [ ] [ ] [ ] DEFECTIVE TAIL LIGHTS
6 [ ] [ ] [ ] DEFECTIVE TURN-SIGNAL
7 [ ] [ ] [ ] PUNCTURE OR BLOWOUT
8 [ ] [ ] [ ] ONE OR MORE SMOOTH TIRES
9 [ ] [ ] [ ] FIRE
10 [ ] [ ] [ ] DEFECTIVE WINDSHIELD WIPER
11 [ ] [ ] [ ] DEFECTIVE EXHAUST SYSTEM
12 [ ] [ ] [ ] OTHER DEFECTS
13 [ ] [ ] [ ] NO TRAILER BRAKES
14 [ ] [ ] [ ] UNKNOWN

31 - VISION OBSCUREMENT

CHECK ONE (1) PER UNIT

1 [X] [ ] [ ] NOT OBSCURED
2 [ ] [ ] [ ] BY PARKED / STOPPED VEHICLE
3 [ ] [ ] [ ] BY MOVING VEHICLE
4 [ ] [ ] [ ] BY BUILDING
5 [ ] [ ] [ ] BY EMBANKMENT
6 [ ] [ ] [ ] BY SIGNBOARD
7 [ ] [ ] [ ] BY HILLCREST
8 [ ] [ ] [ ] BY LOAD ON VEHICLE
9 [ ] [ ] [ ] BY TREES, BUSHES
10 [ ] [ ] [ ] BY HEADLIGHT
11 [ ] [ ] [ ] BY SUN GLARE
12 [ ] [ ] [ ] BECAUSE OF BAD WEATHER
13 [ ] [ ] [ ] OTHER
14 [ ] [ ] [ ] RAIN, SNOW, FOG ON WINDSHIELD
15 [ ] [ ] [ ] WINDSHIELD OBSCURED - OTHER
16 [ ] [ ] [ ] UNKNOWN

32 - DIRECTION OF TRAVEL

CHECK ONE (1) PER UNIT

1 [X] [ ] [ ] NORTH
2 [ ] [ ] [ ] SOUTH
3 [ ] [ ] [ ] EAST
4 [ ] [ ] [ ] WEST
5 [ ] [ ] [ ] NW
6 [ ] [ ] [ ] NE
7 [ ] [ ] [ ] SW
8 [ ] [ ] [ ] SE
9 [ ] [ ] [ ] UNKNOWN

1

[redacted]

FORWARD COPY TO
ACCIDENT RECORDS ANALYSIS UNIT 064R
ARIZONA DEPARTMENT OF TRANSPORTATION
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

RE. / ID.

YEAR MONTH DAY	HOUR	NCIC NO.	OFFICERS'S ID NO.
2005/05/28	12 55	0799	0 4292

Agency Report Number
2005-027759

☒ Dead at time of investigation
☐ Delayed fatality

2 VICTIM

NAME OF VICTIM [redacted]

☐ DRIVER ☐ PEDALCYCLIST ☐ PEDESTRIAN ☒ PASSENGER

RACE: H
MARITAL STATUS: S

CITY: PHOENIX
STATE: AZ
MARKS,SCARS/TATTOOS:

SEX	WEIGHT	HEIGHT	EYES	HAIR	DATE OF BIRTH	OCCUPATION
F	122				[redacted]	Nurse

VICTIM REMOVED TO: Maricopa County Office of the Medical Examiners
VICTIM REMOVED BY: Office of the Medical Examiners

DESCRIPTION OF CLOTHING:

DESCRIPTION OF PROPERTY:

DESCRIPTION OF PROPERTY (CONT):

PROPERTY IN POSSESSION OF: NAME / ADDRESS / CITY / STATE

NEXT OF KIN: NAME [redacted] / ADDRESS / CITY / STATE / RELATIONSHIP: Niece

NOTIFIED	NOTIFIED BY	DATE	TIME	MEDICAL EXAMINER
☒ YES ☐ NO	Ofr Petculescu	05/28/2005	16 55	DR. Lyon

3 DRIVER

NAME OF DRIVER
☐ SAME AS VICTIM [redacted]

RACE: H

OCCUPATION:

MARITAL STATUS: M

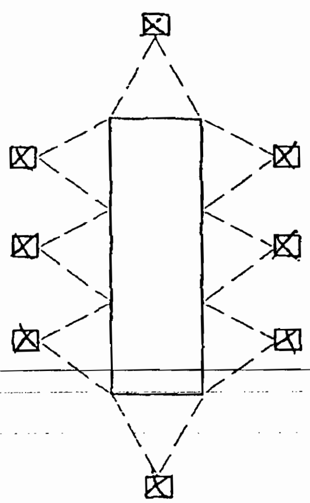
4

COMMENTS:
Medical Examiners report number 05-1996

5 TIME 24 HRS

POLICE CALLED	POLICE ARRIVED	AMBULANCE CALLED	AMBULANCE ARRIVED	AMBULANCE DEPARTED
12 58	12 59	12 58	12 59	00 00

6 MARK DAMAGED AREA(S) OF VICTIM'S VEHICLE



☒ TOP
☒ UNDERCARRIAGE
☐ NONE
☐ UNKNOWN

7 RESTRAINT FAILURE / IMPROPER RESTRAINT USAGE

ENTER SEAT POSITION	4					
RESTRAINT FAILURE: NONE FAILED						
LAP FAILED						
SHOULDER FAILED						
BOTH FAILED						
CHILD RESTRAINT						
AIR BAG NOT DEPLOYED						
PASSIVE SYSTEM						
UNKNOWN	◉					
IMPROPER USAGE: RESTRAINT PROPERLY USED						
CHILD RESTRAINT						
PASSIVE & LAP						
SHOULDER HARNESS						

8 SUPPLEMENTAL DATA — CHECK ONE IN EACH CATEGORY

ACCIDENT FIRST REPORT BY
☐ PERSONS INVOLVED
☒ PASSING MOTORIST
☐ POLICE
☐ RESIDENT BYSTANDER
☐ OTHER

VICTIM EJECTED
☒ NOT EJECTED
☐ COMPLETE
☐ PARTIAL
☐ UNKNOWN

VICTIM EXTRICATION
☐ NOT REQUIRED
☐ BY AMBULANCE ATTENDANT
☐ BY POLICE
☒ BY FIRE DEPARTMENT
☐ BY PASSERBY
☐ OTHER

ACCIDENT LOCALE
☒ URBAN
☐ RURAL
☐ UNKNOWN

TERRAIN TYPE
☒ LEVEL
☐ HILLY
☐ MOUNTAINOUS

DRUG SCREEN TAKEN
☐ YES
TYPE ________
RESULT________
☐ NO
☒ UNKNOWN

DRIVER FAMILIAR WITH LOCALE
☐ YES
☐ NO
☒ UNKNOWN

ROAD ALIGNMENT
☒ STRAIGHT ROAD
☐ CURVED
☐ UNKNOWN

VEHICLE TRANSMISSION
☒ AUTOMATIC
☐ MANUAL
☐ UNKNOWN

COMPLIANCE WITH DRIVER LICENSE RESTRICTIONS
☐ YES
☐ NO
☒ UNKNOWN

BLOOD ALCOHOL CONTENT TEST TAKEN
☐ YES
TYPE ________
RESULT________
☒ NO
☐ UNKNOWN

9

OFFICER SIGNATURE AND ID NUMBER	ID NUMBER	DATE
[signature] 4292	4292	06/01/2005

01-2704 7/92
1• FORM N

DPS 802-01040 12/99

EA12-005 000389LC

1 [redacted] R RT ID

FORWARD COPY TO
ACCIDENT RECORDS ANALYSIS UNIT 864R
ARIZONA DEPARTMENT OF TRANSPORTATION
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

YEAR	MONTH	DAY	HOUR	NCIC NO.	OFFICER'S ID NO.
2005	05	28	12 55	0799	0 4292

Agency Report Number: **2005-027759**
☉ Dead at time of investigation
☐ Delayed fatality

2 VICTIM

NAME OF VICTIM: [redacted]
☐ DRIVER ☐ PEDALCYCLIST ☐ PEDESTRIAN ☉ PASSENGER
RACE: H | MARITAL STATUS: S
CITY: PHOENIX | STATE: AZ | MARKS, SCARS/TATTOOS:
SEX: M | WEIGHT: 42 | HEIGHT: | EYES: | HAIR: [redacted] | OCCUPATION: -
VICTIM REMOVED TO: Maricopa County Office of the Medical Examiners
VICTIM REMOVED BY: Office of the Medical Examiners
DESCRIPTION OF CLOTHING:
DESCRIPTION OF PROPERTY:
DESCRIPTION OF PROPERTY (CONT):
PROPERTY IN POSSESSION OF: NAME | ADDRESS | CITY | STATE:
NEXT OF KIN NAME: [redacted] | ADDRESS | CITY | STATE | RELATIONSHIP: Aunt
NOTIFIED: ☉ YES ☐ NO | NOTIFIED BY: Ofr Petculescu | DATE: 05/28/2005 | TIME: 16 55 | MEDICAL EXAMINER: DR. Lyon

3 DRIVER

NAME OF DRIVER: ☐ SAME AS VICTIM [redacted] (Father) | RACE: H
OCCUPATION: | MARITAL STATUS: M

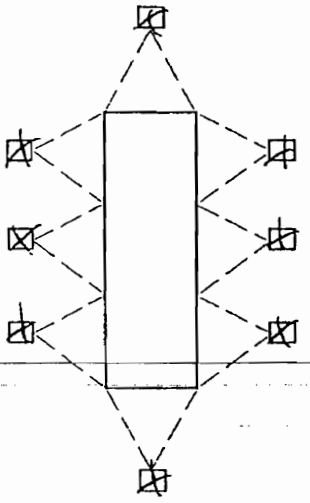
4

COMMENTS:
Medical Examiners report number 05-1995

5

TIME 24 HRS	POLICE CALLED	POLICE ARRIVED	AMBULANCE CALLED	AMBULANCE ARRIVED	AMBULANCE DEPARTED
	12 58	12 59	12 58	12 59	00 00

6 MARK DAMAGED AREA(S) OF VICTIM'S VEHICLE



☒ TOP
☒ UNDERCARRIAGE
☐ NONE
☐ UNKNOWN

7 RESTRAINT FAILURE / IMPROPER RESTRAINT USAGE

ENTER SEAT POSITION: 5

RESTRAINT FAILURE
- NONE FAILED
- LAP FAILED
- SHOULDER FAILED
- BOTH FAILED
- CHILD RESTRAINT
- AIR BAG NOT DEPLOYED
- PASSIVE SYSTEM
- UNKNOWN ◉

IMPROPER USAGE
- RESTRAINT PROPERLY USED
- CHILD RESTRAINT
- PASSIVE & LAP
- SHOULDER HARNESS

8 SUPPLEMENTAL DATA — CHECK ONE IN EACH CATEGORY

ACCIDENT FIRST REPORT BY
☐ PERSONS INVOLVED
☒ PASSING MOTORIST
☐ POLICE
☐ RESIDENT BYSTANDER
☐ OTHER

VICTIM EJECTED
☒ NOT EJECTED
☐ COMPLETE
☐ PARTIAL
☐ UNKNOWN

VICTIM EXTRICATION
☐ NOT REQUIRED
☐ BY AMBULANCE ATTENDANT
☐ BY POLICE
☒ BY FIRE DEPARTMENT
☐ BY PASSERBY
☐ OTHER

ACCIDENT LOCALE
☒ URBAN
☐ RURAL
☐ UNKNOWN

TERRAIN TYPE
☒ LEVEL
☐ HILLY
☐ MOUNTAINOUS

DRUG SCREEN TAKEN
☐ YES
TYPE _____
RESULT _____
☐ NO
☒ UNKNOWN

DRIVER FAMILIAR WITH LOCALE
☐ YES
☐ NO
☒ UNKNOWN

ROAD ALIGNMENT
☒ STRAIGHT ROAD
☐ CURVED
☐ UNKNOWN

VEHICLE TRANSMISSION
☒ AUTOMATIC
☐ MANUAL
☐ UNKNOWN

COMPLIANCE WITH DRIVER LICENSE RESTRICTIONS
☐ YES
☐ NO
☒ UNKNOWN

BLOOD ALCOHOL CONTENT TEST TAKEN
☐ YES
TYPE _____
RESULT _____
☒ NO
☐ UNKNOWN

9

OFFICER SIGNATURE AND ID NUMBER: [signature] 4292 | ID NUMBER: 4292 | DATE: 06/01/2005

01-2704 7/92
1• FORM N

DPS 802-01040 12/99

EA12-005 000390LC

ARIZONA TRAFFIC ACCIDENT REPORT
FATAL SUPPLEMENT

FORWARD COPY TO
ACCIDENT RECORDS ANALYSIS UNIT 064R
ARIZONA DEPARTMENT OF TRANSPORTATION
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

RE T ID

YEAR	MONTH	DAY	HOUR	NCIC NO.	OFFICER'S ID NO.
2005	05	28	12 55	0799	0 4292

Agency Report Number: 2005-027759
☐ Dead at time of investigation
☒ Delayed fatality

1

2 VICTIM

NAME OF VICTIM: [redacted]
☐ DRIVER ☐ PEDALCYCLIST ☐ PEDESTRIAN ☒ PASSENGER
RACE: H
MARITAL STATUS: M
CITY: Phoenix
STATE: AZ
MARKS, SCARS/TATTOOS:
SEX: F
WEIGHT:
HEIGHT:
EYES:
HAIR:
DATE OF BIRTH: [redacted]
OCCUPATION:
VICTIM REMOVED TO: Maricopa County Office of the Medical Examiners
VICTIM REMOVED BY: Office of the Medical Examiners
DESCRIPTION OF CLOTHING:
DESCRIPTION OF PROPERTY:
DESCRIPTION OF PROPERTY (CONT):
PROPERTY IN POSSESSION OF: NAME / ADDRESS / CITY / STATE:
NEXT OF KIN: NAME: [redacted]
ADDRESS / CITY / STATE:
RELATIONSHIP: Sister
NOTIFIED: ☒ YES ☐ NO
NOTIFIED BY: Hospital Staff
DATE: 06/02/2005
TIME: 18 25
MEDICAL EXAMINER: Dr. Lyon

3 DRIVER

NAME OF DRIVER: ☐ SAME AS VICTIM [redacted]
RACE: H
OCCUPATION:
MARITAL STATUS: M

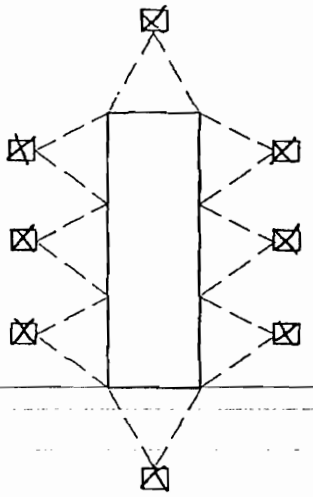
4

COMMENTS:
Medical Examiners report number 05-2081

5

TIME 24	POLICE CALLED	POLICE ARRIVED	AMBULANCE CALLED	AMBULANCE ARRIVED	AMBULANCE DEPARTED
	12 58	12 59	12 58	12 59	13 36

6 MARK DAMAGED AREA(S) OF VICTIM'S VEHICLE



☒ TOP
☒ UNDERCARRIAGE
☐ NONE
☐ UNKNOWN

7 RESTRAINT FAILURE / IMPROPER RESTRAINT USAGE

ENTER SEAT POSITION: 3

RESTRAINT FAILURE
- NONE FAILED
- LAP FAILED
- SHOULDER FAILED
- BOTH FAILED
- CHILD RESTRAINT
- AIR BAG NOT DEPLOYED
- PASSIVE SYSTEM
- UNKNOWN ◉

IMPROPER USAGE
- RESTRAINT PROPERLY USED
- CHILD RESTRAINT
- PASSIVE & LAP
- SHOULDER HARNESS

8 SUPPLEMENTAL DATA — CHECK ONE IN EACH CATEGORY

ACCIDENT FIRST REPORT BY
☐ PERSONS INVOLVED
☒ PASSING MOTORIST
☐ POLICE
☐ RESIDENT BYSTANDER
☐ OTHER

VICTIM EJECTED
☒ NOT EJECTED
☐ COMPLETE
☐ PARTIAL
☐ UNKNOWN

VICTIM EXTRICATION
☐ NOT REQUIRED
☐ BY AMBULANCE ATTENDANT
☐ BY POLICE
☐ BY FIRE DEPARTMENT
☒ BY PASSERBY
☐ OTHER

ACCIDENT LOCALE
☒ URBAN
☐ RURAL
☐ UNKNOWN

TERRAIN TYPE
☒ LEVEL
☐ HILLY
☐ MOUNTAINOUS

DRUG SCREEN TAKEN
☐ YES
TYPE _____
RESULT _____
☐ NO
☒ UNKNOWN

DRIVER FAMILIAR WITH LOCALE
☐ YES
☐ NO
☒ UNKNOWN

ROAD ALIGNMENT
☒ STRAIGHT ROAD
☐ CURVED
☐ UNKNOWN

VEHICLE TRANSMISSION
☒ AUTOMATIC
☐ MANUAL
☐ UNKNOWN

COMPLIANCE WITH DRIVER LICENSE RESTRICTIONS
☐ YES
☐ NO
☒ UNKNOWN

BLOOD ALCOHOL CONTENT TEST TAKEN
☐ YES
TYPE _____
RESULT _____
☒ NO
☐ UNKNOWN

9

OFFICER SIGNATURE AND ID NUMBER: 4292
ID NUMBER: 4292
DATE: 6-2-05

01-2704 7/92
1• FORM N

DPS 802-01040
12/99

EA12-005 000391LC

ARIZONA DEPARTMENT OF PUBLIC SAFETY
VEHICULAR CRIMES AND COLLISION ANALYSIS UNIT

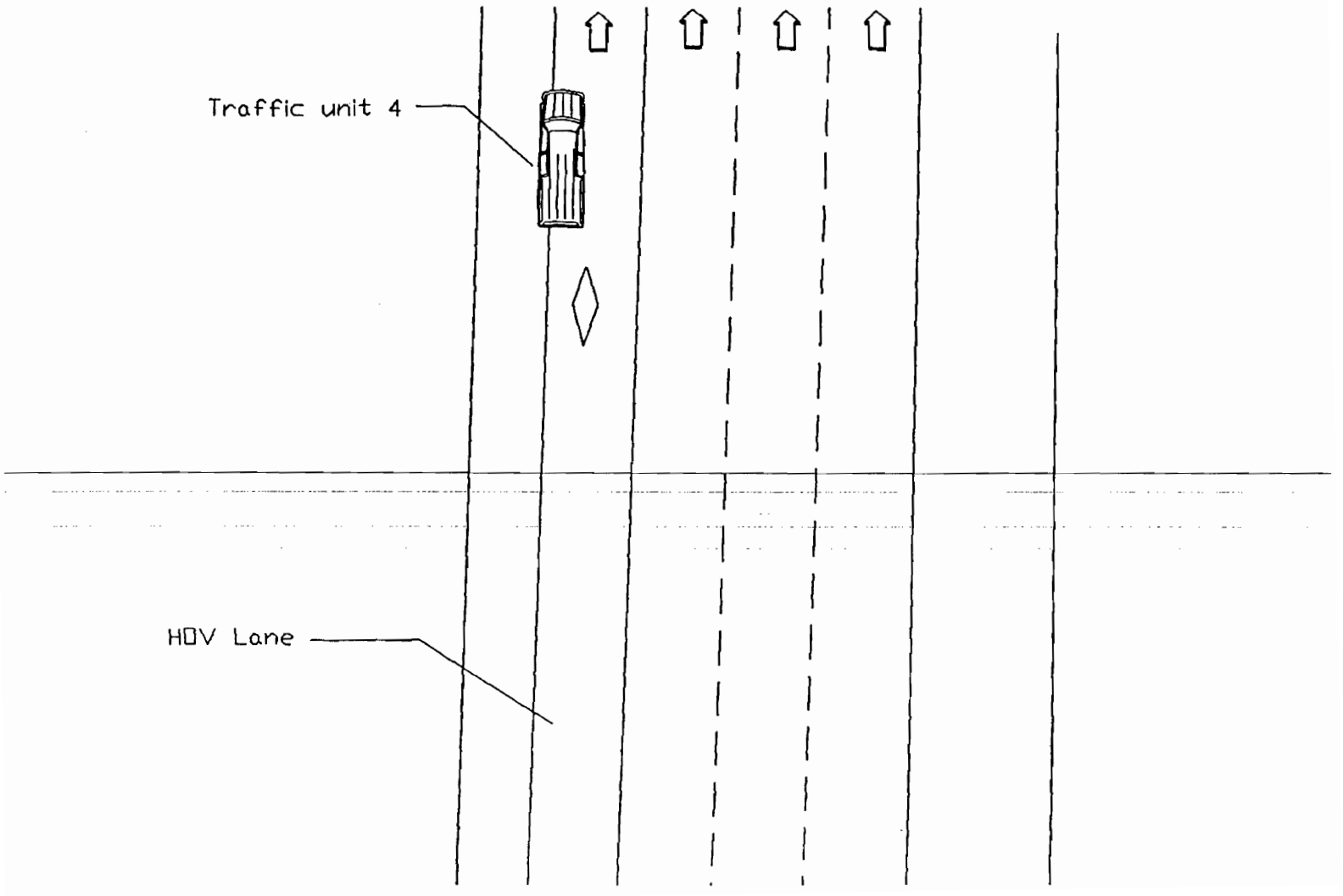
YEARMONTH DAY	HOUR	NCIC NO.	OFFICER'S I.D.
050528	1250	0799	04292

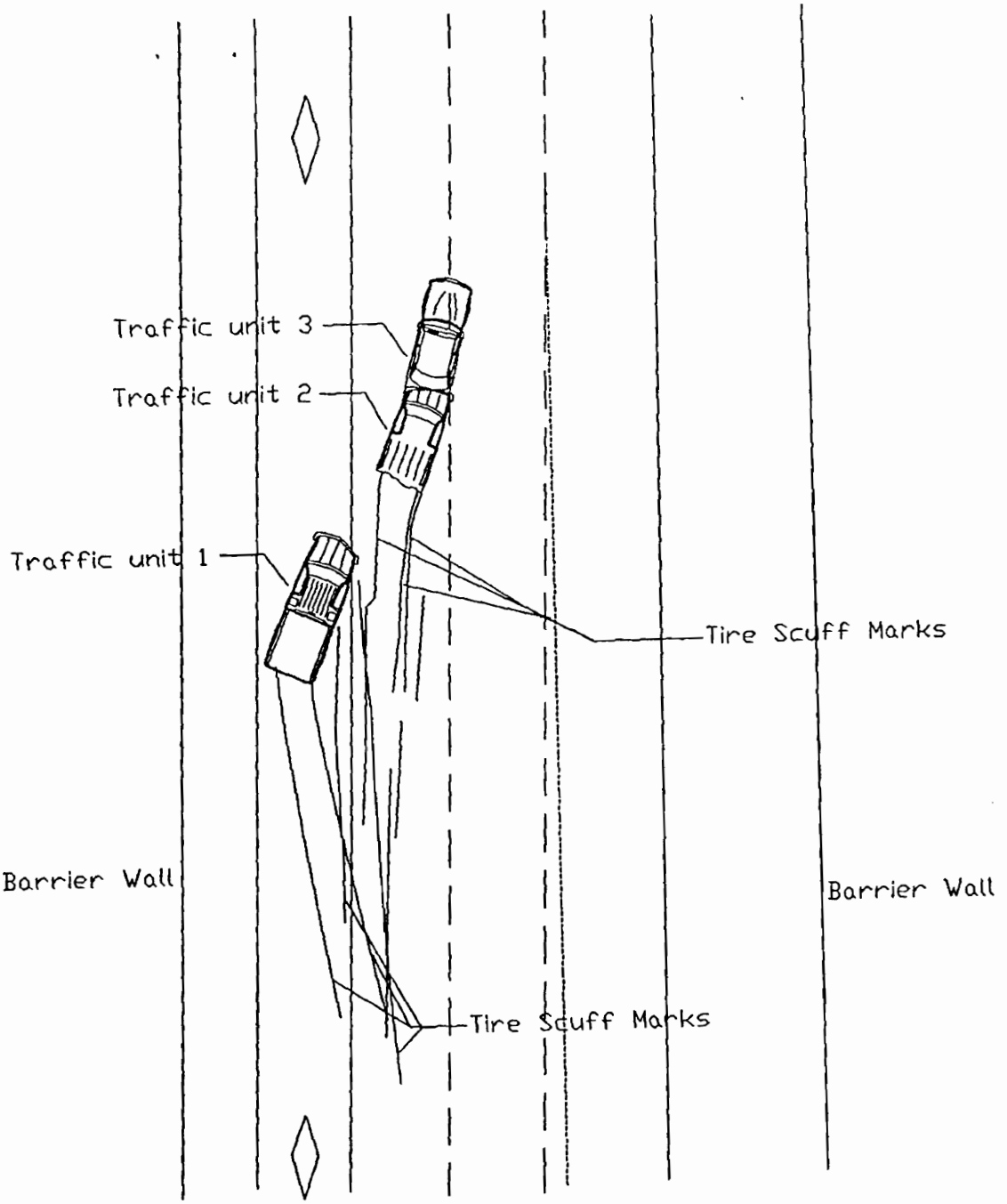
Department Report #2005-027759

Diagram completed by:
R.T. Stephenson#3681

N

Robotics Location





Department
Report
#2005-027759

SUPPLEMENT FORWARD COPY TO ACCIDENT RECORDS ANALYSIS UNIT 064R ARIZONA DEPARTMENT OF TRANSPORTATION 206 S 17TH AVE., PHOENIX, ARIZONA 85007-3233	YEAR MONTH DAY	HOUR	NCIC	OFFICER'S ID.NO.	AGENCY REPORT NUMBER
	05 05 28	1250	0799	04292	2005-027759

ACCIDENT DESCRIPTION
(NARRATIVE)

POINT	X-AXIS	Y-AXIS	Z-AXIS	DISCRIPTION
1	0.000	0.000	0.000	ROBOTICS LOCATION
2	-8.738	-54.458	-0.260	VEHICLE 4 RIGHT FRONT
3	-8.821	-63.900	-0.318	VEHICLE 4 RIGHT REAR
4	-15.476	-63.881	-0.188	VEHICLE 4 LEFT REAR
5	3.597	-186.015	-1.169	VEHICLE 3 LEFT FRONT CORNER
6	2.466	-187.869	-1.171	VEHICLE 3 LEFT FRONT
7	0.333	-196.470	-1.183	VEHICLE 3 LEFT REAR
8	0.116	-197.500	-1.171	VEHICLE 3 LEFT REAR CORNER
9	8.978	-187.560	-1.278	VEHICLE 3 RIGHT FRONT CORNER
10	8.531	-189.598	-1.290	VEHICLE 3 RIGHT FRONT
11	6.504	-198.398	-1.296	VEHICLE 3 RIGHT REAR
12	6.281	-199.126	-1.144	VEHICLE 3 RIGHT REAR CORNER
13	6.465	-199.530	-1.277	VEHICLE 2 RIGHT FRONT CORNER
14	5.968	-201.797	-1.300	VEHICLE 2 RIGHT FRONT
15	2.509	-209.710	-1.257	VEHICLE 2 RIGHT REAR
16	1.520	-211.239	-1.253	VEHICLE 2 RIGHT REAR CORNER
17	-3.668	-207.623	-1.140	VEHICLE 2 LEFT REAR CORNER
18	-3.104	-206.432	-1.082	VEHICLE 2 LEFT REAR
19	0.047	-199.645	-1.195	VEHICLE 2 LEFT FRONT
20	0.519	-198.284	-1.176	VEHICLE 2 LEFT FRONT CORNER
21	-11.341	-215.737	-1.035	VEHICLE 1 LEFT FRONT CORNER
22	-12.564	-217.222	-1.000	VEHICLE 1 LEFT FRONT
23	-17.209	-227.671	-0.954	VEHICLE 1 LEFT REAR
24	-18.418	-231.077	-0.930	VEHICLE 1 LEFT REAR CORNER
25	-12.499	-233.816	-1.056	VEHICLE 1 RIGHT REAR CORNER
26	-10.753	-231.010	-1.071	VEHICLE 1 LEFT REAR
27	-6.632	-220.775	-1.117	VEHICLE 1 RIGHT FRONT
28	-6.188	-219.648	-1.117	VEHICLE 1 RIGHT FRONT CORNER
29	-3.077	-283.038	-1.367	TIRE SCUFF MARKS
30	-3.739	-275.935	-1.326	TIRE SCUFF MARKS
31	-4.353	-266.544	-1.217	TIRE SCUFF MARKS
32	-4.799	-257.100	-1.235	TIRE SCUFF MARKS
33	-5.179	-247.246	-1.220	TIRE SCUFF MARKS
34	-5.309	-238.541	-1.202	TIRE SCUFF MARKS
35	-6.101	-229.344	-1.167	TIRE SCUFF MARKS
36	-6.351	-221.704	-1.125	TIRE SCUFF MARKS

Officer Name	ID No.	Supervisor Name	Date
R.T. Stephenson	3681	SGT D. Coleman Jr. #4582	06-07-05

D. Coleman 4582
6/9/2005

SUPPLEMENT FORWARD COPY TO ACCIDENT RECORDS ANALYSIS UNIT 064R ARIZONA DEPARTMENT OF TRANSPORTATION 206 S. 17TH AVE., PHOENIX, ARIZONA 85007-3233	YEAR	MONTH	DAY	HOUR	NCIC	OFFICER'S ID.NO.	AGENCY REPORT NUMBER
	05	05	28	1250	0799	042921	2005-027759

ACCIDENT DESCRIPTION
(NARRATIVE)

37	-9.047	-227.350	-1.092	TIRE SCUFF MARKS
38	-9.914	-240.110	-1.114	TIRE SCUFF MARKS
39	-9.407	-256.162	-1.168	TIRE SCUFF MARKS
40	-9.511	-263.218	-1.160	TIRE SCUFF MARKS
41	-4.532	-275.088	-1.293	TIRE SCUFF MARKS
42	-6.653	-265.877	-1.225	TIRE SCUFF MARKS
43	-8.262	-258.498	-1.177	TIRE SCUFF MARKS
44	-9.786	-251.390	-1.146	TIRE SCUFF MARKS
45	-11.658	-242.220	-1.037	TIRE SCUFF MARKS
46	-12.596	-236.640	-1.064	TIRE SCUFF MARKS
47	-12.652	-234.048	-0.957	TIRE SCUFF MARKS
48	-17.176	-232.150	-0.954	TIRE SCUFF MARKS
49	-16.366	-239.682	-0.985	TIRE SCUFF MARKS
50	-14.546	-251.930	-1.027	TIRE SCUFF MARKS
51	-12.324	-264.618	-1.113	TIRE SCUFF MARKS
52	-10.462	-274.446	-1.196	TIRE SCUFF MARKS
53	-10.360	-274.740	-1.178	TIRE SCUFF MARKS
54	-4.779	-277.264	-1.307	TIRE SCUFF MARKS
55	-4.146	-262.952	-1.265	TIRE SCUFF MARKS
56	-3.576	-251.800	-1.267	TIRE SCUFF MARKS
57	-3.144	-244.785	-1.258	TIRE SCUFF MARKS
58	-6.820	-251.503	-1.198	TIRE SCUFF MARKS
59	-6.270	-243.719	-1.179	TIRE SCUFF MARKS
60	-5.897	-234.351	-1.192	TIRE SCUFF MARKS
61	-5.572	-225.016	-1.206	TIRE SCUFF MARKS
62	-4.436	-223.976	-1.125	TIRE SCUFF MARKS
63	-3.442	-210.542	-1.162	TIRE SCUFF MARKS
64	-3.202	-209.145	-1.161	TIRE SCUFF MARKS
65	-2.469	-235.562	-1.248	TIRE SCUFF MARKS
66	-2.485	-235.537	-1.248	TIRE SCUFF MARKS
67	-1.581	-228.975	-1.188	TIRE SCUFF MARKS
68	-1.115	-222.327	-1.225	TIRE SCUFF MARKS
69	0.156	-214.405	-1.203	TIRE SCUFF MARKS
70	0.956	-211.943	-1.238	TIRE SCUFF MARKS
71	1.871	-211.017	-1.248	TIRE SCUFF MARKS
72	0.495	-214.809	-1.310	TIRE SCUFF MARKS
73	-0.286	-222.605	-1.276	TIRE SCUFF MARKS
74	-0.813	-230.128	-1.291	TIRE SCUFF MARKS

Officer Name	ID No.	Supervisor Name	Date
R.T. Stephenson	3681	SGT D. Coleman Jr. #4582	06-07-05

SUPPLEMENT FORWARD COPY TO ACCIDENT RECORDS ANALYSIS UNIT 064R ARIZONA DEPARTMENT OF TRANSPORTATION 206 S. 17TH AVE., PHOENIX, ARIZONA 85007-3233	YEAR MONTH DAY	HOUR	NCIC	OFFICER'S ID.NO.	AGENCY REPORT NUMBER
	0 5 0 5 2 8	1 2 5 0	0 7 9 9	0 4 2 9 2	2005-027759

ACCIDENT DESCRIPTION
(NARRATIVE)

75	-1.015	-235.563	-1.317	TIRE SCUFF MARKS
76	-3.778	-277.424	-1.392	GOUGE MARK
77	-2.764	-253.160	-1.284	TIRE SCUFF MARKS
78	-1.956	-244.327	-1.307	TIRE SCUFF MARKS
79	-1.609	-239.089	-1.331	TIRE SCUFF MARKS
80	0.406	-236.635	-1.300	TIRE SCUFF MARKS
81	1.103	-229.597	-1.307	TIRE SCUFF MARKS
82	1.708	-223.803	-1.305	TIRE SCUFF MARKS
83	-21.704	-295.474	-1.069	LANE LINE SOLID
84	-31.182	-296.480	-0.904	LANE LINE SOLID
85	-9.826	-296.112	-1.296	LANE LINE SOLID
86	2.449	-296.934	-1.550	LANE LINE DASHED
87	14.318	-296.829	-1.778	LANE LINE DASHED
88	17.325	-295.992	-1.826	LANE LINE DASHED
89	30.238	-295.651	-2.067	LANE LINE SOLID
90	50.256	-295.052	-2.473	LANE LINE SOLID
91	18.555	-175.582	-1.415	LANE LINE DASHED
92	18.596	-175.537	-1.413	LANE LINE DASHED
93	18.595	-175.573	-1.413	LANE LINE DASHED
94	18.660	-175.510	-1.412	LANE LINE DASHED
95	53.360	-43.222	-1.452	LANE LINE SOLID
96	35.166	-39.960	-1.000	LANE LINE SOLID
97	23.225	-34.638	-0.725	LANE LINE DASHED
98	11.410	-32.453	-0.476	LANE LINE DASHED
99	-0.619	-30.442	-0.192	LANE LINE SOLID
100	-12.605	-26.958	0.060	LANE LINE SOLID
101	-22.267	-24.720	0.241	LANE LINE SOLID

Officer Name	ID No.	Supervisor Name	Date
R.T. Stephenson	3681	SGT D. Coleman Jr. #4582	06-07-05

This four vehicle collision involving three fatalities and seven injuries occurred on I-17, at milepost 214.9, on 05-28-2005, at 1255 hours.

DPS OFFICERS INVOLVED

Commander Hughes # 1513. On scene supervision.
Lt. Coleman # 4047. On scene supervision.
Lt. Hegarty # 4564. On scene supervision.
Sgt. Messerly # 2940. On scene supervisor.
Ofr. Leech # 4292. Investigator.
Ofr. Eagan # 5039. Incident command.
Ofr. Stephenson # 3681. V.C.U. Measurements and diagram.
Ofr. Sundquist # 4095. Assist at scene.
Ofr. Henderson # 5618. Assist at scene.
Ofr. Lason # 6052. Assist at scene.
Ofr. Torres # 5443. Assist at scene. Spanish translation.
Ofr. Bynaker # 4313. Assist at scene and follow up.
Ofr. Jacobs # 6171. Hospital follow up.
Ofr. Petculescu # 5626. Hospital follow up.
Ofr. Zenke #6287. Hospital follow up.

PHOENIX FIRE DEPARTMENT UNITS INVOLVED

R-145, E-50, R-42, L-50, E-141, R-35, B-4, B-9, VLT-50, AR-41, LT-41, E-41, E-42, B-151, NDR-30, R-7, R-36, AR-12, Chaplin.

INITIAL OBSERVATION

On 05-28-2005, at 1258 hours, DPS Radio advised of a collision on I-17 near Rose Garden Ln. At 1311 hours, I arrived at the scene and observed several units from DPS, Phoenix Fire Department and the Phoenix Police Department. Personnel from the Phoenix Fire Department were attending to several victims. I observed a dark green truck (Veh #1) with major front end damage in the HOV lane. In the #1 lane, I observed a Ford Explorer 2/dr (Veh#2) with major rear end damage that was impailed to the back of a Dodge Stratus (Veh #3). The Ford Explorer was completely incinerated and the fire had just been extinguished by the fire department. The rear quarter of the Dodge was also burned. I saw another Ford Explorer 4/dr (Veh #4) ahead of the scene, parked in the left shoulder with damage to the rear end. I observed tire scuff marks, vehicle debris, and a gouge in the area of impact which was in the #1 lane. I did not observe skid marks from vehicle #1 prior to the area of impact. I came in contact with Sergeant Messerly and Officer Eagan who advised me that two fatal victims were inside the Explorer 2/dr.

ENVIRONMENT

I-17 in the area of milepost 214.9 is a north/south controlled access highway consisting of a high occupancy vehicle (HOV) lane and three normal lanes The HOV lane is separated by a solid white line and the normal lanes are separated by broken center lines. The roadway is of concrete composition. The collision occurred on a Saturday and the restriction regarding the use of the HOV lane was not in effect. The posted speed limit is 65 MPH. A concrete barrier wall separates the north and southbound lanes.

During the collision, the visibility was clear. The roadway was in good repair with no unusual conditions.

WITNESS INFORMATION

Witness #1, [redacted] stated the collision happened in front of him and that he observed vehicle #1 at a high rate of speed prior to impact. He stated he pulled driver #2 from the flames and assisted with extracting the female passenger from the front seat. His written statement is attached

Witness #2, [redacted] was in the same vehicle as [redacted] She stated she witnessed the fire erupt from vehicle #2. Her written statement is attached.

Witness #3, [redacted] stated to me over the phone that he observed traffic in all lanes ahead of him stop due to congestion. He said he looked in his rear view mirror and observed vehicle #1 strike the rear of vehicle #2. He said vehicle #2 then struck the rear of vehicle #3. He said he observed a fire immediately erupt under vehicle #2 and that the occupants were trapped inside. He said he and another person were able to get a young girl out of the right rear seat. He said the right rear glass was broken and he was able to reach inside. Refer to his written statement.

Witness #4, [redacted] stated he was stopped in the HOV lane because of a traffic jam. He said he observed vehicle #1 in his rear view mirror speeding towards vehicle #2. He said vehicle #1 did swerve towards the left, however struck vehicle #2 in the rear. Mr. [redacted] stated the impact caused vehicle #2 to "smash" into vehicle #3. He said vehicle #2 then burst into flames. Refer to his written statement. He assisted in extracting the passengers from Vehicle #2 and #3.

Witness #5, [redacted] stated she had just passed vehicle #2 and #3 from the HOV lane. She said both vehicles were stopped in the #1 lane. Ms. [redacted] stated she then stopped with traffic in the HOV lane when she observed, in her rear view mirror, vehicle #1 speeding towards vehicle #2 at 70 MPH. She said vehicle #1 did try to swerve towards the left, however, struck the rear of vehicle #2. She said vehicle #2 was forced into the

rear of vehicle #3. She said vehicle #2 immediately broke out into flames which spread to vehicle #3. Ms. [redacted] stated she then responded to the injured.

DRIVER STATEMENTS

The driver of vehicle #1, [redacted], was interviewed inside the Phoenix Fire Department command van at the scene. Mr. [redacted] was questioned by myself and Officer Sundquist. Officer Torrez was translating in Spanish.

Mr. [redacted] stated he was visiting his sister, [redacted] who lives near [redacted]. He said he stayed at the residence overnight and had about eight hours of sleep the night before. He said he slept from 0300 hours to 1100 hours. He said he left the residence with his son and was going to drive to Albuquerque NM.

Mr. [redacted] stated he had been driving for about 20 minutes before approaching the scene. He said he was driving at 70 MPH in the HOV lane and that he had changed into the left (#1) lane. He said he changed lanes because the traffic behind him was approaching at a faster speed and that he wanted to slow down. He said about two seconds later an unknown vehicle ahead of him veered towards the left and that he observed vehicle #2 ahead of him. He said vehicle #2 struck vehicle #3 prior to his impact. He said he was about 60 feet from vehicle #2 and that he observed smoke and the occupants coming from vehicle #2 and #3. Mr. [redacted] stated he then braked and tried to steer towards the left and that his truck skidded in the antifreeze/oil. He said his son also said "look out".

He related he then struck vehicle #2 and that he lost consciousness. He said he then attempted to wake up his son and that he was not able to open his door. He stated his son was first to exit through the passenger window. He said he observed vehicle #2 on fire and citizens trying to help.

Driver #2, [redacted], was unconscious at the Maricopa County Hospital burn unit and consequently was not interviewed. His family advised me that when [redacted] was conscience he said he did not remember the collision.

Driver #3, [redacted], was interviewed at the scene and later over the phone. She stated she had stopped with traffic in the #1 lane and observed vehicle #2 get hit from behind. She said vehicle #2 was pushed into the rear of her car. She related the impact caused her car to strike the rear of vehicle #4. She said she was not sure how many times she was struck from behind. Ms. [redacted] said she observed vehicle #2 on fire and that she, her two sons, and their dog got out of the car.

Driver #4, [redacted] was interviewed at the scene. He said he was stopped with traffic in the #1 lane when he was struck from behind. The passenger, [redacted] stated she observed vehicle #2 strike the rear of vehicle #3 and that vehicle #1 then struck the rear of vehicle #2 at high speed. She said she felt two impacts and that the second impact was more severe.

FATAL/INJURIES

Vehicle #1:

Driver #1, Mr. [redacted] sustained cuts and abrasions to his hands and legs. He was treated at the scene by the Phoenix Fire Department.

Passenger, [redacted] sustained cuts, contusions, a fractured nose and eye socket. He was transported by the Phoenix FD ambulance # R-42 to the John C Lincoln hospital (North Mountain), where he was admitted.

Vehicle #2:

Driver #2, [redacted] sustained third degree burns to his arms and legs. He was transported by AirEvac helicopter to the Maricopa County Hospital burn unit where he was admitted.

Passenger, [redacted] Sustained burns to 82% of her body. She was transported by DPS Ranger 41 helicopter to the Maricopa County Hospital burn unit where she was admitted. On 06-02-2005 at 1825 hours, Ms. [redacted] was pronounced dead at the burn unit by Dr. Caruso. Next of kin notification was completed at the hospital. Dr. Lyon from the Maricopa County Office of the Medical Examiners conducted an examination on 06-05-2005 #05-2081. The cause of death was burn trauma.

Passenger, [redacted] sustained fatal injuries from the post crash fire. He was pronounced dead by Phoenix Fire Department personnel at approximately 1305 hours. He was found on the floor behind the driver's seat. He was removed by the Maricopa County Office of the Medical Examiners. On 06-01-2005, Dr. Lyon conducted an examination on [redacted] #05-1995.The caused of death was 100 % burns and inhalation of flames. Next of kin was completed at the County hospital by Officer Petculescu at 1655 hours.

Passenger, [redacted] sustained fatal injuries from the post crash fire. She was pronounced dead at the scene by Phoenix Fire Department personnel at approximately

1305 hours. She was found between the front seats. She was removed by the Maricopa County Office of the Medical Examiners. Dr. Lyon conducted an examination on 06-01-2005, #05-1996. The cause of death was 100% burns and inhalation of flames. Next of kin notification was completed by Officer Petculescu at 1655 hours.

Passenger, [redacted] sustained a laceration to her face. She was transported by Phoenix Fire Department ambulance #R-30 to the Maricopa County Hospital where she was treated.

Vehicle #3:

Driver #3, Ms. [redacted] sustained neck and back pain and a cut to her right hand. She was transported by the Phoenix Fire Department # R-35 to the John C Lincoln Hospital (Deer Valley) where she was treated and released.

Passenger, [redacted] sustained a cut to his right leg. Passenger [redacted] also sustained possible injuries. They were transported by the Phoenix Fire Department # R-36 to the John C Lincoln Hospital (Deer Valley) where they were treated and released.

Vehicle #4:

No injuries reported from the occupants of vehicle #4.

TRAFFIC UNIT INFORMATION

Vehicle #1 is a green 2002 Ford F-150 extended cab truck bearing Texas [redacted] The vehicle sustained major damage to the right front end. Induced damage was also observed on the roof line and both right and left sides. Both of the air bags had deployed. Officer Henderson and Officer Torrez inspected the tires. Left front tire: 37 PSI with 7 mm tread depth. Left rear tire: 20 PSI with 5 mm tread depth. Right rear tire: 38 PSI with 4 mm tread depth. Right front tire: 37 PSI with 7 mm tread depth.

Vehicle #2 is a white 1998 Ford Explorer 4X2, 2/dr SUV bearing Arizona [redacted]. The vehicle is equipped with an automatic transmission and air bag deployment was unknown. The vehicle was completely incinerated. On 06-01-2005, I inspected the undercarriage of vehicle #2 at the Tri Star tow yard. The rear drive shaft was broken from the rear axle at the U-joint. Both of the leaf springs were sheared towards the rear connections. The rear bumper was crushed and bent inward. The trailer hitch was pushed

forward and sheared in the middle. The rear axle was also pushed forward. The front of the rear axle's third member was pointed downward. The left side of the rear axle was pushed into the rear of the fuel tank. The rear portion of the fuel tank was damaged. On the right rear portion of the fuel tank, I observed a hole about ½ inch long and ¼ inch wide.

Vehicle #3 is a maroon 2000 Dodge Stratus 4/dr bearing Arizona [redacted] Both of the airbags deployed. The vehicle sustained major damage to the rear end. The rear of the car was burned from vehicle #2. The vehicle also sustained damage to the front end. Officer Henderson and Officer Torrez inspected the tires. Left front tire: 32 PSI with 3 mm tread depth. Left rear tire was flat with 5 mm tread depth. Right front tire: 33 PSI with 5mm tread depth. Right rear tire was flat with 5 mm tread depth.

Vehicle #4 is a gold 2005 Ford Explorer 4/dr SUV bearing Michigan [redacted] The vehicle sustained damage to the rear end.

The witness/driver statements and physical evidence suggested the collision occurred in the following manner:

The traffic became congested on northbound I-17 in the area of Rose Garden Ln. Vehicle #4 stopped with traffic in the #1 lane. Vehicle #3 stopped behind vehicle #4 in the #1 lane. It is unknown if vehicle #2 struck vehicle #3 before being struck from behind, however vehicle #2 was stopped or nearly stopped in the #1 lane. Vehicle #1 was in the #1 lane when the driver observed the traffic was stopped. He then veered towards the left and the right front end then struck vehicle #2 in the rear at approximately 70 MPH. Vehicle #1 did not skid before the collision. The impact caused vehicle #2 to strike the rear of vehicle #3. Vehicle #3 was forced into the rear of vehicle #4. Vehicle #2 then caught on fire. Some of the occupants were pulled from vehicle #2 by the witnesses.

ARIZONA DEPARTMENT OF PUBLIC SAFETY

TRAFFIC ACCIDENT WITNESS STATEMENT

DPS USE ONLY

DR NUMBER: 05-027759

DATE: 8-28-05

WITNESS IS: ☐ DRIVER ☐ PASSENGER ☐ OTHER WITNESS

LOCATION (STREET, HIGHWAY, MILEPOST, INTERSECTION, ETC.): I-17 mp 214

START HERE | Please print all information |

WITNESS INFORMATION

NAME		MIDDLE
[redacted]		I

CURRENT ADDRESS	CITY	STATE	ZIP CODE
[redacted]	Glendale	Az	[redacted]

BUSINESS NAME/ADDRESS	CITY	STATE	ZIP CODE

HOME PHONE	BUSINESS PHONE	BIRTH DATE (MO/DAY/YR)	DRIVER'S LICENSE NUMBER	STATE
[redacted]		[redacted]		Az

CIRCUMSTANCES

WHAT WERE YOU DOING JUST PRIOR TO THE ACCIDENT?

Heading north on I-17

WHAT CALLED YOUR ATTENTION TO THE ACCIDENT? (breaking glass, etc.)

Cars stopping

HOW FAR AWAY FROM THE ACCIDENT WERE YOU WHEN IT OCCURRED?

HOW MANY VEHICLES WERE INVOLVED IN THE ACCIDENT?

PLEASE DESCRIBE THE VEHICLES INVOLVED IN THE ACCIDENT

VEHICLE	COLOR	MAKE (Ford, Chevy, etc.)	MODEL (Mustang, Camaro, etc.)	BODY STYLE (Station Wagon, etc.)
1	Maroon	Dodge	Stratus	Sedan
2		Ford	Explorer 2 door	2 door SUV.
3	Green	Ford	Truck	F150
4				

WEATHER CONDITIONS

☑ CLEAR ☐ RAIN ☐ SNOW ☐ DUST ☐ FOG ☐ STRONG WINDS ☐ CLOUDY ☐ OTHER:

THIS SECTION TO BE COMPLETED ONLY BY DRIVERS OF VEHICLES INVOLVED IN THE ACCIDENT

INSURANCE COMPANY NAME	POLICY NUMBER	EFFECTIVE FROM/TO DATES
		/ / TO / /

PLEASE LIST ALL PASSENGERS IN YOUR VEHICLE (EXCLUDING YOURSELF)

NAME	ADDRESS	CITY, STATE, ZIP CODE	PHONE NUMBER	AGE	SEX (M ☐ F ☐)
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐

WHAT WAS YOUR SPEED? M.P.H.

DIRECTION OF TRAVEL? ☐ NORTH ☐ SOUTH ☐ EAST ☐ WEST

CONTINUE ON THE BACK

DESCRIPTION OF ACCIDENT

↓ DPS USE ONLY ↓

DR NUMBER: 05-02775 9

Arriving on the scene my vision of impact was blocked by an other vehicle. As we got closer we saw that the F150 had hit and pushed the Explorer into the Dodge. We started to pull off to the side of the road when we noticed the flames. In a matter of seconds the vehicle was engulfed in flames. I ran from my vehicle to help. As I approached the explorer the husband was trying to help his wife out. He began to catch fire so we pulled him from the fire. As we tried to help the lady was smothered in flames and I could see someone in the back seat. I tried to find anything I could to smother the fire underneath her. So that we could get closer and so we not sitting in the fire. As we were trying to help the lady a young guy showed up w/a fire extinguisher. I grabbed it and used it to slow the Fire down around her. Then an other gentlemen grabbed her as she came loose, and was pulled to the side. We ran back to the truck but there was nothing we could do to help the other victims. At that time I saw a Fire truck arrive on site. So I began to help clear traffic to the sides so that they could get through.

(1) On the grid below indicate **NORTH** by placing an arrow pointing north in the box provided.
(2) Using the grid area below, draw a diagram which shows the location of the vehicles at the time the accident occurred.
(3) Use a solid line to show the path of the vehicles **BEFORE** the accident occurred.
(4) Number each vehicle according to the numbers you used on the other side of this form.

INDICATE NORTH

[redacted]

WITNESSED BY (OFFICER)

ID NUMBER

ARIZONA DEPARTMENT OF PUBLIC SAFETY

TRAFFIC ACCIDENT WITNESS STATEMENT

DPS USE ONLY
DR NUMBER: 05-027759
DATE: 5-28-05

WITNESS IS: ☑ DRIVER ☐ PASSENGER ☐ OTHER WITNESS
LOCATION (STREET, HIGHWAY, MILEPOST, INTERSECTION, ETC.): I-17 MP214.9

START HERE | Please print all information |

WITNESS INFORMATION

[redacted] MIDDLE

	CITY	STATE	ZIP CODE
[redacted]	Glendale	AZ	[redacted]
BUSINESS NAME/ADDRESS	CITY	STATE	ZIP CODE

HOME PHONE	BUSINESS PHONE	BIRTH DATE (MO/DAY/YR)	DRIVER'S LICENSE NUMBER	STATE
[redacted]				AZ

CIRCUMSTANCES

WHAT WERE YOU DOING JUST PRIOR TO THE ACCIDENT?

Driving behind accident

WHAT CALLED YOUR ATTENTION TO THE ACCIDENT? (breaking glass, etc.)

Collesion, the fire started immodiately, people trying to get out

HOW FAR AWAY FROM THE ACCIDENT WERE YOU WHEN IT OCCURRED?

HOW MANY VEHICLES WERE INVOLVED IN THE ACCIDENT? 3

PLEASE DESCRIBE THE VEHICLES INVOLVED IN THE ACCIDENT

VEHICLE	COLOR	MAKE (Ford, Chevy, etc.)	MODEL (Mustang, Camaro, etc.)	BODY STYLE (Station Wagon, etc.)
1	Red	compact car 4door		
2		sport ultility		
3	Green	pu truck		
4				

WEATHER CONDITIONS
☐ CLEAR ☐ RAIN ☐ SNOW ☐ DUST ☐ FOG ☐ STRONG WINDS ☐ CLOUDY ☐ OTHER:

THIS SECTION TO BE COMPLETED ONLY BY DRIVERS OF VEHICLES INVOLVED IN THE ACCIDENT

INSURANCE COMPANY NAME	POLICY NUMBER	EFFECTIVE FROM/TO DATES
		/ / TO / /

PLEASE LIST ALL PASSENGERS IN YOUR VEHICLE (EXCLUDING YOURSELF)

NAME	ADDRESS	CITY, STATE, ZIP CODE	PHONE NUMBER	AGE	SEX M F
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐

WHAT WAS YOUR SPEED?	DIRECTION OF TRAVEL?
M.P.H.	☐ NORTH ☐ SOUTH ☐ EAST ☐ WEST

CONTINUE ON THE BACK

DESCRIPTION OF ACCIDENT

↓ DPS USE ONLY ↓

DR NUMBER: 05-027759

~~Was pulled~~

The passengers in the ~~...~~ sport ~~...~~ utility vehicle where trying to get out. Two of the people could not get out. One body was having problems getting out because of the fire. She was stuck half ~~...~~ of her body was out of the vehicle the other part her arm was stuck in the vehicle.

(1) On the grid below indicate **NORTH** by placing an arrow pointing north in the box provided.
(2) Using the grid area below, draw a diagram which shows the location of the vehicles at the time the accident occurred.
(3) Use a solid line to show the path of the vehicles **BEFORE** the accident occurred.
(4) Number each vehicle according to the numbers you used on the other side of this form.

INDICATE NORTH

YO [redacted]

WITNESSED BY (OFFICER)

ID NUMBER

ARIZONA DEPARTMENT OF PUBLIC SAFETY

TRAFFIC ACCIDENT WITNESS STATEMENT

↓ DPS USE ONLY ↓

DR NUMBER: 05-02 7 7 5 9

DATE: 5-28-05

WITNESS IS: ☐ DRIVER ☐ PASSENGER ☐ OTHER WITNESS

LOCATION (STREET, HIGHWAY, MILEPOST, INTERSECTION, ETC.): I-10 MP [illegible]

START HERE ↓ Please print all information ↓

WITNESS INFORMATION

[redacted]

CITY: Bakersfield | STATE: CA | ZIP CODE: [redacted]

[redacted]

CITY: Bakersfield | STATE: CA | ZIP CODE: [redacted]

[redacted] STATE: CA

CIRCUMSTANCES

WHAT WERE YOU DOING JUST PRIOR TO THE ACCIDENT? [redacted]

slowing down my vehicle due to stopped traffic Ahead

WHAT CALLED YOUR ATTENTION TO THE ACCIDENT? (breaking glass, etc.)

tires squealing

HOW FAR AWAY FROM THE ACCIDENT WERE YOU WHEN IT OCCURRED? 4-5 cars ahead

HOW MANY VEHICLES WERE INVOLVED IN THE ACCIDENT? 3

PLEASE DESCRIBE THE VEHICLES INVOLVED IN THE ACCIDENT

VEHICLE	COLOR	MAKE (Ford, Chevy, etc.)	MODEL (Mustang, Camaro, etc.)	BODY STYLE (Station Wagon, etc.)
1	Red	Dodge		
2	Blue	Ford	explorer	
3	Blue	Ford	F150	
4				

WEATHER CONDITIONS

☒ CLEAR ☐ RAIN ☐ SNOW ☐ DUST ☐ FOG ☐ STRONG WINDS ☐ CLOUDY ☐ OTHER:

THIS SECTION TO BE COMPLETED ONLY BY DRIVERS OF VEHICLES INVOLVED IN THE ACCIDENT

INSURANCE COMPANY NAME	POLICY NUMBER	EFFECTIVE FROM/TO DATES
		/ / TO / /

↓ PLEASE LIST ALL PASSENGERS IN YOUR VEHICLE (EXCLUDING YOURSELF) ↓

NAME	ADDRESS	CITY, STATE, ZIP CODE	PHONE NUMBER	AGE	SEX M F
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐

WHAT WAS YOUR SPEED? 0-2 M.P.H.

DIRECTION OF TRAVEL? ☒ NORTH ☐ SOUTH ☐ EAST ☐ WEST

CONTINUE ON THE BACK

visiting w/ grandmother also Another witness Speran [redacted] henry (480) 361-986

DESCRIPTION OF ACCIDENT

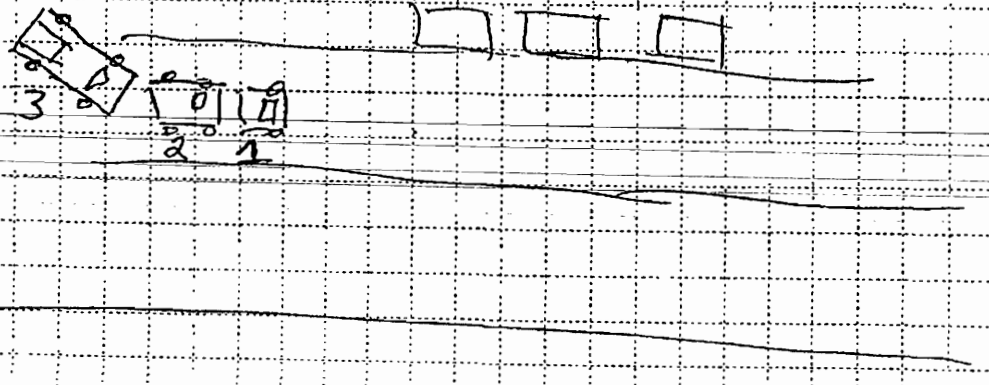
DPS USE ONLY

DR NUMBER: 05-027759

I was slowing down due to stopped traffic Ahead I was keeping my eyes on my rear view mirrors to make ~~sure~~ no one hit me from behind when I heard the tires lock up and saw the vehicles impact each other I pulled forward ~~about~~ about 100ft and put my car in park and turned on my hazards I ran back there was the father of the Ford explorer trying to help his wife out of the passanger side and someone else trying to get the little girl out of the carseat in behind the passanger side seat. I reached in and helped pull the little girl out. The mother was stuck in her seat the father was still trying to get her out he then ran out ~~keeping~~ trying to put ~~his~~ the fire on his pants off. then he ran back trying to get his wife out, there was a little boy in the back seat crying wanting out of his carseat but nowone could get to him. I heard the tires blowing out and me and the little girl walked away from the vehicles there was a man wearing all white Bleeding from his head up against the wall by the Hwy med ~~center~~ I checked the littlegirl she had scratches and Glass in her hair and back

(1) On the grid below indicate NORTH by placing an arrow pointing north in the box provided.
(2) Using the grid area below, draw a diagram which shows the location of the vehicles at the time the accident occurred.
(3) Use a solid line to show the path of the vehicles BEFORE the accident occurred.
(4) Number each vehicle according to the numbers you used on the other side of this form.

INDICATE NORTH



YOUR [redacted]

WITNESSED BY (OFFICER) A. LASON

ID. NUMBER 6052

ARIZONA DEPARTMENT OF PUBLIC SAFETY

TRAFFIC ACCIDENT WITNESS STATEMENT

DPS USE ONLY
DR NUMBER: 05-02-77-59
DATE: 5-28-05

WITNESS IS: ☐ DRIVER ☐ PASSENGER ☒ OTHER WITNESS
LOCATION (STREET, HIGHWAY, MILEPOST, INTERSECTION, ETC.): I-17 SB MP 219

START HERE | Please print all information |

WITNESS INFORMATION

[redacted] | CITY: PHOENIX | STATE: AZ | ZIP CODE: [redacted]

BUSINESS NAME/ADDRESS | CITY | STATE | ZIP CODE

HOME PHONE | BUSINESS PHONE | BIRTH DATE (MO/DAY/YR) | DRIVER'S LICENSE NUMBER [redacted] | STATE: AZ

CIRCUMSTANCES

WHAT WERE YOU DOING JUST PRIOR TO THE ACCIDENT?

SITTING IN CARPOOL LANE NB I-17 @ ROSE GARDEN SLOWING FOR TRAFFIC JAM. DARK COLORED FORD F-150 WAS SPEEDING TOWARDS WHITE SUV & RED DODGE

WHAT CALLED YOUR ATTENTION TO THE ACCIDENT? (breaking glass, etc.) 1ST CAR HIT. 2ND CAR INVOLVED

I HAPPENED TO LOOK INTO REAR VIEW MIRROR JUST PRIOR TO IMPACT FORD F150 MADE IMPACT WITH WHITE SUV WHICH WAS FORCED INTO RED DODGE

HOW FAR AWAY FROM THE ACCIDENT WERE YOU WHEN IT OCCURRED? 25 FEET

HOW MANY VEHICLES WERE INVOLVED IN THE ACCIDENT? 3

PLEASE DESCRIBE THE VEHICLES INVOLVED IN THE ACCIDENT

VEHICLE	COLOR	MAKE (Ford, Chevy, etc.)	MODEL (Mustang, Camaro, etc.)	BODY STYLE (Station Wagon, etc.)
1	BLACK/GREEN DARK	FORD	F-150	EX CAB
2	WHITE	?	SUV	
3	RED	DODGE	?	2 DOOR
4				

WEATHER CONDITIONS
☒ CLEAR ☐ RAIN ☐ SNOW ☐ DUST ☐ FOG ☐ STRONG WINDS ☐ CLOUDY ☐ OTHER:

THIS SECTION TO BE COMPLETED ONLY BY DRIVERS OF VEHICLES INVOLVED IN THE ACCIDENT

INSURANCE COMPANY NAME	POLICY NUMBER	EFFECTIVE FROM/TO DATES
		/ / TO / /

PLEASE LIST ALL PASSENGERS IN YOUR VEHICLE (EXCLUDING YOURSELF)

NAME	ADDRESS	CITY, STATE, ZIP CODE	PHONE NUMBER	AGE	SEX
					M ☐ F ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐

WHAT WAS YOUR SPEED? 5 M.P.H.

DIRECTION OF TRAVEL? ☒ NORTH ☐ SOUTH ☐ EAST ☐ WEST

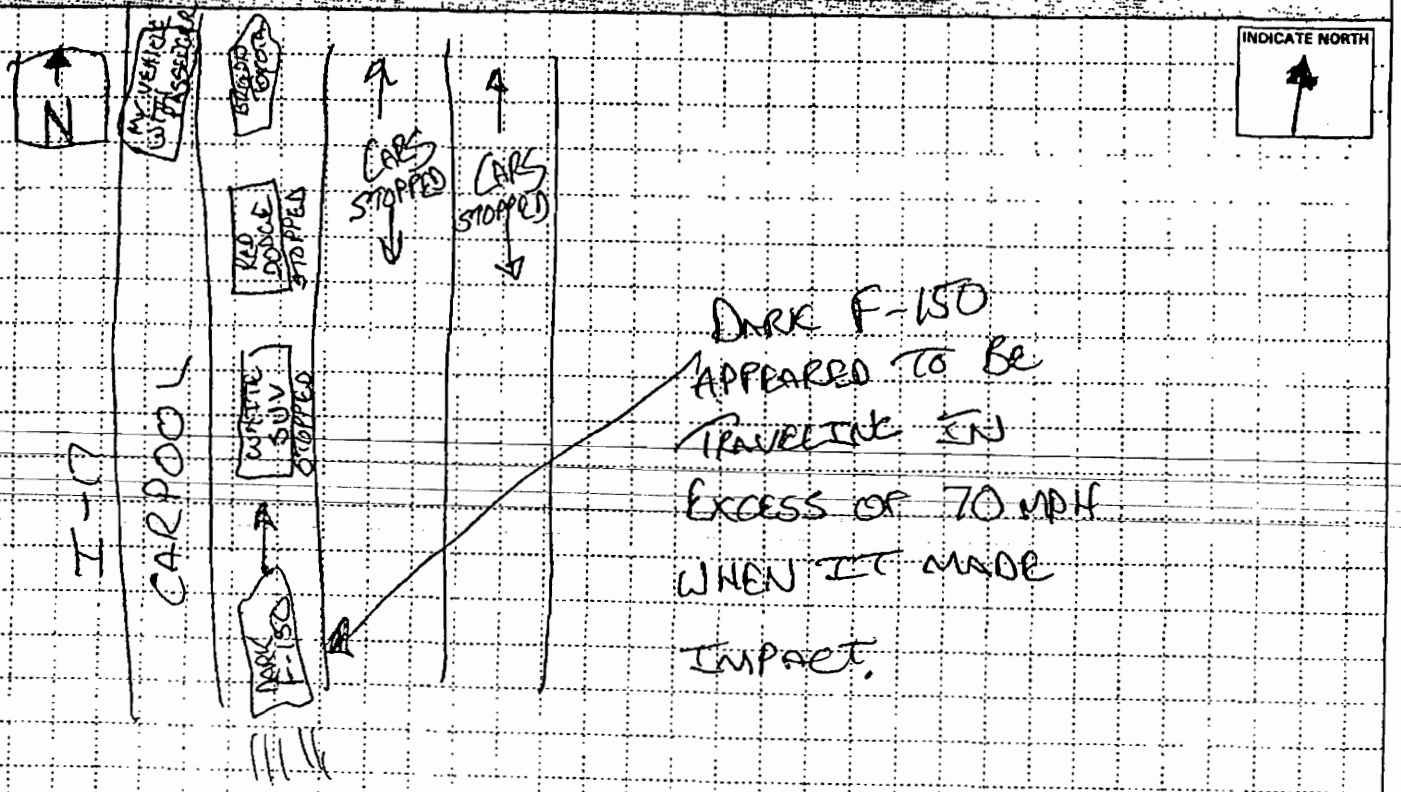
CONTINUE ON THE BACK

DESCRIPTION OF ACCIDENT

↓ DPS USE ONLY ↓
DR NUMBER: 05-007759

TRAFFIC ON ALL NB LANES ON I-17 @ ROSE GARDEN WERE STOPPED AS I LOOKED IN MY REAR VIEW MIRROR (I WAS IN CARPOOL LANE 1 LANE OVER TO THE LEFT OF THE ACCIDENT) AND SAW THE "SPEEDING" DARK COLORED F-150 TRY TO SWERVE OUT OF THE LANE AND INTO THE CARPOOL LANE BUT WAS GOING WAY TO FAST TO MISS THE WHITE SUV. THE DARK F-150 SLAMMED INTO THE REAR OF THE WHITE SUV SMASHING THE WHITE SUV INTO THE RED DODGE. THE WHITE SUV "IMMEDIATELY" BURST INTO FLAMES. 3 PASSENGERS ESCAPED FROM THE RED DODGE. ONLY 2 PEOPLE THAT I SAW ESCAPED FROM THE ~~CAR~~ BURNING WHITE SUV. I COULDN'T GET THE INFANT AND LADY OUT OF THE BACK OF THE WHITE SUV. THE WHITE SUV WAS ENGULFED IN FLAMES. IT WAS TOO HOT TO GET CLOSE TOO TO GET THE 2 VICTIMS OUT. I TRIED. BLACK F-150 SHOULD HAVE BEEN PAYING ATTENTION AND DRIVING SLOWER.

(1) On the grid below indicate **NORTH** by placing an arrow pointing north in the box provided.
(2) Using the grid area below, draw a diagram which shows the location of the vehicles at the time the accident occurred.
(3) Use a solid line to show the path of the vehicles **BEFORE** the accident occurred.
(4) Number each vehicle according to the numbers you used on the other side of this form.



[redacted]

WITNESSED BY (OFFICER): H. LASON

ID. NUMBER: 6052

ARIZONA DEPARTMENT OF PUBLIC SAFETY

TRAFFIC ACCIDENT WITNESS STATEMENT

↓ DPS USE ONLY ↓

DR NUMBER 05 027759

DATE 5-28-05

WITNESS IS: ☐ DRIVER ☐ PASSENGER ☐ OTHER WITNESS

LOCATION (STREET, HIGHWAY, MILEPOST, INTERSECTION, ETC.) I-17 MP 2[illegible]

START HERE ↓ Please print all information ↓

WITNESS INFORMATION

[redacted] MIDDLE

[redacted] -B)

CITY Anthem | STATE AZ | ZIP CODE [redacted]

CITY Phoenix | STATE Az | [redacted]

[redacted] STATE AZ

CIRCUMSTANCES

WHAT WERE YOU DOING JUST PRIOR TO THE ACCIDENT?

Driving [redacted] in carpool lane, northbound on I-17, slowing to stop with stopped traffic

WHAT CALLED YOUR ATTENTION TO THE ACCIDENT? (breaking glass, etc.)

Watching vehicle 3 (dark Ford F150) in rear view mirror (driver's side), speed towards stopped traffic. I witnessed full impact of vehicle 2 (light SUV) which then crashed into Vehicle 1 (sm. red car).

HOW FAR AWAY FROM THE ACCIDENT WERE YOU WHEN IT OCCURRED? Approx 25 ft

HOW MANY VEHICLES WERE INVOLVED IN THE ACCIDENT? 3

PLEASE DESCRIBE THE VEHICLES INVOLVED IN THE ACCIDENT

VEHICLE	COLOR	MAKE (Ford, Chevy, etc.)	MODEL (Mustang, Camaro, etc.)	BODY STYLE (Station Wagon, etc.)
1	red	Dodge		2Dr
2	white?	SUV.		
3	Dark	~~F150~~ Ford	F150	
4				

WEATHER CONDITIONS

☒ CLEAR ☐ RAIN ☐ SNOW ☐ DUST ☐ FOG ☐ STRONG WINDS ☐ CLOUDY ☐ OTHER:

THIS SECTION TO BE COMPLETED ONLY BY DRIVERS OF VEHICLES INVOLVED IN THE ACCIDENT

INSURANCE COMPANY NAME	POLICY NUMBER	EFFECTIVE FROM/TO DATES
		/ / TO / /

PLEASE LIST ALL PASSENGERS IN YOUR VEHICLE (EXCLUDING YOURSELF)

NAME	ADDRESS	CITY, STATE, ZIP CODE	PHONE NUMBER	AGE	SEX M F
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐

WHAT WAS YOUR SPEED? 5 M.P.H.

DIRECTION OF TRAVEL? ☒ NORTH ☐ SOUTH ☐ EAST ☐ WEST

CONTINUE ON THE BACK

DESCRIPTION OF ACCIDENT

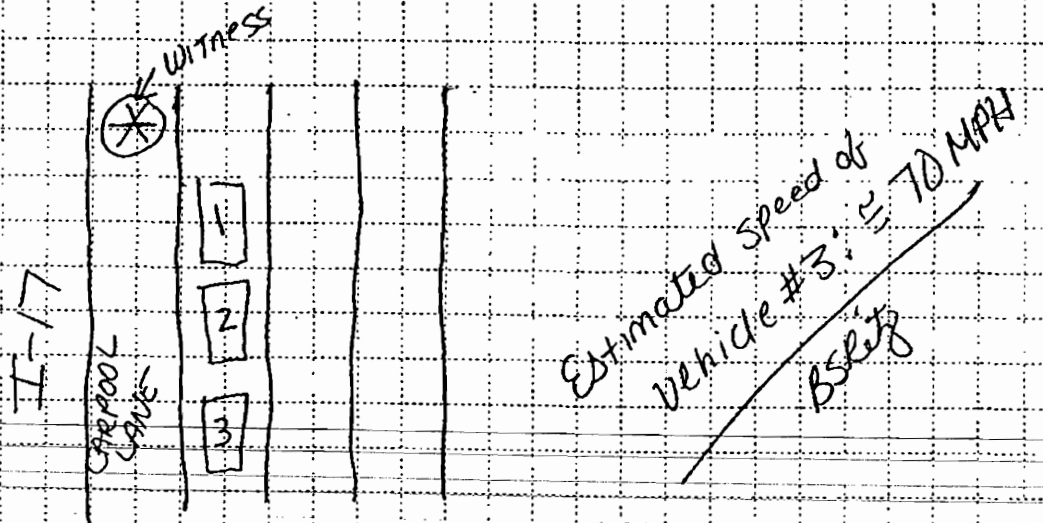
↓ DPS USE ONLY ↓
DR NUMBER: 05-027759

All traffic in all four lanes was at a complete and total stop with all vehicles viewed having their brake lights illuminated. Vehicle one and two were both stopped w/brake lights. Vehicle three was speeding towards veh 1 & 2, recognized situation with minimal time to react, veh 3 did attempt to swerve into carpool lane but was going too fast with too little room to maneuver.

I had just passed veh 1 & 2 in the carpool lane, witnessed accident in mirror, immediately stopped bike and responded to injured motorists. We were unable to extricate all victims in veh 2, and dog in veh 1.
Vehicle 3 hit veh 2, which hit veh 1. Veh 2 immediately broke out in flames, which then caught veh 1 on fire.

(1) On the grid below indicate **NORTH** by placing an arrow pointing north in the box provided.
(2) Using the grid area below, draw a diagram which shows the location of the vehicles at the time the accident occurred.
(3) Use a solid line to show the path of the vehicles **BEFORE** the accident occurred.
(4) Number each vehicle according to the numbers you used on the other side of this form.

INDICATE NORTH ↑



[redacted]

WITNESSED BY (OFFICER): A. LASON

ID NUMBER: 6152

ARIZONA TRAFFIC ACCIDENT REPORT	REPORT ID						Agency Report Number
SUPPLEMENT FORWARD COPY TO ACCIDENT RECORDS ANALYSIS UNIT 064R ARIZONA DEPARTMENT OF TRANSPORATION 206 S 17TH AVE., PHOENIX, ARIZONA 85007-3233	YEAR	MONTH	DAY	HOUR	NCIC NO.	OFFICER'S ID NO.	2005-027759
	2005	5	28	1255	0799	4292	

ACCIDENT DESCRIPTION
(NARRATIVE)

On 5-29-05 at 1258 I was advised of a serious injury collision on I17 at Yorkshire. I responded from I10 and Estrella and arrived at 1330. After being briefed by Officer Eagan on the details of the collision and the status of the investigation, I assumed incident command at 1410. I coordinated tow trucks, fire department, medical examiner, ADOT, and other personnel until 1600 when incident command was teminated.

An incident command system log form was completed.

LT Jack Hegarty 4564

ARIZONA TRAFFIC ACCIDENT REPORT

SUPPLEMENT
FORWARD COPY TO
ACCIDENT RECORDS ANALYSIS UNIT 084R
ARIZONA DEPARTMENT OF TRANSPORTATION
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

REPORTID

MO DAY YEAR	HOUR	NCIC NO	OFFICERS ID NO	Agency Report Number
05312005	1255	0799	4292	2005-027759

ACCIDENT DESCRIPTION
(NARRATIVE)

On May 28, 2005 at approximately 1330 hours, I responded to a call out of a fatal collision on Interstate 17 at the 101 interchange. I was assigned the responsibility of providing traffic control at the intersection of Interstate 17 and Yorkshire. I relieved the two Phoenix Police Officers from there positions and provided traffic control for approximately one hour.

Upon completion of providing traffic control; I was assigned the task of a follow up investigation of Mr. [redacted] at John C Lincoln North Mountain medical center. At JCL I made contact with Mr. [redacted] His nurse stated he had a broken nose; a broken cheek, and a broken eye socket. Mr. [redacted] was in a lot of pain and was being admitted into the Hospital. I asked Mr. [redacted] the following questions:

I asked "What vehicle were you in?"
Mr[redacted] stated "I was in the green truck."
I asked "Where were you going?"
Mr.[redacted] stated "Northbound on the freeway."
I asked "What happened?"
Mr.[redacted] stated "I saw smoke ahead, and traffic came to a stop."
I asked "How far were you from the vehicle in front of you?"
Mr.[redacted] stated "Too close; too close to stop."
I asked "What happened next."
Mr.[redacted] stated "We struck a white SUV."
I asked "Then what?"
Mr.[redacted] stated "My face hit the dashboard and I saw a lot of flames."
I asked "What did you do next?"
Mr.[redacted] stated "I took off my seatbelt and jumped out the window."
Mr.[redacted] further stated his father helped him out the window and he was walking around but would not sit down.

I concluded my interview; Mr.[redacted] nose was extremely swollen and bleeding heavily. He gave me his address of [redacted] El Paso, TX[redacted] and a phone number of [redacted]

He has a local contact through his cousin [redacted] Phoenix, AZ [redacted] with a phone number of [redacted]

This concludes my portion of this investigation.

X
G. R. JACOBS #6171 ARIZONA HIGHWAY PATROL

I- 01-2707 2/92

DPS 802-01036 12/99

EA12-005-000414LC

[redacted]

SUPPLEMENT
FORWARD COPY TO
ACCIDENT RECORDS ANALYSIS UNIT 064R
ARIZONA DEPARTMENT OF TRANSPORTATION
206 S. 17th AVE., PHOENIX, ARIZONA 85007-3233

REPORT ID					Agency Report Number
YEAR MONTH DAY	HOUR	NCIC NO.	OFFICER'S ID NO.		
2005/05/28	11 28	0799	4292		05-027938

ACCIDENT DESCRIPTION
(NARRATIVE)

SUPPLEMENTAL REPORT
PREPARED BY: A. STOLZ JR. #5299

ON JUNE 2, 2005 AT 2136 HOURS I WENT TO THE MARICOPA COUNTY HOSPITAL'S BURN UNIT TO PREPARE A DECEASED PERSON IDENTIFICATION TAG. I ARRIVED AND CONTACTED MATTY PERRY WHO IS A NURSE THERE. SHE GAVE ME INFORMATION THAT I NEEDED TO COMPLETE THE TAG.

IT WAS DETERMINED THAT ON JUNE 2, 2005 AT 1825 HOURS, [redacted] WAS PRONOUNCED DEAD BY DR. DANIEL CARUSO AT THE BURN UNIT. THE CAUSE OF DEATH WAS LISTED AS SEPTIC SHOCK DUE TO NECROSIS OF RIGHT FOOT, RIGHT HAND, AND LEFT FOOT. IT WAS NOTED THAT ARCELIA DIAZ SUSTAINED 82% TOTAL BODY SURFACE AREA BURNS. THE NEXT OF KIN THAT WAS NOTIFIED WAS [redacted] WHO IS [redacted] SISTER. I VIEWED THE BODY AS IT WAS BEING PREPARED TO BE TAKEN TO THE CRYSTAL ROSE FUNERAL HOME IN TOLLESON, AZ. THE DECEASED PERSON IDENTIFICATION TAG WAS GIVEN TO MATTY PERRY WHO PLACED IT IN [redacted] FILE. THIS CONCLUDED MY INVOLVEMENT WITH THIS CASE.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EA12-005 000418LC


EA12-005 000419LC

EA12-005 000420LC


EA12-005 000421LC


EA12-005 000422LC

EA12-005 000423LC

Paul G. Cereghini (Bar No. 009641)
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Phoenix, Arizona 85012
(602) 643-2300
(602) 248-0947 FAX

Attorneys for Defendant Ford Motor Company

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF MARICOPA

ARMANDO RIVERA, a single man, and as natural parent for MONSERRAT RIVERA, a minor child, SOPHIA DIAZ, as next of kin for ARCELIA DIAZ and INEZ ASTORGA, deceased single adults, JAIME ROBERTO PEREZ, as natural parent for JAIME PEREZ, a minor child, Plaintiffs, v. FORD MOTOR COMPANY, a foreign corporation; LEDEZMA AUTO SALES, an Arizona Corporation; LORENZO FAVELA and JANE DOE FAVELA, husband and wife, JOHN DOES I-X, JANE DOES I thru X, BLACK CORPORATIONS I-X; WHITE CORPORATIONS I-X, Defendants.	Case No. CV2005-017559 **FORD MOTOR COMPANY'S SEVENTH SUPPLEMENTAL and EXPERT DISCLOSURE STATEMENT** (Tort-Product Liability-Negligence, Wrongful Death) (Assigned to the Honorable Glenn Davis)

Pursuant to Arizona Rules of Civil Procedure, Rule 26.1, Defendant, Ford Motor Company ("Ford"), hereby submits its seventh supplemental and expert disclosure statement. **Supplemental information will appear in bold.**

PREFATORY STATEMENT

Ford's investigation of the facts relating to this incident is incomplete and is continuing. Ford has not yet received or collected all documents relating to this action,

interviewed all witnesses in this lawsuit, nor completed its discovery or preparation of its defenses to plaintiffs' various allegations. Ford reserves the right, at any time in this litigation, to identify additional witnesses, information or documents, if any, that pertain to any such theories known or unknown, or which may be discovered.

This case is in its preliminary stages and information relating to the plaintiffs' allegations of liability is limited. Notwithstanding the foregoing, pursuant to Rule 26(a)(1) Arizona Rules of Civil Procedure, and in a good faith effort to comply therewith, Ford discloses the following:

I. FACTUAL BASIS OF DEFENSES

This litigation stems from a four vehicle accident on May 28, 2005. According to the accident report, at approximately 12:55pm, Plaintiff Armando Rivera was operating a 1998 Ford Explorer 4X2, 2 door ("Explorer") on Interstate 17 at or near its intersection with Rose Garden Lane, in Phoenix, Arizona. According to the accident report, the Explorer was stopped, or nearly stopped, in the northbound direction of the left lane for a traffic backup on Interstate 17. The Explorer was struck in the rear by a Ford F-150 being driven by Lorenzo Favela. According to the accident report, Mr. Favela had been traveling approximately 70 mph and swerved left to avoid hitting the Explorer in the left northbound lane. The accident report notes that Mr. Favela was traveling at approximately 70 mph and left no skid marks prior to the collision. The impact caused the Explorer to strike the rear of the 2000 Dodge Stratus driven by Linda Begay in front of it. The Stratus was then forced into the rear of the 2005 Ford Explorer in front of it.

In the 1998 Explorer, Plaintiff Armando Rivera was seated in the driver's seat, Arcelia Diaz was seated in the front passenger seat, Jamie Perez was seated in the left rear seat, Inez Astorga was seated in the middle rear seat, and Monserrat Rivera was seated in the right rear seat. The 1998 Explorer caught on fire. Armando Rivera exited the vehicle and tried to assist Arcelia Diaz out of the vehicle, but she partially stuck in the front passenger seat. A witness, Hector Ramos, also assisted in extracting Ms.

Diaz from the Explorer. Armando Rivera sustained third degree burns to his arms and legs. He was transported by Air Evac helicopter to the Maricopa County Hospital Burn Unit where he was admitted. Arcelia Diaz sustained burns to 82 percent of her body. She was transported by DPS Ranger 41 helicopter to the Maricopa County Hospital Burn Unit where she was admitted. On June 2, 2005 at 1825 hours, Ms. Diaz was pronounced dead at the burn unit as a result of burn related trauma.

Monserrat Rivera was extracted from the vehicle by Andrew Morgret, a scene witness. Monserrat Rivera sustained a laceration to her face. She was transported by Phoenix Fire Department ambulance #R-30 to the Maricopa County Hospital where she was treated. Jaime Perez and Inez Astorga were unable to be extracted from the Explorer prior to the vehicle being engulfed in flames. Jaime Perez and Inez Astorga were pronounced dead at the scene by the Phoenix Fire Department personnel at approximately 1305 hours. According to the Maricopa County Medical Examiner, the cause of death of both Jamie Perez and Inez Astorga was 100 percent burns and inhalation of flames.

Mr. Favela, driver of the 2002 Ford F-150 sustained cuts and abrasions to his hands and legs. He was treated at the scene by the Phoenix Fire Department. His passenger/son, Jesus Favela, sustained cuts, contusions, a fractured nose and fractured eye socket. He was transported by the Phoenix Fire Department Ambulance #R-42 to the John C. Lincoln Hospital (North Mountain) where he was admitted.

The driver and two passengers in the 2000 Dodge Stratus suffered minor injuries, were treated and released. Their vehicle was towed from the scene.

The driver and two passengers in the 2005 Ford Explorer suffered no injuries. They were able to drive from the scene in their vehicle.

II. DEFENSE LEGAL THEORIES

Ford has not yet had an opportunity to conduct an investigation or engage in formal discovery concerning the accident. Ford reserves the following defenses

pending further investigation and discovery:

At this time, Ford understands that Plaintiffs allege that the subject vehicle was defective and unreasonably dangerous because it contained a defective fuel system. Additionally, Ford understands that Plaintiffs allege that Ford was negligent in designing and manufacturing the subject Explorer.

Ford contends that the 1998 Explorer 4X2 involved in this accident embodied a state-of-the-art design that was neither unreasonably dangerous nor defective. A.R.S. §§12-681, et seq. At trial, Ford will establish that the Explorer, specifically the fuel system, was neither defective nor unreasonably dangerous. Ford intends to present expert evidence, as well as design and testing information, which demonstrate that these systems are well-designed and safe and are not unreasonably dangerous or defective. The evidence will also demonstrate that Ford was not negligent in anyway. Rather, the subject Explorer was state-of-the-art, met industry standards at the time, and complied with the federal standards then in effect. See Deyoe v. Clark Equipment Co., Inc., 134 Ariz. 281, 285, 655 P.2d 1333, 1337 (App. 1982) (evidence of state-of-the-art, industry standards, and government standards is admissible).

Moreover, a manufacturer has no duty to equip its vehicles with a safety device not mandated by federal safety standards. See, e.g., Cooper v. General Motors Corp., 702 So. 2d 428 (Miss. 1997); Schwartz v. Volvo North America Corp., 554 So. 2d 927 (Ala. 1989). Likewise, a manufacturer has no duty to make a product that incorporates only the ultimate in safety features. Piper v. Bear Medical Sys, Inc., 180 Ariz. 170, 883 P.2d 407 (App. 1993); Raschke v. Carrier Corp., 146 Ariz. 9, 11, 703 P.2d 556, 558 (App. 1985).

Ford also expects to establish that Plaintiffs' damages were not caused or enhanced by any alleged defect in the 1998 Explorer 4X2. Furthermore, Plaintiffs will be unable to establish that their alleged damages were caused by the defects or negligence alleged in their Complaint. Rather, the cause of this accident and any

resulting injuries was the negligence of other parties and non-parties to this case, including Plaintiffs negligent operation of the subject vehicle. Accordingly, in addition to the defenses based upon the state-of-the-art, misuse, and negligence per se, Defendant may present evidence to support a comparative fault issue.[1]

At this time, Ford has not received sufficient evidence to evaluate Plaintiffs claims against the Co-Defendants and reserve the right to argue these Defendants liability as the case progresses. Ford also will defend Plaintiffs claims by asserting the affirmative defenses that are set forth in their answers.

Ford will supplement this disclosure with more detail about the legal basis of their defenses when Plaintiffs provide more specific information about their claims.

III. WITNESSES EXPECTED TO BE CALLED AT TRIAL

At this time, discovery and investigation have barely begun and therefore, Ford cannot identify all witnesses it may call at trial. Witnesses Ford may call at trial include, but are not limited to, plaintiffs, non-parties at fault, employees of Ford most qualified to testify about areas related to plaintiffs claims, defense expert witnesses, custodians of record necessary to identify and authenticate records to be introduced, and some or all of the witnesses listed in Section IV.

IV. NAMES AND ADDRESS OF ALL PERSONS WHO FORD BELIEVES HAVE KNOWLEDGE OR INFORMATION

Ford cannot at this time identify all witnesses who may have knowledge of facts relevant to the subject matter of this action. The following is a list of fact witnesses of whom it is currently aware that may have relevant knowledge:

1. Armando Rivera
   c/o Douglas S. Younglove
   P.O. Box 10766
   Phoenix, AZ 85064-0766

[1] Arizona law is clear that, even when the non-party at fault is an unidentifiable entity, the jury should be permitted to apportion fault to them. Smith v. Johnson, 183 Ariz. 38, 899 P.2d 199 (App. 1995); Rosner v. Denim & Diamond, Inc., 188 Ariz. 431, 937 P.2d 353 (App. 1997). This designation may be supplemented with additional bases for this non-party s fault as discovery progresses.

Mr. Rivera was the driver of the 1998 Ford Explorer, which is the subject vehicle in this litigation.

2. Monserrat Rivera
c/o Douglas S. Younglove
P.O. Box 10766
Phoenix, AZ 85064-0766.

Ms. Rivera was a passenger in the 1998 Ford Explorer, which is the subject vehicle in this litigation.

3. Sophia Diaz
c/o Douglas S. Younglove
P.O. Box 10766
Phoenix, AZ 85064-0766.

Ms. Diaz sister Arcelia was a passenger in the 1998 Ford Explorer which is the subject vehicle in this litigation.

4. Jaime Roberto Perez
c/o Douglas S. Younglove
P.O. Box 10766
Phoenix, AZ 85064-0766.

Mr. Perez son Jaime was a passenger in the 1998 Ford Explorer which is the subject vehicle in this litigation.

5. Lorenzo Favela
1450 George Dieter #B22
El Paso, TX 79936

Lorenzo Favela was the driver of the 2002 Ford F-150 which struck the rear of the subject vehicle in this litigation.

6. Jesus Favela
1450 George Dieter #B22
El Paso, TX 79936

Jesus Favela was a passenger in the 2002 Ford F-150 which struck the rear of the subject vehicle in this litigation.

7. Linda Begay
4423 N. 13th Place #1
Phoenix, Arizona 85014

Ms. Begay was the driver of the 2000 Dodge Stratus which was struck by the subject vehicle in this litigation.

8. Nicholas Begay
4423 N. 13th Place #1
Phoenix, Arizona 85014

Nicholas Begay was a passenger in the 2000 Dodge Stratus, which was struck by the subject vehicle in this litigation.

9. Donovan Begay
4423 N. 13th Place #1
Phoenix, Arizona 85014

Donovan Begay was a passenger in the 2000 Dodge Stratus which was struck by the subject vehicle in this litigation.

10. Hichim Chedli-Ben Brahim
4060 EM 36
Pinckney, MI 48169

Hichim Chedli-Ben Brahim was the driver of a 2005 Ford Explorer which was struck by a 2000 Dodge Stratus which was struck by the subject vehicle in this litigation.

11. Trisha Webb
37830 N. Linda Dr.
Cave Creek, Arizona 85331

Trisha Webb was a passenger in the 2005 Ford Explorer which was struck by a 2000 Dodge Stratus which was struck by the subject vehicle in this litigation.

12. Bessam Amri-Hnichi
4870 Bridle Run #1-A
Ypsilanti, Michigan 48197

Bessam Amri-Hnichi was a passenger in the 2005 Ford Explorer which was struck by a 2000 Dodge Stratus which was struck by the subject vehicle in this litigation.

13. Andrew Morgret
806 Castale Ave
Bakersfield, California 93308

Andrew Morgret was a witness to the accident. He assisted Monserrat Rivera out of the subject vehicle at the accident scene.

14. Angie Ramos
5020 W. Peoria # 102
Glendale, Arizona 85302

Angie Ramos was a witness to the accident.

15. Hector Ramos
5020 W. Peoria # 102
Glendale, Arizona 85302

Hector Ramos was a witness to the accident. He assisted Arcelia Diaz out of the subject vehicle at the accident scene.

16. Belinda Ritz
41232 N. Parker Ln.
Anthem, Arizona 85086
Belinda Ritz was a witness to the accident.

17. Dennis Texleira
38718 N. 16th Pl.
Phoenix, Arizona 85086

Dennis Texleira was a witness to the accident. He tried to assist Inez Astorga and Jaime Perez out of the subject vehicle at the accident scene.

18. Ofr. Bynaker # 4313, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 85009

Officer Bynaker assisted at the accident scene and with follow up.

19. Lt. Coleman # 4047, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Lieutenant Coleman assisted with on-scene supervision at the accident.

20. Ofr. Eagan # 5039, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Eagan assisted with incident command at the accident.

21. Ofr. Jacobs # 6171, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Jacobs assisted with hospital follow up.

22. Lt. Hegarty # 4564, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Lieutenant Hegarty assisted with incident command at the accident.

23. Ofr. Henderson # 5618, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Henderson assisted at the accident scene.

24. Commander Hughes # 1513, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Commander Hughes assisted with on-scene supervision at the accident.

25. Ofr. Jacobs # 6171, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Jacobs assisted with traffic control at the accident scene, and then interviewed Jesus Favela at John C. Lincoln Hospital.

26. Ofr. Lason # 6052, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Lason assisted at the accident scene.

27. Ofr. Leech # 4292, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Leech was the Investigator for the accident. He is the author of report number 2005-027759.

28. Sgt. Messerly # 2940, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Sergeant Messerly was the On-Scene Supervisor at the accident.

29. Ofr. Petculescu # 5626, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Petculescu assisted with hospital follow up.

30. Ofr. Stephenson # 3681, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Stephenson assisted with V.C.U. measurements and diagrams.

31. Ofr. Stoltz # 5299, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Stoltz assisted with follow up on Arcelia Diaz at the burn unit.

32. Ofr. Sunquist # 4095, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Sunquist assisted at the accident scene.

33. Ofr. Torres # 5443, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Torres assisted at the accident scene and with Spanish translations.

34. Ofr. Zenke # 6287, Arizona Department of Public Safety
2102 W. Encanto Blvd.
Phoenix, Arizona 8500

Officer Zenke assisted with hospital follow up.

35. Firefighter Boor, # BHO579, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Boor assisted at the scene of the accident.

36. Firefighter Cantalme, # CJ6125, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Cantalme assisted at the scene of the accident.

37. Firefighter Carretto, # CM5001, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Carretto assisted at the scene of the accident.

38. Firefighter Chase, # CR0979, City of Phoenix Fire ETS
150 S. 12th St.

Phoenix, AZ 85034

Firefighter Chase assisted at the scene of the accident.

39. Chief Davis, # 0D0301, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Chief Davis assisted at the scene of the accident.

40. Firefighter Dyer, # DP4055, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Dyer assisted at the scene of the accident.

41. Captain Griffin, # GJ0654, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Captain Griffin assisted at the scene of the accident.

42. Firefighter Gudinas, # GB2701, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Gudinas assisted at the scene of the accident.

43. Firefighter Hendrick, # HD2628, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Hendrick assisted at the scene of the accident.

44. Captain Hernandez, # HA1096, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Captain Hernandez assisted at the scene of the accident.

45. Firefighter Hover, # HK1115, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Hover assisted at the scene of the accident.

46. Firefighter Kennedy, # KR6115, City of Phoenix Fire ETS
150 S. 12th St.

Phoenix, AZ 85034

Firefighter Kennedy assisted at the scene of the accident.

47. Firefighter Lloyd, # L5103, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Lloyd assisted at the scene of the accident.

48. Captain Mabry, # MJ1577, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Captain Mabry assisted at the scene of the accident.

49. Firefighter Moses, # MM5195, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Moses assisted at the scene of the accident.

50. Firefighter Ohab, # OS1279, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Ohab assisted at the scene of the accident.

51. Firefighter Quint, # QT2943, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Quint assisted at the scene of the accident.

52. Firefighter Rhoades, # RK0774, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Rhoades assisted at the scene of the accident.

53. Firefighter Richards, # RB0775, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Richards assisted at the scene of the accident.

54. Captain Roberts, # RM1336, City of Phoenix Fire ETS

150 S. 12th St.
Phoenix, AZ 85034

Captain Roberts assisted at the scene of the accident.

55. Firefighter Sanders, # SJ9174, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Sanders assisted at the scene of the accident.

56. Firefighter Sandman, # SJ5026, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Sandman assisted at the scene of the accident.

57. Firefighter Sawyers, # SW1349, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Sawyers assisted at the scene of the accident.

58. Captain Schell, # SS1624, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Captain Schell assisted at the scene of the accident.

59. Captain Simmons, # SMO422, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Captain Simmons assisted at the scene of the accident.

60. Firefighter Simpson, # SR1369, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Simpson assisted at the scene of the accident.

61. Firefighter Sneed, # SM2869, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Sneed assisted at the scene of the accident.

62. Firefighter Walters, # WJ6398, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Walters assisted at the scene of the accident.

63. Firefighter Williams, # WT5609, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Williams assisted at the scene of the accident.

64. Firefighter Wilson, # WD5180, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Wilson assisted at the scene of the accident.

65. Firefighter Wood, # WM5211, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Firefighter Wood assisted at the scene of the accident.

66. Deputy Yeager, # YP0032, City of Phoenix Fire ETS
150 S. 12th St.
Phoenix, AZ 85034

Deputy Yeager assisted at the scene of the accident.

V. NAME AND ADDRESS OF ALL PERSONS WHO HAVE GIVEN STATEMENTS

No one acting on behalf of Ford has taken any written or recorded statements from any fact witnesses in this case. The medical records, insurance records, or accident report may contain information that could be considered a "statement," but those documents should be in plaintiffs position and Ford expects these documents to be disclosed by plaintiffs.

VI. NAMES AND ADDRESS OF EXPERT WITNESSES AT TRIAL

Plaintiffs have not timely disclosed their experts' qualifications to testify, "the substance of the facts and opinions" to which their experts are expected to

testify, or a summary of the bases for their opinions, as required by Rule 26.1(a)(6), Arizona Rules of Civil Procedure and the Court's scheduling order. Ford's designation of experts and the general substance of their opinions in compliance with Rule 26.1(a)(6) and the Court's scheduling order should not be construed as waiver of any remedy or recourse available to Ford in light of plaintiffs' failure to properly disclose their experts.

Ford reserves the right to identify expert witnesses as discovery in this case progresses. **Because of plaintiffs' failure to properly disclose their experts and lack of any defect specificity, any opinions identified below are preliminary and subject to change based on new information which may be learned later. However, the persons identified in this section below may be called at trial to render expert opinions. This disclosure contains preliminary opinions. To the extent additional work causes the experts to redefine or change the opinions set forth below, Ford will supplement this disclosure.**

Ford reserves the right to elicit opinion testimony from any witnesses listed in Part III, above, who qualify to give such an opinion.

1. Jarrod W. Carter, Ph.D.
Origin Engineering, L.L.C.
12314 East Broadway
Spokane, WA 99216

Dr. Carter will testify about the following subjects at trial:

A. He will testify about his education, experience, employment and training that qualify him to render expert opinions in this case regarding analysis and reconstruction of the subject crash. Ford is producing a copy of Dr. Carter's curriculum vitae, which outlines his education and experience.

B. Dr. Carter is expected to provide opinion evidence regarding his observations from inspections of the subject vehicle and scene of the subject collision; his investigation and reconstruction of the subject crash; crash

causations; his analysis, observations and conclusions from the evidence; testimony he will have reviewed; the vehicle speeds and dynamics involved in the crash; his training, education and experience; any matter set forth in a later produced report (including any by plaintiffs' experts) and curriculum vitae.

C. It is anticipated that Dr. Carter will base his opinions upon his education, knowledge, training, and experience in the field of accident reconstruction; review of photographs of the vehicles involved in the subject crash; his inspection, measurement and photographs of the subject vehicle (had the other vehicles been available for inspection the effort to analyze this crash would have been significantly reduced); review of photographs of the scene of the subject crash; his inspection of the scene of the subject crash; his review of deposition testimony and information contained in written discovery materials; engineering analysis of the subject vehicle; documents produced by the plaintiffs and Ford; and other materials generated through discovery; his review of engineering and scientific literature; and the evidence to be introduced at trial.

D. Dr. Carter will testify that the following vehicles were involved in the subject crash:

> **<u>Vehicle 1</u> – 2002 green Ford F-150 Supercab XL 138.5 inch wheelbase 4X2 pickup (VIN – 1FTRXI7292NA46156) being operated by Lorenzo Favela;**
>
> **<u>Vehicle 2</u> – 1998 white Ford Explorer Sport 2-door 4X2 (VIN – 1FMYU22XSWUA79238), being operated by Armando Rivera;**
>
> **<u>Vehicle 3</u> – 1997 red Dodge Stratus SE 4-door sedan (VIN – 1B3EJ46X2YN215037), being operated by Linda Begay, and;**
>
> **<u>Vehicle 4</u> – 2005 gold Ford Explorer XLT 4-door 4X4 (VIN – 1FMZU73K05UB50462), being operated by Hichem Chedli-Ben Brahim.**

E. Dr. Carter will testify that Vehicle 2, the Rivera Explorer, was stopped for traffic congestion in the northbound lanes of I-17 near the Loop 101 interchange on May 28, 2005. Dr. Carter will testify that Vehicle 3, the Begay

Stratus, was stopped ahead of Vehicle 2, and that Vehicle 4, the Brahim Explorer, was stopped ahead of Vehicle 3.

F. Dr. Carter will testify that at approximately 12:55 p.m. on May 28, 2005, Vehicle 1, the Favela F-150, failed to stop and collided with the rear-end of Vehicle 2, the Rivera Explorer. The collision drove Vehicle 2 forward into Vehicle 3, which was subsequently driven forward into Vehicle 4. Subsequent to the initial collision between Vehicle 1 and Vehicle 2 a fire developed, eventually involving Vehicle 2 in its entirety and the rear-end of Vehicle 3.

G. Dr. Carter is expected to testify that there was a second collision between Vehicle 1, the Favela F-150, and Vehicle 2, the Rivera Explorer, following their initial collision, likely occurring after the collision between Vehicle 2 and Vehicle 3, the Begay Stratus. The second collision is demonstrated by irregularities in the front tiremarks deposited by the Favela F-150 after the initial impact with the Rivera Explorer. Dr. Carter will testify that there is no indication that the Rivera Explorer and Begay Stratus separated after the initial impact.

H. Dr. Carter will testify that this was a severe, violent and complex crash. Dr. Carter is expected to testify about impact speeds and velocity changes for the various impacts involved in the subject crash. At the time of this disclosure, Dr. Carter has additional analysis to complete to assess these impact speeds and velocities. Consistent with witness statements suggesting an impact speed of 70 mph for the Favela F-150 when it struck the rear-end of the Rivera Explorer, Dr. Carter's initial calculations suggest that the Favela F-150 was traveling at least the posted speed limit of 65 mph at initial impact.

I. Plaintiffs have failed to provide any specific defect theories or accident reconstruction opinions at the time this disclosure was prepared. Accordingly, Dr. Carter may respond to any issues raised by plaintiffs' experts' testimony in the event such testimony is ever given. Dr. Carter reserves the

opportunity to fully evaluate and address plaintiffs' experts' theories and offer additional opinions upon plaintiffs later disclosing the substance and bases of their experts' opinions. Ford reserves the opportunity for Dr. Carter to provide a supplemental disclosure or report further setting forth the general substance of his mental impressions and opinions and a brief summary of the basis for them.

J. Ford also reserves the opportunity to provide a list of all items reviewed or prepared in anticipation of Dr. Carter's testimony in the event plaintiffs disclose the substance of their experts' mental impressions, opinions, and their underlying bases.

K. Ford anticipates that it will continue to provide Dr. Carter with additional information as it is obtained through the discovery process. Therefore, Ford reserves the right to supplement Dr. Carter's opinions accordingly. Further explanation regarding the basis of his opinions may be obtained by taking his deposition.

2. Edward M. Caulfield, Ph.D., P.E.
Mark Fleming, Ph.D., P.E.
Packer Engineering, Inc.
1950 North Washington Street
Naperville, IL 60563

The Packer Engineering witness will testify about the following subjects at trial:

A. He will testify about his education, experience, employment and training that qualify him to render expert opinions in this case regarding the design, performance and crashworthiness of the fuel system in the subject vehicle. Ford is producing a copy of Dr. Caulfield and Dr. Fleming's curriculum vitaes, which outline their education and experience.

B. It is anticipated that the Packer Engineering witness will base his opinions upon his education, knowledge, training, and experience; review of photographs of the subject vehicle; review of photographs of the vehicles

involved in the subject crash; inspection, measurement and photographs of the subject vehicle; review of deposition testimony and information contained in written discovery materials; analysis of FARS data; analysis of hitch information; survey of SUV fuel tank locations; documents produced by the plaintiffs and defendants; and other materials generated through discovery; their review of engineering and scientific literature; and the evidence to be introduced at trial.

C. Plaintiffs have failed to provide any specific defect theories or alternative designs at the time this disclosure was prepared. Accordingly, the Packer Engineering witness may respond to any issues raised by plaintiffs' expert testimony in the event such testimony is ever given. The Packer Engineering witness reserves the opportunity to fully evaluate and address plaintiffs' experts' theories and offer additional opinions upon plaintiffs later disclosing the substance and bases of their experts' opinions. Ford reserves the opportunity for the Packer Engineering witness to provide a supplemental disclosure or report further setting forth the general substance of their mental impressions and opinions and a brief summary of the basis for them.

D. It is anticipated that the Packer Engineering witness will testify that the subject vehicle, Rivera Explorer, was stopped due to traffic congestion when it was impacted in the rear-end by the Ford F-150 driven by Lorenzo Favela at a very high rate of speed. He is expected to testify that the impact pushed the Rivera Explorer into the rear-end of a Dodge Stratus, which was in turn pushed into another Ford Explorer in front of it. He will testify that as a result of the crash, the fuel tank of the Rivera Explorer was breached and a fire occurred.

E. He is expected to testify about the inspection of the subject vehicle. The Packer Engineering witness will testify that the rear of the Rivera Explorer was heavily deformed, the rear section of both frame rails were bent, and the rear leaf springs on both sides of the rear axle were fractured in the

vicinity of the rear mountings.

F. He will testify that the Rivera Explorer was equipped with an aftermarket hitch (non-Ford hitch) which was bolted to the frame rails of the subject vehicle. The Packer Engineering witness will testify that during the collision, the non-Ford hitch split in half on the left side of the receiver, that the left part of the hitch was pushed into the rear axle, resulting in a fracture of the left rear side of the differential housing. The right side of the hitch impacted the rear cover plate of the differential, and the axle was rotated such that the rear of the differential was oriented forward.

G. He will testify that the left boss of the rear differential housing was fractured and the left rear axle tube was separated from the differential.

H. The Packer Engineering witness will testify that at the inspection of the subject vehicle, the rear face of the tank was deformed inward due to impact from the rear axle and that two openings were noted on the rear of the fuel tank. He will testify that one opening was on the rear inside corner and appeared to have been made by the lip on the rear cover plate of the differential. He will testify that the lip had sustained impact damage and was no longer rounded in that area. The Packer Engineering witness will testify that the second opening, on the rear face below the seam of the tank, was crescent-shaped and approximately ½" long. He is expected to testify that this opening appeared to have been caused by the fractured differential housing.

I. He will testify that the 1998 Ford Explorer Sport has a fuel tank located in the "midship" location, meaning that it is located ahead of the rear-axle, between the driveshaft and the left side frame rail.

J. He will testify that the aftermarket hitch was torn into two pieces by the force of the impact, and that the separation was on the left side of the receiver.

K. He will testify that the left half of the broken hitch impacted the left side of the center differential and caused the casting to fracture. The Packer Engineering witness will testify that the right half of the hitch impacted the center differential and caused it to rotate around such that the attachment for the drive shaft was oriented rearward and the rear cover plate was oriented forward. He will testify that the rounded lip on the cover plate sustained impact damage, and that the damaged part of the rear cover plate impacted the rear corner of the fuel tank resulting in an opening.

L. The Packer Engineering witness will testify that the sharp edge of the fractured center differential casting was pushed into the tank, resulting in a crescent-shaped opening approximately ½" inch in length.

M. He will testify that Packer Engineering has analyzed data from the FARS database and found that fires were very rare for Ford Explorers impacted in the rear. From 1995 – 2005, a fire in a Ford Explorer due to a rear impact comprised only 0.0017% of total vehicles in fatal crashes.

N. The Packer Engineering witness will testify that Packer Engineering has surveyed SUV's from several manufacturers, including all SUV's sold in the United States, and found that the most common fuel tank location is the midship location.

O. The Packer Engineering witness will address plaintiffs' vague and general statement that the vehicle design was defective simply because of the location of the fuel tank.

1. **He will testify that plaintiffs have not disclosed any alternative location for the fuel tank, nor any analysis of the efficacy of an alternative location.**
2. **He will testify that the midship fuel tank location on the subject vehicle is the most common tank location for SUVs manufactured in 1998.**

3. He will testify that the midship location is a safe location for the fuel tank on this vehicle.

P. The Packer Engineering witness will address plaintiffs' general and vague statement that a shield would have prevented the puncture of the tank.

1. He will testify that no design details of the proposed shield have been disclosed and as such the efficacy of the proposed shield can not be evaluated at this point.

2. He will testify that additional fuel tank shields need engineering consideration and testing before they are applied. Shields can and have caused fuel tank breaches in cases where breaches would not have occurred. Applying a shield as a remedy to a particular isolated situation is not proper engineering methodology.

3. He will testify that the design of the production fuel tank in the 1998 Ford Explorer Sport is safe and not defective.

Q. The Packer Engineering witness will address and respond to opinions of plaintiffs' experts, including testimony about any alternative designs proposed by plaintiffs' witnesses.

R. Ford also reserves the opportunity to provide a list of all items reviewed or prepared in anticipation of the Packer Engineering witness' testimony in the event plaintiffs disclose the substance of their experts' mental impressions, opinions, and their underlying bases.

S. Ford anticipates that it will continue to provide Packer Engineering with additional information as it is obtained through the discovery process. Therefore, Ford reserves the right to supplement the Packer Engineering witness' opinions accordingly. Further explanation regarding the basis of their opinions may be obtained through deposition.

3. Paul Beauchamp
JASICH & BEAUCHAMP FIRE ANALYSIS
3100 Airway Avenue, Suite 136
Costa Mesa, CA 92626

Mr. Beauchamp will testify about the following subjects at trial:

A. He will testify about his education, experience, employment and training that qualify him to render expert opinions in this case regarding analysis of the fire in the subject crash. Ford is producing a copy of Mr. Beauchamp's curriculum vitae, which outlines his education and experience.

B. Mr. Beauchamp will testify concerning his inspection and analysis of the subject vehicle and, in particular, the fire from the subject crash.

C. It is anticipated that Mr. Beauchamp will base his opinions upon his education, knowledge, training, and experience; review of photographs of the subject vehicle; review of photographs of the vehicles involved in the subject crash; inspection, and photographs of the subject vehicle; review of deposition testimony and information contained in written discovery materials; documents produced by the plaintiffs and defendants; and other materials generated through discovery; his review of engineering and scientific literature; and the evidence to be introduced at trial.

D. Mr. Beauchamp will testify that no design or manufacturing defect caused the subject fire. Mr. Beauchamp will testify that this opinion is based in part on no defect being observed or noted in his review, analysis or inspection, and the subject vehicle's test results and compliance with safety standards.

E. Mr. Beauchamp will testify that gasoline did not enter the passenger compartment of the subject vehicle as a result of the impact and related accident dynamics. Mr. Beauchamp will testify that this opinion is based in part on the types and timing of known injuries to the front left passenger (driver) and rear right passenger.

F. Mr. Beauchamp will testify that despite the severe impact, the passenger compartment of the subject vehicle in this incident provided an environment safe from fire for a period of time sufficient to allow exit from the

vehicle without burn injury. Mr. Beauchamp will testify that this opinion is based in part on the types and timing of known injuries to the front left passenger (driver) and rear right passenger, that the Good Samaritan(s) that reportedly assisted the right rear passenger to exit the vehicle did not suffer any known burn injuries, and that the driver of the subject vehicle exited the vehicle.

G. Mr. Beauchamp will testify that gasoline from the fuel tank contributed to the subject fire. He will testify that he observed two openings in the fuel tank as well as a liquid level. Mr. Beauchamp will testify that disassembly of the tank from the vehicle is required for a more comprehensive examination and analysis of the effect, contribution, and role as a fuel source that gasoline played in this fire event.

H. It is believed that additional information exists in this matter that would be helpful to Mr. Beauchamp in analyzing this event such as financial records, fuel/credit card receipts, witness statements and other similar information. Ford continues to encourage plaintiffs to provide complete discovery responses and disclose all such relevant information. Upon receipt of any additional information Mr. Beauchamp will review and analyze that information in context with what is already available to further refine his opinions in this matter.

I. Plaintiffs have failed to provide any specific defect theories or fire analysis at the time this disclosure was prepared. Accordingly, Mr. Beauchamp may respond to any issues raised by plaintiffs' expert testimony in the event such testimony is ever given. Mr. Beauchamp reserves the opportunity to fully evaluate and address plaintiffs' experts' theories and offer additional opinions upon plaintiffs later disclosing the substance and bases of their experts' opinions. Ford reserves the opportunity for Mr. Beauchamp to provide a supplemental disclosure or report further setting forth the general substance of

his mental impressions and opinions and a brief summary of the basis for them.

J. Ford also reserves the opportunity to provide a list of all items reviewed or prepared in anticipation of Mr. Beauchamp's testimony in the event plaintiffs disclose the substance of their experts' mental impressions, opinions, and their underlying bases.

K. Ford anticipates that it will continue to provide Mr. Beauchamp with additional information as it is obtained through the discovery process. Therefore, Ford reserves the right to supplement Mr. Beauchamp's opinions accordingly. Further explanation regarding the basis of his opinions may be obtained through deposition.

VII. COMPUTATION AND MEASURE OF DAMAGES

Ford does not allege any damages. Plaintiffs have the burden of proving damages. Ford disputes liability and, to the extent it is necessary and appropriate, also will contest plaintiffs damages. Ford will seek its costs.

VIII. THE EXISTENCE, LOCATION CUSTODIAN AND GENERAL DESCRIPTION OF ANY TANGIBLE EVIDENCE OR RELEVANT DOCUMENTS THAT THE DEFENDANT PLANS TO USE AT TRIAL AND RELEVANT INSURANCE AGREEMENTS:

Ford has not yet determined what exhibits they will offer into evidence at trial because investigation is ongoing and discovery is in its early stages. Some or all of the materials listed below may be used at trial. Ford does not admit the relevancy of any materials identified below and Ford reserves the right to object to the relevancy or admissibility of any materials at trial:

A. Documents Relating to the Accident

1. Arizona Department of Public Safety Accident Report (Bates Nos. RIVERA FORD 000001-00031);

2. Custodian of Records Tri-Star Towing (Bates Nos. RIVERA FORD 000032-00035);

3. DVD-COR KSAZ Fox 10 News Fatal Accident 5/28/06 (Bates No. RIVERA

FORD 000036);

4. Declaration of News Director-COR KSAZ Fox 10 News Fatal Accident 5/28/06 (Bates Nos. RIVERA FORD 000037-038);

5. DVD-COR KPHO TV 5 CBS News Fatal Accident 5/28/06 (Bates Nos. RIVERA FORD 000039);

6. Edit Notes-COR KPHO TV 5 CBS News Fatal Accident 5/28/06 (Bates Nos. RIVERA FORD 000040-041);

7. State Farm Insurance file for Lorenzo Favela (Bates Nos. RIVERA FORD 000042- 000403);

8. Maricopa County Medical Examiner's report for Arcelia Diaz (Bates Nos. RIVERA FORD 000404-000413);

9. Maricopa County Medical Examiner's report for Inez Astorga (Bates Nos. RIVERA FORD 000414-000423)

10. Maricopa County Medical Examiner's report for Jaime Perez (Bates Nos. RIVERA FORD 000424-000432);

11. Arizona Motor Vehicle Department records for the Begay 2000 Dodge Stratus (Bates Nos. RIVERA FORD 000433-000441);

12. Michigan Department of Driver and Vehicle Records for 2005 Ford Explorer rental vehicle (Bates Nos. RIVERA FORD 000442-000448);

13. Texas Department of Public Safety re no record of license for Lorenzo Favela (Bates Nos. RIVERA FORD 000449-000450);

14. Texas Motor Vehicle Department re no record of registration for Favela 2002 F-150 (Bates Nos. RIVERA FORD 000451);

15. Arizona Motor Vehicle Division registration information re Rivera 1998 Ford Explorer (Bates Nos. RIVERA FORD 000452-000494);

16. Newspaper articles from The Arizona Republic (Bates Nos. RIVERA FORD 000495-000496);

17. Custodian of Records for City of Phoenix ETS - Incident Report (Bates Nos. RIVERA FORD 000497-000527);

18. Arizona Department of Public Safety photographs (Bates Nos. RIVERA FORD 000528 - 000818);

19. Custodian of Records for Maricopa County Medical Examiner for Arcelia

Diaz (Bates Nos. RIVERA FORD 000819-000894);

20. Custodian of Records for Maricopa County Medical Examiner for Inez Astorga (Bates Nos. RIVERA FORD 000895-000952);

21. Custodian of Records for Maricopa County Medical Center for Arcelia Diaz (Bates Nos. RIVERA FORD 000953-001332);

22. Custodian of Records for Maricopa County Medical Center Billing Department for Arcelia Diaz (Bates Nos. RIVERA FORD 001333-001356)

23. Custodian of Records for Maricopa County Medical Center for Arcelia Diaz XRAYS on 2 CDs (Bates Nos. RIVERA FORD 001357-001358);

24. City of Phoenix ETS Fire Department Accident Scene Video (Bates Nos. RIVERA FORD 001359);

25. Michigan Department of State Driving Record of Hichem Ben-Brahim (Bates Nos. RIVERA FORD 001360 - 001361);

26. Custodian of Records for Insurance Auto Auctions (Bates Nos. RIVERA FORD 001362 - 001375);

27. Custodian of Records for GEICO (Bates Nos. RIVERA FORD 001376 - 001639);

28. Custodian of Records for Air Evac regarding Armando Rivera (Bates Nos. RIVERA FORD 001640 - 001650);

29. Custodian of Records for Maricopa Medical Center for Monserrat Rivera (Bates Nos. RIVERA FORD 001651 - 001689);

30. Custodian of Records for Maricopa Medical Center for Armando Rivera (Bates Nos. RIVERA FORD 001690 - 002374);

31. Custodian of Records for GEICO 6 color photos on CD (Bates Nos. RIVERA FORD 002375);

32. Custodian of Records for Maricopa County Medical Examiner for Inez Astorga color photographs on CD [Please note: GRAPHIC] (Bates Nos. RIVERA FORD 002376);

33. Custodian of Records for Maricopa County Medical Examiner for Arcelia Diaz color photographs on CD [Please note: GRAPHIC] (Bates Nos. RIVERA FORD 002377);

34. Custodian of Records for Maricopa County Medical Center Billing for Monserrat Rivera (Bates Nos. RIVERA Ford 002391-002393);

35. Custodian of Records for Maricopa County Medical Center Billing for Armando Rivera (Bates Nos. RIVERA Ford 002394-002421);

36. Custodian of Records for Insurance Auto Auctions – 5 color photos on CD (Bates Nos. RIVERA Ford 002779);

37. Custodian of Records for Maricopa County Medical Examiner for Jaime Perez (Bates Nos. RIVERA FORD 003768 - 003826);

38. Custodian of Records for Maricopa County Medical Examiner for Jaime Perez – color photographs on CD [Please note: "GRAPHIC"] (Bates Nos. RIVERA FORD 003827).

39. **Curriculum Vitae for Ford's experts disclosed above in Section VI;**

Ford will supplement.

B. Documents from Ford

The 1998 Ford Explorer 4 x 2 Involved in the Incident

The vehicle that is the subject of Plaintiff's claims is a 1998 2-door Ford Explorer. The 1998 Explorer's Fuel System is similar to the fuel system of 1998-2000 Explorer 2 Door (UN-150) and 2001-2003 Explorer Sport 2 Door (U207) vehicles (which Ford will refer to as 1998-2003 Ford Explorer 2-door vehicles) and Ford will respond accordingly. Ford identifies the following materials or categories of materials pertaining to the subject 1998 Ford Explorer 4 x 2 vehicle:

- Copy of the factory invoice for the subject 1998 Ford Explorer 4 x 2 (Bates Nos. RIVERA Ford 002422);
- Representative copy of the Owner Guide that Ford provided with the 1998 Ford Explorer 4 x 2 vehicles (Bates Nos. RIVERA Ford 002423-002632);
- Representative copy of the Warranty Facts Booklet that Ford provided in the 1998 Ford Explorer 4 x 2 vehicles (Bates Nos. RIVERA Ford 002633-002650);
- Representative copy of the Maintenance Schedule Log that Ford provided with the 1998 Ford Explorer 4 x 2 vehicles (Bates Nos. RIVERA Ford 002651-002686);
- Warranty records, if any, for the subject 1998 Ford Explorer 4 x 2 (Bates Nos. RIVERA Ford 002687-002689);

- Recalls, if any, applicable to the subject 1998 Ford Explorer 4 x 2 (Bates Nos. RIVERA Ford 002690-002762);

- Pages relating to standard equipment and option packages from the 1998 Explorer Dealer Source Book Bates Nos. RIVERA Ford 002763-002767).

The Design and Development of the Fuel System of the 1998 Ford Explorer 4 x 2

For the purpose of these responses, the Fuel System is defined as the fuel tank, fuel delivery and return lines, and the fuel filler pipe. Ford disputes Plaintiff's allegations that the fuel system contained in the subject vehicle was defective in design or manufacture. Nonetheless, in the spirit of cooperation, Ford identifies the following materials or categories of materials pertaining to those allegations that Ford will search for and produce:

- CD containing Ford's Federal Motor Vehicle Safety Standard No. 301 certification package applicable to the 1998 Ford Explorer 4 x 2 (Bates Nos. RIVERA Ford 002780) (printed pages Bates Nos. RIVERA Ford 003828 - 004019;

- A list of crash tests conducted during the course of development of 1998-2000 Explorer 2 Door (UN-150) and 2001-2003 Explorer Sport 2 Door (U207) vehicles, including those associated with Ford's Federal Motor Vehicle Safety Standard No. 301 certification package. Ford will produce test reports, photographs and/or videos upon Plaintiff's request and written agreement to reimburse Ford for the costs of reproduction (Bates Nos. RIVERA FORD 002378 – 002390);

- Worldwide Customer Requirements (or its equivalent) applicable to the fuel system in 1998-2003 Ford Explorer 2-door vehicles (Bates Nos. RIVERA Ford 002781 - 002845);

- Engineering and Material Specifications applicable to the fuel tank, fuel delivery and return lines, and the fuel filler pipe in 1998-2003 Ford Explorer 2-door vehicles (Bates Nos. RIVERA Ford 002846 – 003598);

- Assembly, Installation and Detail drawings for the fuel tank, fuel delivery and return lines, and the fuel filler pipe in 1998-2003 Ford Explorer 2-door vehicles (Bates Nos. RIVERA Ford 003599 - 003686);

  - A layout drawing of the fuel system in 1998-2003 Ford Explorer 2-door vehicles (Bates Nos. RIVERA Ford 003687 - 003688);

- Ford's Engineering Test Procedures applicable to the fuel tank, fuel delivery and return lines, and the fuel filler pipe in 1998-2003 Ford Explorer 2-door vehicles (Bates Nos. RIVERA Ford 003689 - 003767);

- An index of Technical Service Bulletins pertaining to the fuel tank, fuel delivery and return lines, and fuel filler pipe in 1998-2003 Ford Explorer 2-door vehicles (Bates Nos. RIVERA Ford 002768-002778); and,

- Recalls and Owner Notification Notices, if any, that relate to the fuel tank, fuel delivery and return lines, and fuel filler pipe on 1998-2003 Ford Explorer 2-door vehicles (After a duly diligent search, no responsive documents could be located for Recalls and Owner Notification Notices that relate to the fuel tank, fuel delivery and return lines, and fuel filler pipe on 1998-2003 Ford Explorer 2-door vehicles).

C. Other Exhibits Intended to be Used at Trial

- Taber's Cyclopedic Medical Dictionary; F.A. Davis Co., Philadelphia;

- The Merck Manual; 16th Edition; Merck Sharp Laboratories;

- Netter, Frank; Atlas of Human Anatomy; CIBA-Geigy Corp., New Jersey;

- Williams & Warwick; Gray's Anatomy; 36th Edition; W.B. Saunders Co., Philadelphia;

- Physicians' Desk Reference;

- Clayman, Charles [Ed.], American Medical Association Encyclopedia of Medicine, Random House, New York, 1989;

- Bakerman, Seymour, M.D., ABC's of Interpretive Laboratory Data, 3rd Edition, 1994;

- Guyton, Arthur, M.D., Textbook of Medical Physiology, 8th Edition, W.B. Saunders 1991;

- Roland, Lewis; Merritt's Textbook of Neurology, 9th Edition, Williams & Wilkins, Baltimore, 1995;

- Exemplar 1998 Ford Explorer;

- Exemplar seat belts and other related components from a 1998 Ford Explorer;

- Exemplar roof structure and other related components from a 1998 Ford Explorer;

- Without waiving any objection thereto, any and all interrogatories

exchanged in this matter and any and all attachments and responses thereto;

- Without waiving any objection thereto, any and all requests for admissions and any and all responses and attachments thereto;
- Without waiving any objection thereto, any and all requests for production of documents or things and any and all responses and attachments thereto;
- Without waiving any objection thereto, any and all depositions and any and all exhibits attached thereto;
- Without waiving any objection thereto, Rule 26.1 Disclosure statements and supplementations thereto filed in this action by any party;
- Without waiving any objection thereto, any exhibits listed by or in possession of plaintiffs;
- Without waiving any objection thereto, anatomical drawings, demonstrative blow-ups, transparencies, overlays of all portions of exhibits for use at trial;
- Without waiving any objection thereto, curriculum vitaes for all expert witnesses and parties in this action;
- Without waiving any objection thereto, any and all photographs of plaintiffs relevant to the issues in this case;
- Without waiving any objection thereto, medical records, notes, correspondence, billing statements, x-rays, ultrasounds, radiological films, reports, films, tapes, photographs, etc. from including but not limited to the following health care providers, received from plaintiffs;
- Ford reserves the right to utilize at trial in support of defendants, any and all issues in the case at that time, any exhibit listed or utilized by a party (or former party) irrespective of whether or not the exhibit is hereinafter "delisted" by such party listing the exhibit, subject to the objections of defendants' previously asserted.

IX. <u>A LIST OF DOCUMENTS THAT DEFENDANTS BELIEVE MAY BE RELEVANT TO THE SUBJECT MATTER OF THE ACTION AND THOSE THAT APPEAR REASONABLY CALCULATED TO LEAD TO THE DISCOVERY OF ADMISSIBLE EVIDENCE</u>:

See Ford's response to subpart 8, supra.

In making this disclosure, Ford has not disclosed information or documents that are protected either by the attorney-client privilege or by the attorney work product doctrine. Such documents consist of investigative memoranda or notes prepared by

counsel, or at counsel's direction, containing those individual's thoughts and conclusions.

Ford has not completed its discovery of the facts relating to this case, has not completed its discovery in this action, and has not completed its trial preparation. Therefore, the information in this Disclosure Statement is based on knowledge or materials presently available and specifically known to Ford. It is possible that more discovery, independent investigation, legal research, and case analysis will supply additional facts, and new meaning to the known facts, or to establish entirely new factual conclusions and legal contentions, all of which may lead to additions, changes, or variations to this Disclosure Statement. As necessary, Ford will supplement this Disclosure Statement in accordance with the requirements of Rule 26.1 of the Arizona Rules of Civil Procedure.

The disclosures herein include information and data in the possession, custody, and control of Ford, as well as information that can be ascertained, learned, or acquired by reasonable inquiry and investigation.

DATED this 15th day of August, 2008.

BOWMAN AND BROOKE LLP

By □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
Paul G. Cereghini
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Phoenix, Arizona 85012
Attorneys for Ford Motor Company

Copy of the foregoing sent by U.S. Mail this 15th day of August, 2008, to

Douglas S. Younglove, Esq.
Douglas S. Younglove, PLLC
P.O. Box 10766
Phoenix, AZ 85064-0766
Attorney for Plaintiffs

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EA12-005

FORD

2/18/2013

APPENDIX C2

LAWSUIT 2

Design Analysis Engineering
Ford World Headquarters
One American Road
Dearborn, MI 48126

Kathleen A. Clark, Esq.
Dawson & Clark, P.C.
243 W. Congress Ave, Ste 600
Detroit, MI 48226

Subject: Bagg/Marsters v. Ford Motor Company report (1998 Ford Explorer) by Jon S. Olson, P.E., Design Analysis Engineer, Ford Motor Company

Date: April 15th, 2009

Ms. Clark:

Pursuant to your request, this report is being provided in response to the subject incident involving a 1998 Ford Explorer. All of the opinions expressed in this report are to a reasonable degree of engineering certainty. I reserve my right to supplement or revise my opinions in the event additional information is made available.

BASIS OF OPINION

I have a Bachelor of Science degree in Mechanical Engineering Technology from Lake Superior State University and a Masters Degree in Business Administration/Leadership from Baker College. I am a professional engineer based on the licensure requirements for the state of Wisconsin and have participated in hundreds of hours of post-graduate training in automotive engineering, accident investigation, and fire investigation. I am an active member in a several professional organizations relating to the automotive industry.

Since 1991 I have been continuously employed as a full time automotive engineer with experience and training in the areas of automotive facilities and tooling design, manufacturing engineering, component and system engineering design, engineering development and testing, and computer-aided engineering. I have been employed by Ford Motor Company since 1994 and have been deeply involved with engineering concepts, design, development, and manufacturing processes utilized in releasing automotive products to the consumer.

Since 2002 I have worked as a Design Analysis Engineer which is part of the Automotive Safety Office of Ford Motor Company. During this time I have conducted

EXHIBIT
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hundreds of investigations and have analyzed the real world safety performance of Ford vehicles, including but not limited to the Ford Explorer.

A copy of my current curriculum vitae is attached for further reference.

INCIDENT SUMMARY

During the early morning hours of Sunday, June 29th, 2003, Mr. Allen Bagg was operating a 1998 Ford Explorer with Ms. Noreen Marsters as a passenger on Falmouth Road in Cotuit, MA. Mr. Daniel Valente was also operating a 2003 Audi A4 on Falmouth Road traveling at a high rate of speed in the same direction as the Explorer. Mr. Valente's vehicle struck the left rear of the Explorer resulting in a post-collision fire in both the Audi and the Explorer. The vehicles separated after the collision with the Explorer leaving the roadway, rolling, striking a tree while on its passenger side, and finally impacting the ground as it came to rest.

EVIDENCE

The following includes a list of documents and/or investigations that I have conducted in support of my opinions:

- Scene photos of incident that occurred on June 29, 2003 in Cotuit, MA involving the subject 1998 Ford Explorer and the 2003 Audi A4
- Post incident vehicle inspection photos taken by law enforcement officers
- Photos taken by Wilson Dobson and Gil Lewis
- Reports/testimony of investigating law enforcement officers
- Expert disclosure/report issued by Mr. Jerry Wallingford
- Inspection of the bullet vehicle (2003 Audi A4) in Bellingham, MA on May 28th, 2008
- Repair records relating to previous damage to the subject 1998 Ford Explorer
- Review of design engineering documents relating to the 1998 Ford Explorer
- Review of subject vehicle invoice and other documents relating to the design, features, and options of the 1998 Ford Explorer
- Personal involvement in the design and manufacturing of the fuel system for the Ford Explorer
- Documents relating to the development and certification to applicable Federal Motor Vehicle Safety Standards and Corporate Safety Design Guidelines for the 1998 Ford Explorer
- Personal involvement and/or study of the design and manufacturing of the fuel systems for other North American car and light truck vehicles
- Review of exemplar Explorer vehicles

NOTE: I have been informed that the subject 1998 Ford Explorer was not preserved for inspection by Ford Motor Company. As a result, no physical evidence from the subject vehicle is available for inspection however limited documentary evidence was reviewed.

OPINIONS AND CONCLUSIONS

After a careful review of the documents, my inspection of the 2003 Audi A4, review of exemplar Explorer vehicles, my education, training, and nearly 18 years of knowledge and experience as an automotive engineer, I have reached the following opinions and conclusions:

1. The 1998 Ford Explorer is a reasonably safe vehicle for its intended use.

2. The 1998 Ford Explorer meets or exceeds all applicable federal motor vehicle safety standards, including FMVSS 301 for fuel system integrity.

3. In addition to the applicable FMVSS 301 standard, the 1998 Ford Explorer is designed to meet or exceed Ford's corporate Safety Design Guideline (SDG) for fuel system integrity. This standard significantly enhances the real world safety performance of the 1998 Ford Explorer and it's fuel system by achieving the following standards:

    - An Increase in the front fixed rigid barrier impact speed from 30 to 35 mph resulting in a 36% increase in energy over FMVSS 301
    - An increase in the rigid rear moving barrier impact speed from 30 to 35 mph resulting in a 36% increase in energy over FMVSS 301
    - The replacement of the 20 mph rigid side moving barrier with a 50 mph vehicle to vehicle side impact test
    - The addition of a 50 mph in line and/or 50 mph vehicle to vehicle 50% offset rear impact test.

4. Ford conducted a significant number of vehicle crash tests to develop, study, and certify fuel system performance to the federal and corporate safety design standards. A summary of the rear impact tests certifying compliance includes the following tests:

    - 9240: 35 mph rigid rear moving barrier test
        - Test date: 2/7/1994
        - Certification test of a 4x2, 4Dr Explorer
        - No spillage in all aspects of the test
    - 9250: 35 mph rigid rear moving barrier
        - Test date: 2/14/1994
        - Certification test of a 4x2, 2 Dr Explorer
        - No spillage or pressure leaks in all aspects of the test
    - 9218: 50 mph vehicle to vehicle, 50% rear offset
        - Test date: 1/25/1994
        - Safety Design Guide development test of a 4x2, 4 Dr Explorer
        - No spillage or pressure leaks in all aspects of the test

5. Mr. Wallingford identifies crash test numbers 8454, 9108, 9146, and 9250 as violations of Ford corporate safety design guidelines. A summary of these tests are as follows:

   - Tests 8454 and 9108 are early program 50 mph vehicle to vehicle development rear crash tests intended to provide initial crash test and energy management performance characteristics. Although these vehicles performed well in these severe tests, they were early prototype builds that included non-design intent fuel system components. Subsequent tests were conducted that reflect compliance with design intent components to Ford's safety design guideline requirements.

   - Development crash test 9146 was also a 50 mph vehicle to vehicle crash test of a 2 door Explorer conducted on 12/13/93 that reflects spillage in excess of the SDG and federal standards. Spillage from this test was not the result of a puncture to the fuel tank, but rather from a vent valve on the top of the fuel tank. Subsequent testing established compliance to the safety design guideline for this test mode.

   - Crash test 9250 was a 35 mph rigid rear moving barrier test that demonstrates compliance to FMVSS 301 and Ford's safety design guideline. The Explorer in this test performs extremely well and meets all acceptance criteria for fuel system integrity testing.

   Mr. Wallingford incorrectly interprets Ford's acceptance criteria for the safety design guide performance; therefore his criticisms of compliance to these standards are incorrect. Ford's acceptance criteria in applicable safety design guideline testing specifies that spillage limits are the same as the FMVSS 301 limits with any spillage taken to engineering resolution. The acceptance criteria for contact or fuel tank deformation during a safety design guide fuel system integrity test is a subjective assessment made by engineers based on characteristics of the deformation and the impacting object. Prohibiting deformation as an objective performance criterion, as Mr. Wallingford opines, can be detrimental to the ability for the vehicle and its fuel system to manage energy in a collision and can lead to a reduction in overall vehicle safety.

   While minimal deformation may be observed in some of Ford's certification crash testing, none of the characteristics in the compliance testing represent an unreasonable risk to fuel system spillage nor are they representative of the deformation observed in the documentary evidence of the subject Explorer. They are also representative of the robust compliance to Ford's safety design guideline testing without the incorporation of a shield at the rear of the fuel tank.

6. The fuel system for the 1998 Ford Explorer is a particularly safe and well designed system. When designed in conjunction with the 1998 Ford Explorer's architecture, the fuel system includes the following safety attributes:

   - Steel fuel tank construction consisting of 0.046" thickness steel that is designed to provide durable and safe performance. This material is

particularly well suited for stamping, forming, and welding the complex geometry of the Explorer's fuel tank while retaining its ability to manage energy in the event of contact during a reasonably severe collision.

- Midship fuel tank location that protects and secures the fuel tank to the structural frame of the vehicle. The frame also plays a roll in protecting the fuel tank by virtue of its vertical and horizontal positioning. The midship location provides approximately 4 feet of clearance to the outer edge of the rear bumper and more than 7 feet to the outer edge of the front bumper.
- Surrounding components are designed so that in the unlikely event they interact with the tank in reasonably severe collisions, they reduce the likelihood of fuel system spillage.
- Integral check valves and anti-siphon devices minimize the risk of the flow of gasoline from the fuel tank due to gravity.
- The fuel system inertia switch deactivates the fuel pump in reasonably severe impacts.
- Break-away fuel filler cap allows outer cover to be impacted and separate while leaving the seal intact in reasonable severe impacts.

7. The collision between the 1998 Ford Explorer and the 2003 Audi was unique, severe, and in excess of both federal and corporate standards for fuel system integrity, including the following:

    - A high speed rear offset set angled collision with significant intrusion from the 2003 Audi A4
    - A 100° - 120° degree roll (per Parkka report) with multiple impact forces, including, but not limited to separation of the drive shaft and a partial separation of the rear axle
    - A significant impact with a tree with the vehicle on its passenger side
    - An impact with the ground after the vehicle disengages from the tree

    The severity, complexity, and unpredictability of this event are not foreseeable and lack any conceivable performance objective for vehicle and fuel system design.

8. There are several photos depicting what appear to be 2 small punctures to the upper portion of the subject Explorer's fuel tank. It is alleged by Mr. Wallingford that these punctures were from an unknown component contained within the rear axle and/or rear suspension of the subject vehicle during the initial impact.

    Other more clearly identifiable contact witness marks to the fuel tank include cylindrical deformation to the vertical mid-point at the rear of the fuel tank from what is mostly likely the axle tube. The steel fuel tank performed well in managing the energy from the impact of this rounded and non-intrusive component.

9. Two relatively small punctures are evident above the axle tube impact point at the rear of the fuel tank. The lack of physical evidence prohibits a more detailed

study of the puncture mechanisms however the following are candidates as the cause of the puncture:

- Component(s) from the front end of the Audi A4 during initial collision
- Unknown component from the vehicle during initial collision, roll sequence, impact with the tree, or final ground impact.

Given the spatial relationship between the axle tube impact mark and the apparent punctures, it is unlikely that the axle tube was responsible for the small punctures to the rear of the fuel tank. It is also evident that anything remotely similar to this type of fuel tank deformation and puncture to the fuel tank was not observed during Ford's safety design guide testing. The preservation of the physical evidence would have enabled a more detailed analysis of the puncture mechanism as well when in the sequence of the incident the punctures may have occurred. It also would have enabled a more detailed analysis of whether incomplete or inappropriate repairs from the 1999 collision could have played a roll in the compromise to the fuel tank.

10. It is alleged by Mr. Wallingford that because there was no polymer shield on the rear of the fuel tank of the 1998 Ford Explorer, it is defective. He supports this opinion by representing that there were polymer shields present on the fuel tank of the 1997 F-Series and on the axle of the Crown Victoria Police Interceptor. In forming this opinion, Mr. Wallingford fails to consider the following:

    - The design and architecture of both the F-150 and Crown Vic Police Interceptor, including but not limited to the fuel system, fuel tank location, suspension, drive train, powertrain, height, weight, wheelbase, and rear overhang are significantly different than the 1998 Ford Explorer. The three vehicles share few, if any, parts relating to rear crash performance. Each of these vehicles have been independently subjected to extensive engineering and testing to establish crashworthiness performance and compliance to the federal and corporate safety standards relating to fuel system integrity.
    - The release of the fuel tank shield on the 1997 F-150 was incorporated as a result early development safety design guideline testing on that vehicle. The 1998 Ford Explorer did not exhibit this concern in any of the federal or corporate safety testing. The shield released for the 1997 F-150 would not fit on the 1998 Explorer.
    - The incorporation of the axle shielding on the Crown Victoria Police Interceptor (CVPI) was in response to a significant investigation into the unique requirements, usage, and exposure of police vehicles to extremely high speed rear collisions. As a result of this investigation, additional standards relating to rear crash performance of the CVPI were established, standards that were and remain the highest rear crash standards in the industry, leading to the incorporation of several different shields. These shields and their performance are unique to the design and architecture of the CVPI and are not similar to the design and performance of the 1998 Ford Explorer. The shields for the CVPI would not fit on the 1998 Ford Explorer.

- The incorporation of shields can create the risk of unintended consequences, including an adverse effect on durability, a reduction in clearance to surrounding components, fuel tank volume, and dissipation of heat. Furthermore, shields can also change the manner in which the vehicle or the fuel system manages energy in a collision and can increase the risk of fuel spillage in severe collisions. Thus, shields are used where a demonstrated need exists.

11. Documents indicate that in 1999, the subject 1998 Explorer was involved in a collision with a subsequent roll resulting in significant repair cost estimates. Damage estimates include recommended repairs to the rear axle and housing and frame assembly, however there is no evidence indicating that these repairs were completed. The lack of the preservation of physical evidence prohibits further analysis of this issue and the role in may have played in the subject incident.

    A repair order prepared by Dartmouth Collision Center in December 1999 reflects significant repairs to the subject Explorer, none of which includes the axle housing and frame assembly. There is no evidence indicating that the recommended repairs to the frame and rear axle housing were ever completed further supporting my opinion that the subject vehicle was not properly or completely repaired. It is also an indication that the vehicle was not in a substantially similar condition when Ford conducted its development and compliance testing or when it left Ford's possession.

    Improper and/or incomplete repairs can have a detrimental affect to the ability of the vehicle to manage energy in a collision. This is of particular importance in this incident given that the vehicle was involved in a high speed rear collision and roll. Furthermore, it has been alleged that the fuel tank was punctured by the rear axle and/or suspension, the very same components that required repair from the previous incident. Further analysis of this aspect of performance was not possible because of the lack of preservation of the physical evidence.

12. The lack of further documentary evidence of the vehicle, or the preservation of the physical evidence itself, negatively impacts the ability for Mr. Wallingford to correctly utilize the scientific method for reaching his opinions and conclusions. This includes, but is not limited to his opinions regarding:

    - Contributing repairs, alterations, or modifications to the vehicle and the role this may have played in this incident
    - Source or cause of alleged punctures to the fuel tank
    - Alternative shielding design

In conclusion, it is my opinion to a reasonable degree of engineering certainly that the subject 1998 Ford Explorer is a reasonably safe vehicle. It has been thoroughly engineered and tested and meets or exceeds all federal and corporate safety standards for fuel system integrity.

The collision involving the subject vehicle and the 2003 Audi A4 on June 29th, 2003 was in excess of any federal, corporate, or industry standards for fuel system integrity. It apparent from the evidence that the vehicle and its fuel system sustained excessive forces, loading, and impacts from multiple collisions and for those reasons, makes this incident extremely severe, rare, and unforeseeable.

It is also likely that the vehicle had been altered from its original design and was not in a substantially similar condition when it left Ford Motor Company's possession. It is further evident that these inappropriate and/or incomplete vehicle repairs likely had a negative affected the crashworthiness of the subject vehicle and its fuel system in this incident.

Respectfully,

Jon S. Olson, P.E.
Design Analysis Engineer
Ford Motor Company

Attachment: CV for Jon S. Olson

PACKER ENGINEERING Inc

Expert Report

Bagg v Ford
Packer Engineering Project No. 103147

Background and Findings

The following summarizes my understanding of this matter. More detailed information can be found in the testimony and documents produced to date on this case.

- On June 29, 2003 at approximately 3:09 am, Allen Bagg was driving a 1998 Ford Explorer (VIN 1FMZU34E3WZB07157) west on Route 28 in Cotuit, MA when it was impacted in the rear at high speed by a 2003 Audi A4 station wagon driven by Mr. Daniel Valente. During the impact, the fuel tank of the Bagg Explorer was punctured and a fire occurred.

- The subject Ford Explorer was destroyed before Packer Engineering was able to inspect it. As such, my analysis of the subject vehicle is based on the inspection photos and reports listed in Appendix A.

    - The Audi underrode the Explorer and the rear section of the left frame rail and body were deformed upward by the accident forces.

    - The left side leaf spring was fractured ahead of and behind the axle, leaving the left side of the axle unattached to the vehicle. The right side of the axle was still attached.

    - There were two punctures noted in the rear portion of the fuel tank. One puncture was approximately 1.25 inches above the seam and below the spud for the filler neck. The other puncture was on the rear corner approximately 1.88 inches above the flange. Both appear to have been made by something sharp as the puncture openings on the fuel tank are small and the dented area around the punctures is not deep.

    - The rear face of the fuel tank has a rounded indent below the seam due to the impact from the axle. The indent appears to be deeper on the outboard side of the tank due to the rotation of the axle during the collision.

    - The fuel tank skid plate was still attached to the vehicle, but was displaced relative to the fuel tank in the rear.

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- Packer Engineering inspected the Audi A4 bullet vehicle on May 22, 2006 in Bellingham, MA.
    - There was extensive damage to the front of the vehicle, with more damage on the passenger's side and the front and top of the vehicle had been damaged by fire. The vehicle interior was also fire damaged.
    - The front end sheetmetal of the Audi was folded and torn and several sharp points were noted.
- In 1999, the subject Ford Explorer was involved in an accident which resulted in it being declared a total loss by the insurance company due to the extent of the damage and the cost of repair. The vehicle was purchased at a salvage auction, repaired to a limited extent, and subsequently sold to the Baggs on February 17, 2000.
    - The repair appraisal by the insurance company appraiser, Mr. Henry Bayley, called for $18,468 in replacement parts. This appraisal included a recommendation to replace the frame assembly, the rear axle assembly and the stabilizer bar.
    - On December 28, 1999, Dartmouth Collision Center invoiced Sha-Nic Auto Body for $4,050 in labor, parts, and paint & materials.
- The fuel tank for the 1998 Ford Explorer has a "midship" location, meaning that it is located ahead of the rear axle between the driveshaft and the left side frame rail.
    - The midship fuel tank location on the subject vehicle is the most common location for SUV's manufactured in 1998.
    - The midship location is a safe location for the fuel tank on this vehicle.
- I have reviewed Ford's crash testing of the Ford Explorer. No indentations of the type involved in this accident were noted. In addition, no fuel tank punctures were noted.

Results and Opinions

The opinions described here are based on the following activities and information which are reasonably relied upon by engineering experts in forming the opinions set forth in this report, along with the application of my knowledge, experience, training, background, and education. All opinions are stated to a reasonable degree of engineering certainty.

1. Review and analysis of the background file material listed in Appendix A.
2. Packer Engineering inspection of the bullet vehicle.
3. Packer Engineering inspection of an exemplar 1998 Ford Explorer
4. Analysis of fuel tank shields.
5. Survey of SUV fuel tank locations.

6. Analysis of FARS data.

Based on the foregoing, our results and opinions in this matter are:

1. The punctures to the fuel tank of the subject vehicle were produced by the front end sheet metal of the Audi when it impacted the Explorer. The punctures were not caused by the rear axle or attached components of the subject Ford Explorer.

    - The indent from the rear axle tube is clearly visible below the seam of the subject fuel tank, while the punctures were above the seam.

    - The geometry of the punctures does not correspond to the axle or attached components.

    - Sharp features capable of the type of punctures seen on the subject fuel tank were noted on the front end sheet metal of the Audi when it was inspected by Packer Engineering.

2. Packer Engineering was not able to make a determination about the condition of the subject Explorer at the time of the subject accident because the vehicle had been destroyed. In particular, the condition of the frame assembly, rear axle assembly and stabilizer bar were in question. The appraisal following the 1999 accident called for these parts to be replaced and there is not evidence that they were replaced or repaired.

3. Packer Engineering has analyzed data from the FARS database and found that fires were very rare for Ford Explorers impacted in the rear. From 1995 – 2005, a fire in a Ford Explorer due to a rear impact comprised only 0.0017% of total vehicles in fatal crashes.

4. Packer Engineering has surveyed SUV's from Ford and other manufacturers and found that the most common fuel tank location is the midship location.

5. The subject Ford Explorer was been equipped with a skid plate under the fuel tank at the time of manufacture. Following the accident, the skid plate was displaced relative to the fuel tank in the rear. The amount of deformation of the skid plate relative to the fuel tank would have resulted in an exposed rear face of the fuel tank even if the skid plate had originally extended up to the level of the punctures.

6. Fuel tank shields are utilized in specific situations where no other design method is found to alleviate risk. Examples of such include gravel shields placed on the bottom and front of a fuel tank, shields placed between the tank and the drive shaft, and heat shields between the tank and the exhaust system.

7. Another type of shield is a skid plate, which is placed as a guard beneath the fuel tank for protection when the vehicle is driven off road. These shields are typically placed on 4x4's and may be part of an off road package.

8. Fuel tank shields are not designed to prevent all punctures from sharp objects. Shields will marginally increase the amount of force required to puncture the shield/tank

combination as compared to the fuel tank alone; however, the amount of force involved in a high speed collision far exceeds the marginal increase in strength.

9. The benefits of placing a shield on a fuel tank must be weighed against the risks involved. Lightweight plastic or composite shields provide good abrasion and light contact resistance. Steel shields such as skid plates provide good impact and damage resistance, but pose a puncture hazard themselves if the edge or fold of the shield were to contact the fuel tank during impact.

10. Another method of shielding is to cover a specific component which could potentially contact a fuel tank in a high speed collision. This methodology was used effectively for the police upgrade kit on the Ford CVPIs in which extensive high speed crash testing was performed and certain components were identified as a risk in high speed collisions.

11. Fuel tank shields need engineering consideration and testing before they are applied. Shields can and have caused fuel tank breaches in cases where breaches would not have occurred. Applying a shield as a remedy to a unique isolated situation is not proper engineering methodology without proper assessment of other collisions.

12. Plaintiff's expert Jerry Wallingford has stated that the 1998 Ford Explorer fuel storage system was defective because there was no shielding on the rear of the fuel tank.

    - The skid plate on the 1998 Ford Explorer only shielded the bottom of the fuel tank and was intended to protect the fuel tank from damage which would be encountered when driving off road, not for crashworthiness protection. I am not aware of any shields available in 1998 of the type and thickness of the skid plate that cover the upper half of the rear face of the fuel tank. The risks associated with placing this type of shield on the rear face of the fuel tank would outweigh the benefits.

    - The shield on the 1997 Ford F-150 is a plastic shield and would not have been effective in preventing the sharp punctures in this accident.

    - The shields on the Ford CVPI upgrade kit shield specific components on the axle and fuel tank straps in high speed rear collisions. The punctures in this accident were not caused by any of those components and as such those shields would not have made a difference.

13. Plaintiff's expert Jerry Wallingford has cited Ford crash tests 8454, 9108, 9146 and 9250 as showing contact with or damage to the fuel tank or fuel storage system.

    - None of these tests resulted in an impact to the rear face of the fuel tank.

    - CT 8454 was a 50 mph, 50% offset developmental test of a 4-door Explorer. Some leakage from the filler cap was noted when the vehicle was rolled over. This test was followed up by CT 9218 in which no fuel system leakage was found.

- CT 9108 was a 50 mph, 50% offset developmental test of a 2-door 1991 Explorer (previous generation). This test was followed up by CT 9218 in which no fuel system leakage was noted.

- CT 9146 was a 50 mph, 50% offset developmental test of a 2-door Explorer. A part of the evaporative system on the top of the tank fractured during the test resulting in leakage. This test was followed up by CT 9218 in which no fuel system leakage was noted.

- CT 9250 was a 35 mph rear moving barrier test of a 2-door Explorer. The 35 mph rear moving barrier test of a 4-door Explorer was CT 9240, which resulted in no fuel system leakage.

14. The design of the production fuel tank in the 1998 Ford Explorer is safe and is not defective or unreasonably dangerous. The fuel tank is located in a midship location ahead of the rear axle and inboard of the frame rail. The Ford Explorer was crash tested and met both Ford's 50 mph car-to-car standard (CT 9218) and FMVSS 301 standards (CT 9240).

This concludes my report to date. If you need anything additional or need further clarification, please feel free to contact me. My investigation into this matter continues and if my opinions change or need to be amplified, I will modify the report accordingly.

Sincerely,

PACKER ENGINEERING INC.

E. M. Caulfield

Edward M. Caulfield, Ph.D., P.E.
President and Chief Technical Officer

EMC/cls

Appendix A

File Material

Deposition

Arruda, Russell Deposition and Exhibits taken 10/28/08

Bagg, Allen Deposition and Exhibits taken 11-15-06

Bagg, Stephanie Nickas Deposition and Exhibits taken on 6-1-06

Bayley, Henry Deposition taken 6/25/08 and Exhibits 1-8

Burnett, Roger Deposition and exhibits taken 4/11/08

Burnett, Roger Deposition and Exhibits taken 6/24/08

Chambers, James Deposition and Exhibits taken 1/5/09

Davidson, Keith (Lear Corporation) Deposition and Exhibits taken 2/26/09

Evans, Mark Deposition and Exhibits taken 10/28/08

Fobes, Larry Deposition and Exhibits taken 10/16/08

Knipler, Langston Deposition taken 4/26/07

Landry, Dennis Deposition and Exhibits taken 2/27/09

Losordo, Mark M.D. (Emergency Room Doctor) (Commonwealth v Valente) taken 12/10/04
(Comm v Valente file)

Majka, Phillip Deposition taken 2/5/09

Marsters, John Deposition taken 4/16/08

Marsters, Noreen Deposition taken 3/23/07

McGuire, Stephen (Comm v Valente) Deposition taken 12/13/04

Merlesena, Ellen June Hillman Deposition and exhibits taken on 4-6-06

Merlesena, Paul Xavier Deposition and exhibits taken on 4-6-06

Mezzadri, Robert Deposition and Exhibits taken 2/5/09

Moniz-Levesque, Donna Depositiono and Exhibits (on CD) taken 7/28/08

Morrison, Brian Deposition (Commonwealth v Valente) taken 10/12/04 (se Comm v Valente File)

Pajak, Gina Deposition and Exhibits taken 2/27/09

Parkka, Daniel Deposition and exhibits (Vol II) taken 5/14/07

Parkka, Daniel Deposition and exhibits taken 4/2/07

Pinto, Steven Deposition and Exhibits taken 12/4/08

Prasad, Priyaranjan Deposition and Exhibits take 2/6/09

Stanley, Nicole (Comm v Valente) Deposition taken 12/13/04 (see Comm v Valente file)

Valente, Daniel Deposition and exhibits taken on 3-14-08

Valente, Dennis (Comm v Valente) Deposition taken 12/13/04

Valente, Janet (Comm v Valente) Deposition taken 12/13/04

Expert Reports

Bergman, Susan MD Expert Report (Pltfs Disclosure 3/13/09)

Hewins, Dana Ph.D. (Economic Consultant) Expert Report dated 1/9/09 (Pltf Disclosure 3/13/09)

Lowery, Sandra RN (Life Care Plan) Expert Report dated 12/30/08 (Ptlf Disclosure 3/13/09)

Parkka Collision Consultants (Daniel Parkka) Report

Wallingford, Jerry G., P.E. Report dated 3.4.2004

Incident Reports and Information

Barnstable Police Dept 911 Audio (on CD)

Barnstable Police Records

Cotuit Fire Department's Incident Report

EMT report, Boston MedFlight 6/29/03

Mashpee Fire & Rescue Report re Valente

Legal Documents

Bagg (Allen and Stephanie) Response to Lear's Request for Production 3/13/09

Bagg (Allen) Answers to Ford's Second Set of Interrogatories 9/4/08

Bagg (Allen) Answers to Lear's First Set of Interrogs 3/13/09

Bagg (Allen) Responses to Ford's Requests for Admission (Sets 2 and 3) 5/26/06 and 9/4/08

Bagg (Allen) Responses to Merselena's (Ellen and Paul) First Set of Interrogatories 6/14/06

Bagg (Stephanie) Answers to Lear's First Set of Interrogs 3/13/09

Bagg, Allen Answers to Ford's 3rd and 4th Set of Interrogatories dated 2/20/09

Bagg, Allen Response to Ford's Third Set of Requests for Admissions dated 9/4/08

Bagg, Allen Responses to Ford's 2nd and 3rd Set of Requests for Production dated 2/20/09

Bagg, Allen Responses to Ford's 4th and 5th Set of Requests for Admission dated 2/18/09

Bagg, Stephanie (Plaintiff)-Response to Defendant Paul Merlesena's First Request for Production of Documents

Bagg, Stephanie Answers to Ford's 1st Set of Interrogs and 1st and 2nd Set of Admission 2/20/09

Barnstable Police Report and Reconstruction Report

Complaint 6-2-05

Complaint(s) and Ford' Answer(s) to Complaints (Marsters v Ford)

Documents From Criminal Trial - Commonwealth v Daniel Valente

Ford Motor Company's Answer to Plaintiff's Complaint

Ford Motor Company's Responses to the Plaintiff's First Requests for Production

Ford's Answer to Plaintiffs' Second Amended Complaint 2/6/08

Ford's Responses to Bagg's First Set of Interrogatories

Ford's Responses to Bagg's Interrogatories dated 2/19/09

Ford's Responses to Plaintiff's First Request for Production

Ford's Responses to Pltf Marsters RFD and Interrogs (Marsters v Ford)

Ford's Supplemental Answers to Interrogs by Plaintiff Marsters 2/12/09

Lear Corp (Third Party Pltf) Complaint, Answers to Ptlf Complaints, Responses to Marsters Interrogs and RFP

Lear's Response to Plaintiff for Production dated 1/7/09

Lear's Response to Pltf Marsters Second Request for Production dated 1/7/09

Marsters Answers to Ford's Interrogs and First RFP

Marsters Answers to Interrogs of Def Valente

Marsters Response to Ford's Second Set of Requests for Production dated 12/17/08

Merlesena (Third Party Def) Answers to Interrogs, Cross Claims of Def Baggs and Marsters

Newspaper articles regarding accident: Cape Cod Times and Boston Globe

Plaintiff's Answers to Ford Motor Company's First Set of Interrogatories

Plaintiff's Response to Ford Motor Company's First Request for Production of Documents

Plaintiff's Responses to Ford's Request for Admissions

Plaintiff's Supplemental Answer to Ford's First Set of Interrogs re Expert Witnesses dated 3/13/09

Plaintiff's Supplemental Answers to Ford's Interrogs (Expert Disclosure) dated 3/13/09

Safety Insurance Records re Daniel Valente Insurance Policy

Scheduling Order dated 6/27/06

Trial and Deposition transcripts from Commonwealth v Daniel Valente

Valente, Daniel Answers to Ford's First Set of Interrogs and RFP (March 2008)

Valente's (Daniel) Answer to the Plaintiff's Complaint

Valente's Answers to Complaints and CrossClaim

Vehicle Information

Medical Records

Barnett, Michael M.D. Medical Records re Allen Bagg

Boston Medical Center (Neurological) Records re Noreen Marsters

Cape and Island Urology Records re Noreen Marsters

Cape Cod Hospital Records re Allen Bagg

Falmouth Hospital Records re Noreen Masters

Falmouth Hosptial Records re Noreen Masters (see CD)

Hanover Insurance Files re Allen Bagg on CD (3 volumes)

Massachusetts General Hospital Records re Allen Bagg (see CD)

Miscellaneous

Allen Bagg's Employment Records re Steamship Authority

Assurant Employee Benefits re Allen Bagg

Boomer McCloud Repair Records re Ford Explorer (see Vehicle Repair Records)

Cormier's Auto Service Repair Records re Ford Explorer (see Vehicle Repair Records)

Crash Tests

Dartmouth Collision Center re 1998 Ford Explorer (see Vehicle Repair Records)

Davis Towing Records re Ford Explorer (see Vehicle Repair Records)

Fortis Benefits re Allen Bagg

Hanover Insurance Company Statement re Donna Moniz-Levesque (Lear Corporation)

Horance Mann Insurance Company Recoreds re 1990 Mitsubishi Mirage (see CD)

Journal by Noreen Marsters

Karco Testing Results (Mark Pozzi) (Pltf Disclosure 3/13/09)

Professional Cuts Documents re Noreen Marsters

Reynolds Auto Wrecking Records re Ford Explorer re Destruction of Ford Explorer

Route 18 Auto Center Records re 1998 Ford Explorer

Safety Insurance Company Records re McCarthy

Safety Insurance File of Daniel Valente

Safety Insurance Records (produced by Lear)

Safety Insurance Records re Ford Explorer (Insured Michael McCarthy)

Sha-Nic Auto Body & Repair re Ford Explorer (see Vehicle Repair Records)

Suddard Ford re Ford Explorer (see Vehicle Repair Records)

Title History

TKS Consulting Documents (Pltf Disclosure 3/13/09)

Vehicle Repair Records

Wareham Ford Records re Ford Explorer (see Vehicle Repair Records)

Photographs

Bagg Hospital Photos and Misc. Photos

Barnstable Police Department of Vehicle Components Photos - CD

Barnstable Police Dept Color Copies of photos taken 6/29/03

Dobson, William Photos (CD)

Ford Explorer and Audi A4 Photos at salvage yard, produced by Plaintiff (CD)

Ford Explorer Photos at Salvage yard produced by Plaintiff (CD)

Lewis, Gil Photos (CD)

Mercaldi Bullet Audi Wagon Photos

Mercaldi Exemplar Inspection Photos 7-27-08

Mercaldi Exemplar Inspection Photos taken 7/25/07

Mercaldi Photographs Misc.

Newell Bullet Vehicle Photos 9/25/08

Olson/Sharma Bullet Vehicle Inspection Photos 5/29/08

Parkka Collision Consultants (Daniel Parkka) Photos (CD)

Scene and the Ford Explorer and Audi A4 Photos by Plaintiff (CD)

Sharma Inspection Photos

Statements

Askew, Christina Voicemail Audio (on CD)

Videos

Aerial Video of Scene 10/6/05 on CD

Video of accident scene on the date of the accident

COMMONWEALTH OF MASSACHUSETTS

SUFFOLK, SS.

SUPERIOR COURT DEPARTMENT
OF THE TRIAL COURT
CIVIL ACTION NO:
05-2344

ALLEN E. BAGG
and
STEPHANIE BAGG,

Plaintiffs

v.

FORD MOTOR COMPANY,
a Delaware Corporation, and
DANIEL VALENTE,

Defendants

COMPLAINT

Preliminary Statement

1. In this action, the Plaintiffs, Allen E. Bagg and Stephanie Bagg, seek damages and other relief for injuries sustained by them as a direct and proximate result of negligence, breach of warranties, and other wrongful actions of the Defendants, Ford Motor Company and Daniel Valente, arising from the fiery explosion of a Ford sport utility vehicle when it was struck in the rear end by another vehicle.

Parties

2. Plaintiff, Allen E. Bagg ("Allen Bagg"), is a Massachusetts resident living in Mashpee, Barnstable County.

3. Plaintiff, Stephanie Bagg ("Stephanie Bagg"), is a Massachusetts resident living in Mashpee, Barnstable County and is the spouse of Allen Bagg.

4. Defendant, Ford Motor Company ("Ford"), is a corporation organized under the laws of the State of Delaware with its principal place of business on The American Road, Dearborn, Michigan 48121. At all times relevant, Ford was doing business in the Commonwealth of Massachusetts. Ford has designated its Resident Agent in the Commonwealth of Massachusetts as CT Corporation, 101 Federal Street, Boston, Suffolk County, Massachusetts 02110.

5. Defendant, Daniel Valente ("Valente"), is a Massachusetts resident living at 131 Winchester Street, Brookline, Norfolk County, Massachusetts. At all times relevant to this Complaint, Valente was a resident of Norfolk County.

Jurisdiction And Venue

6. Pursuant to Massachusetts General Laws Chapter 212, §4 and 223A, §§ 1, 2 and 3, this Court has original jurisdiction over this civil action and personal jurisdiction over all parties to this action, in that all parties are domiciled in or maintain a principal place of business in the Commonwealth of Massachusetts.

7. This Court has personal jurisdiction over all Defendants pursuant to M.G.L. c. 223A §3 because each of them has undertaken acts or conduct within the Commonwealth of Massachusetts that directly relate to the causes of action herein.

8. This Court has personal jurisdiction over Defendant, Ford Motor Company, pursuant to M.G.L. 223A §3(a)-(d), which provides this Court with jurisdiction over actions against foreign corporations. Defendant, Ford Motor Company, is a foreign corporation transacting business in Massachusetts which also contracts to supply

services or things in Massachusetts and which has caused tortious injury in Massachusetts by an act or omission outside the Commonwealth while regularly doing or soliciting business; engaging in a persistent course of conduct; and, deriving substantial revenues from goods used or consumed or services rendered in Massachusetts.

9. Venue in this Court is appropriate pursuant to Massachusetts General Laws, Chapter 223, § 1, which permits a transitory action to be brought in the county where one of the parties lives or has a usual place of business.

10. The Defendant, Ford Motor Company, does business within the Commonwealth of Massachusetts and within Suffolk County and has designated as its resident agent, pursuant to M.G.L. c. 227 §5, CT Corporation with a principal place of business also located in Suffolk County.

Allegations

The 1998 Ford Explorer Sport Utility Vehicle

11. At all times relevant, Ford was in the business of designing, testing, manufacturing, inspecting, distributing, maintaining, warning and instructing users on safe use and maintenance of Ford vehicles, and in the business of selling vehicles to members of the general public.

12. Ford manufactured and distributed for sale a model 1998 Ford Explorer Sport Utility Vehicle ("the 1998 Model").

13. The 1998 Model included a metal shield covering the bottom of the fuel tank but no shield covering the rear of the fuel tank.

14. The 1998 Model rear edge of the fuel tank is approximately 3.5 inches from the forward section of the left rear axle housing.

15. Ford performed rear impact crash testing with speeds up to 55 miles per hour on prototype 1997 Ford pickups, and knew as a result of those tests that the rear suspension components contacted the rear of the fuel tank and compromised the fuel tank.

16. As a result of the testing described in the preceding paragraph, Ford installed a polymer shield to cover the rear of the fuel tank on 1997 Ford F150 pickups to protect the fuel tank from being compromised by the rear axle assembly in a rear end collision.

17. Ford's installation of a shield covering the rear of the fuel tank in the 1998 Model would have prevented suspension components from contacting and compromising the fuel tank.

18. Despite Ford's knowledge that the absence of a safety shield protecting the rear of the fuel tank created a great risk of causing catastrophic damage in the event of a rear end collision, Ford never installed a shield to cover the rear of the fuel tank in the 1998 Model.

19. Prior to June 29, 2003, in the ordinary course of its business, Ford designed, engineered, manufactured, distributed, and sold the 1998 Model, including a 1998 Ford Explorer Sport Utility Vehicle ("the Ford SUV"), which is the subject matter of this action, by placing the 1998 Model and the Ford SUV in the stream of commerce for

sale to the general public as ultimate consumers. The Ford SUV had a vehicle identification number of 1FMZU34E3WZB07157.

Allen Bagg's Purchase of the Ford Sport Utility Vehicle

20. On or about February 19, 2000, Plaintiff Allen Bagg purchased the Ford SUV from an automobile dealer in Lakeville, Massachusetts.

21. As of June 29, 2003, the Ford SUV had passed a yearly safety inspection as indicated by the Registry of Motor Vehicles.

22. The Ford SUV was not substantially modified prior to or on June 29, 2003.

The Ford Sport Utility Vehicle Explosion

23. On June 29, 2003, while Allen Bagg was driving the Ford SUV proceeding west in the westbound lane of Route 28 (also known as Falmouth Road) in Cotuit, Massachusetts, the Ford SUV was struck in the rear end by a 2003 Audi A4 automobile carelessly operated by Defendant Daniel Valente. The Ford SUV exploded on impact and burst into flames.

24. The Ford SUV explosion occurred when the impact of the Audi caused the Ford SUV rear axle housing to be forced into the rear panel of the Ford SUV fuel tank. As a result of the forward propulsion, the rear axle housing produced a geometrical impression of its outer shell into the tank, which caused several splits to the tank that led to excessive fuel spillage.

25. The severe and sudden metal contact within the Ford SUV caused the fuel spillage to burst into flames. The Ford SUV was completely burned out as a direct result of the rupture to the fuel tank.

Bagg's Personal Injuries

26. When the Ford SUV exploded, Allen Bagg received serious injuries, including a pelvic fracture and crushed left leg and horrendous burns over more than sixty percent of his body including serious burns to his arms, hands and legs caused by the fire. Bagg was airlifted to Massachusetts General Hospital with severe burns, contusions to his lungs, a complex open fracture of his left lower extremity and pelvic fractures.

27. Bagg's injuries required extensive medical treatment including treatment in the Intensive Care Burn Unit of Massachusetts General Hospital where he was hospitalized for more than three months. He was tracheotomized and artificially ventilated. His fractures required open reduction and the placement of multiple screws and metallic plates. His hospital course was complicated by severe pneumonia and renal failure with infection of his tibial fracture for which he required numerous surgeries and skin graft procedures.

28. Bagg was discharged from Massachusetts General Hospital to Spaulding Rehabilitation Hospital in October of 2003 with multiple open wounds on his legs and feet and from the donor sites of his skin grafts with surgical drains in place. Over the following months, these multiple open wounds caused great pain and suffering and required multiple treatments including the debridement of desiccated tissue. However, his mutilated and severely burned leg remained swollen and painful.

29. Over the following months, Bagg required numerous out-patient surgical procedures at Massachusetts General Hospital to treat his burns and orthopedic injuries as well as extensive and painful physical therapy at Spaulding Rehabilitation Hospital to regain the partial use of his arm and legs.

30. On March 23, 2004, Bagg underwent a below knee amputation of his left leg as well as multiple skin grafts for the treatment of his burns all of which are directly related to injuries received by Bagg in the motor vehicle accident. Since that time, Bagg has struggled to regain the use of his limbs and has received extensive therapy to help him adjust physically to the loss of his left leg. To date, Allen Bagg's medical expenses alone exceed 2.1 million dollars.

Bagg's Disability and Other Consequential Damages

31. At all times relevant to this Complaint, Bagg was employed by the Massachusetts Steamship Authority in Woods Hole, Massachusetts as a pilot. Prior to the accident, Bagg had been so employed for 8 years.

32. As a direct result of the personal injuries sustained by Bagg, he was and continues to be totally disabled from his employment and has sustained additional incidental and consequential damages.

COUNT I
Negligence
(Allen E. Bagg v. Ford Motor Company)

33. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 32 of this Complaint.

34. Ford, in its careless and negligent acts and/or omissions, breached its duty of care to Plaintiffs.

35. Ford carelessly and negligently designed, manufactured, distributed, and sold the 1998 Model and the Ford SUV in that there was inadequate protection for the fuel tank in a reasonably foreseeable accident.

36. Ford carelessly and negligently failed to give adequate warnings to purchasers and users of the 1998 Model and the Ford SUV, including Allen Bagg, about the unreasonably dangerous and defective condition of the 1998 Model and the Ford SUV and the dangerous propensity of the vehicle to catch fire as a result of fuel tank rupture during a reasonably foreseeable collision resulting in unnecessary and severe injury to persons using the 1998 Model.

37. Ford carelessly and negligently put into the stream of commerce the unreasonably dangerous and defective 1998 Model and the Ford SUV.

38. Ford was careless and negligent in designing the 1998 Model so that the structure of the rear axle housing presented a threatening surface to the fuel tank; in inadequately packaging the fuel tank to prevent contact with surrounding components in the event of a reasonably foreseeable collision; and/or in failing to provide adequate shielding for the fuel tank to prevent contact with surrounding components during a reasonably foreseeable collision creating an unreasonably dangerous propensity for puncture of the fuel tank.

39. As a direct and proximate result of the negligence of Ford, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo

numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT II
Strict Liability
(Allen E. Bagg v. Ford Motor Company)

40. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 39 of this Complaint.

41. At the time that the Ford SUV left the control of Ford, and at the time that Allen Bagg suffered extensive burns and other damage on June 29, 2003, the Ford SUV was in a defective condition and unreasonably dangerous when put to a reasonably anticipated use. The 1998 Model (of which the Ford SUV was one) was unreasonably dangerous to Allen Bagg and other consumers or users by reason of the defects and design, manufacture, and assembly of the 1998 Model, including, but not limited to, its propensity to catch fire during a reasonably foreseeable collision due to lack of adequate protection for the fuel tank, and the failure to warn or give adequate warnings to Allen Bagg and other consumers or users of the defective nature of the 1998 Model.

42. The 1998 Model, and the Ford SUV owned by Allen Bagg, was in a defective condition unreasonably dangerous in that the structure of the rear axle housing presented a threatening surface to the fuel tank; the fuel tank was not adequately packaged to prevent contact with surrounding components in the event of a reasonably foreseeable collision; and/or the fuel tank was not adequately shielded to

prevent contact with surrounding components during a reasonably foreseeable collision creating an unreasonably dangerous propensity for puncture of the fuel tank.

43. The Ford SUV was expected to reach and did reach the hands of its owner, Allen Bagg, without substantial change in the condition in which it was designed, manufactured, distributed and sold and was being used in a manner intended by Ford and was in substantially the same condition on June 29, 2003 as when it left Ford's control.

44. Ford knew that the 1998 Model, and the Ford SUV owned by Allen Bagg, would be used without inspection for defects and represented that it could be safely used and would be fit for the ordinary purposes for which it was purchased.

45. Allen Bagg was not aware of any defect in the Ford SUV at any time prior to the vehicle's explosion on June 29, 2003. The defects in the Ford SUV that resulted in the vehicle's explosion would not have been detectable by Allen Bagg.

46. The acts and/or omissions of Ford showed a complete indifference to or conscious disregard for Allen Bagg and other users of the 1998 Model.

47. As a direct and proximate result of the defective Ford SUV, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT III
Breach Of Warranty
(Allen E. Bagg v. Ford Motor Company)

48. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 47 of this Complaint.

49. At all times relevant, Ford expressly and impliedly warranted and advertised to the general public that the 1998 Model was safe and stable in handling, crashworthiness, and fireworthiness, and further warranted that the 1998 Model would reasonably protect occupants during an accident.

50. Allen Bagg justifiably and reasonably relied upon Ford's warranties and advertising and had reason to believe that the vehicle was safe when operated as advertised and warranted.

51. Ford's warranties were breached because the 1998 Model, and the Ford SUV owned by Allen Bagg, was not fit for the use for which it was intended due to insufficient warnings, lack of instructions and misleading advertising to the customer regarding controllability, stability, crashworthiness, and fireworthiness.

52. As a direct and proximate result of Ford's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT IV
Breach Of Warranty Of Merchantability
(Allen E. Bagg v. Ford Motor Company)

53. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 52 of this Complaint.

54. Ford had a legal duty pursuant to Massachusetts General Laws, Chapter 106, Section 2-314 to warrant that the 1998 Model and the Ford SUV were merchantable and that the vehicles were fit for the ordinary purposes for which such vehicles were used. The 1998 Model and the Ford SUV were defective and not reasonably suitable for the ordinary uses for which goods of that kind and description were sold. Furthermore, the defects existed at the time the vehicles were manufactured and sold.

55. Ford's failure to provide a shield to cover the rear of the fuel tanks in the 1998 Model and the Ford SUV to protect the fuel tank from being compromised by the rear axle assembly in a rear-end collision, which was both foreseeable and preventable, constitutes a violation of M.G.L. c. 106 §2-314.

56. As a direct and proximate result of Ford's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT V
Failure To Warn
(Allen E. Bagg v. Ford Motor Company)

57. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 56 of this Complaint.

58. At all times relevant, Ford had an ongoing duty to provide information, instructions and warnings regarding the handling and control characteristics and problems of the 1998 Model to ensure that users would use the vehicle safely – or not use it at all – and would understand the operating characteristics of the 1998 Model.

59. Allen Bagg was not made aware of any such instruction, warning, or recommendation at any time prior to June 29, 2003 by Ford.

60. As a direct result of Ford's failure to warn, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT VI
Loss Of Consortium
(Stephanie Bagg v. Ford Motor Company)

61. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 60 of this Complaint.

62. As a direct and proximate result of Ford's wrongful conduct, Plaintiff Stephanie Bagg has suffered and will continue to suffer in the future the loss of care, comfort, services, support, companionship, society, and consortium of Plaintiff Allen

Bagg as a kind and loving spouse; and has suffered great pain of body, anguish of mind and severe emotional distress and other incidental and consequential damages.

COUNT VII
Negligent Infliction Of Emotional Distress
(Allen E. Bagg v. Ford Motor Company)

63. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 62 of this Complaint.

64. As a direct and proximate result of Ford's wrongful conduct, Plaintiff, Allen Bagg, has suffered extreme emotional distress.

65. In so acting with respect to Plaintiff, Allen Bagg, Ford knew or should have known that severe emotional distress was the likely result of such conduct.

66. The emotional distress suffered by Plaintiff, Allen Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT VIII
Negligent Infliction Of Emotional Distress
(Stephanie Bagg v. Ford Motor Company)

67. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 66 of this Complaint.

68. As a direct and proximate result of Ford's wrongful conduct, Plaintiff, Stephanie Bagg, has suffered extreme emotional distress.

69. In so acting with respect to Plaintiff, Stephanie Bagg, Ford knew or should have known that severe emotional distress was the likely result of such conduct.

70. The emotional distress suffered by Plaintiff, Stephanie Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT IX
Violation Of Massachusetts General Law Chapter 93A
(Allen E. Bagg v. Ford Motor Company)

71. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 70 of this Complaint.

72. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

73. Ford is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

74. The acts of Ford were performed willfully and knowingly.

75. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Allen E. Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and he is also entitled to an award of attorney's fees and costs.

COUNT X
Violation Of Massachusetts General Law Chapter 93A
(Stephanie Bagg v. Ford Motor Company)

76. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 75 of this Complaint.

77. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts

General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

78. Ford is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

79. The acts of Ford were performed willfully and knowingly.

80. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Stephanie Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and she is also entitled to an award of attorney's fees and costs.

COUNT XI
Negligence
(Allen E. Bagg v. Daniel Valente)

81. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 80 of this Complaint.

82. Defendant Daniel Valente owed a duty of care to Plaintiff Allen Bragg.

83. Defendant Daniel Valente negligently breached his duty of care to Plaintiff Allen Bragg.

84. As a direct and proximate result of the negligence of Valente, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XII
Loss Of Consortium
(Stephanie Bagg v. Daniel Valente)

85. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 84 of this Complaint.

86. As a direct and proximate result of the actions of Defendant Daniel Valente, Plaintiff Stephanie Bagg has suffered and will continue to suffer in the future the loss of care, comfort, services, support, companionship, society, and consortium of Plaintiff Allen Bagg as a kind and loving spouse; and has suffered great pain of body, anguish of mind and severe emotional distress and other incidental and consequential damages.

COUNT XIII
Negligent Infliction Of Emotional Distress
(Allen E. Bagg v. Daniel Valente)

87. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 86 of this Complaint.

88. As a direct and proximate result of the actions of Defendant Daniel Valente, Plaintiff, Allen Bagg, has suffered extreme emotional distress.

89. In so acting with respect to Plaintiff, Allen Bagg, Valente knew or should have known that severe emotional distress was the likely result of such conduct.

90. The emotional distress suffered by Plaintiff, Allen Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XIV
Negligent Infliction Of Emotional Distress
(Stephanie Bagg v. Daniel Valente)

91. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 90 of this Complaint.

92. As a direct and proximate result of the Defendant, Daniel Valente's, wrongful conduct, Plaintiff, Stephanie Bagg, has suffered extreme emotional distress.

93. In so acting with respect to Plaintiff, Stephanie Bagg, Defendant, Daniel Valente, knew or should have known that severe emotional distress was the likely result of such conduct.

94. The emotional distress suffered by Plaintiff, Stephanie Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

Relief Sought

WHEREFORE, the Plaintiffs pray as follows:

1. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the negligence of Defendant Ford Motor Company and enter judgment against it as to Count I of the Complaint, together with interest and costs;

2. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the strict liability of Defendant Ford Motor Company and enter judgment against it as to Count II of the Complaint, together with interest and costs;

3. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of Defendant Ford Motor

Company and enter judgment against it as to Count III of the Complaint, together with interest and costs;

4. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of merchantability of Defendant Ford Motor Company and enter judgment against it as to Count IV of the Complaint, together with interest and costs;

5. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the failure to warn by Defendant Ford Motor Company and enter judgment against it as to Count V of the Complaint, together with interest and costs;

6. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, for loss of consortium as a result of the actions of Defendant Ford Motor Company and enter judgment against it as to Count VI of the Complaint, together with interest and costs;

7. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the infliction of emotional distress by Defendant Ford Motor Company and enter judgment against it as to Count VII of the Complaint, together with interest and costs;

8. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the infliction of emotional distress by Defendant Ford Motor Company and enter judgment against it as to Count VIII of the Complaint, together with interest and costs;

9. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Ford Motor Company and enter judgment against it as to Count IX of the Complaint, together with interest and costs;

10. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Ford Motor Company and enter judgment against it as to Count X of the Complaint, together with interest and costs;

11. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the negligence of Defendant Daniel Valente and enter judgment against him as to Count XI of the Complaint, together with interest and costs;

12. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, for loss of consortium as a result of the actions of Defendant Daniel Valente and enter judgment against him as to Count XII of the Complaint, together with interest and costs;

13. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the infliction of emotional distress by Defendant Daniel Valente and enter judgment against him as to Count XIII of the Complaint, together with interest and costs;

14. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the infliction of emotional distress by Defendant

Daniel Valente and enter judgment against him as to Count XIV of the Complaint, together with interest and costs;

15. That the amount of the Plaintiffs' actual damages be trebled;

16. That the Court award attorneys fees to the Plaintiffs;

17. That the Court award Plaintiffs punitive damages; and,

18. That the Court grant such other relief as it deems reasonable and proper.

Jury Demand

Plaintiffs demand a trial by jury on all issues so triable.

Respectfully submitted;

THE PLAINTIFFS

By their attorneys:

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Dated: June 2, 2005

COMMONWEALTH OF MASSACHUSETTS

SUFFOLK, SS.

SUPERIOR COURT
DEPARTMENT OF
THE TRIAL COURT

NOREEN MARSTERS AND JOHN MARSTERS,

Plaintiffs,

v.

FORD MOTOR COMPANY,

Defendant.

NO.

COMPLAINT

Parties

1. The plaintiff, Noreen Marsters, resides at 177 Old Barnstable Road, Town of Mashpee, County of Barnstable, Commonwealth of Massachusetts.

2. The plaintiff, John Marsters, resides at 177 Old Barnstable Road, Town of Mashpee, County of Barnstable, Commonwealth of Massachusetts and was at all material times and is the husband of the plaintiff, Noreen Marsters.

3. The defendant, Ford Motor Company, is a foreign corporation duly registered under the laws of the state of Delaware with a business address of The American Road, City of Dearborn, State of Michigan, was at all material times registered to do business and engaged in the transaction of business within the Commonwealth of Massachusetts. The defendant has designated and appointed CT Corporation System, 101 Federal Street, City of Boston, County of Suffolk, Commonwealth of Massachusetts as its registered agent.

Facts

4. On or about June 29, 2003, the plaintiff, Noreen Marsters, was a passenger in a 1998 Ford Explorer that was struck by a motor vehicle operated and controlled by Daniel Valente on a public way in Cotuit, County of Barnstable, Commonwealth of Massachusetts.

5. The above-mentioned Ford Explorer was designed, manufactured, distributed, sold, supplied and/or conveyed by defendant Ford Motor Company.

6. The defendant, Ford Motor Company, was and is a merchant with respect to the vehicle, such as the above-mentioned Ford Explorer.

7. The defendant, Ford Motor Company, was careless and negligent in the design, manufacture, distribution, sale, supply and/or conveyance of the above-mentioned Ford Explorer.

8. The defendant, Ford Motor Company, impliedly warranted that the above-mentioned Ford Explorer would be of merchantable quality and that it was fit for any ordinary or reasonable purpose contemplated for its use.

9. The plaintiff's injuries resulting from the accident as aforesaid were caused by the carelessness and negligence of the defendant, Ford Motor Company, its servants, agents, or employees.

10. The plaintiff's injuries resulting from the accident as aforesaid were caused by the dangerous and defective condition of the above-mentioned Ford Explorer and by the breaches of warranty by defendant, Ford Motor Company.

11. Due notice has been given to the defendant, Ford Motor Company, of any and all breaches of warranty.

12. The breaches of implied warranties of the defendant, Ford Motor

Company, as aforesaid constitute unfair and deceptive acts or practices by the defendant in violation of Massachusetts General Laws, Chapter 93A.

13. The acts or practices of the defendant, Ford Motor Company, were willful and knowing violations of General Laws, Chapter 93A.

14. Plaintiff made demand upon the defendant, Ford Motor Company, pursuant to Massachusetts General Laws, Chapter 93A on May 26, 2006.

15. The defendant, Ford Motor Company, failed to make any written tender of settlement and said refusal to grant relief upon demand was made in bad faith with knowledge or reason to know that the defendant's breaches of implied warranties were unfair and deceptive acts or practices.

16. As a result of the injuries sustained in the accident described above, the plaintiff, Noreen Marsters, was caused to suffer great pain of body and anguish of mind, her earning capacity has been and will be impaired for a long period of time and she has expended and will continue to expend large sums of money for medical care and attendance.

17. As a result of the personal injuries sustained by the plaintiff, Noreen Marsters, the plaintiff, John Marsters, has had his marital relationship with his wife interfered with, whereby he suffered loss of his wife's society, affection, companionship and consortium.

CAUSES OF ACTION
(Each Cause of Action Specifically Incorporates by Reference All of Those Paragraphs Previously Set Forth)

First Cause of Action

This is an action by the plaintiff, Noreen Marsters, against the defendant, Ford Motor Company, for negligence resulting in personal injuries.

Second Cause of Action

This is an action by the plaintiff, Noreen Marsters, against the defendant, Ford Motor Company, for breach of implied warranty of merchantability resulting in personal injuries.

Third Cause of Action

This is an action by the plaintiff, Noreen Marsters, against the defendant, Ford Motor Company, for damages pursuant to Massachusetts General Laws, Chapter 93A for unfair or deceptive acts and practices arising out of the defendant's breach of implied warranty of merchantability resulting in personal injuries.

Fourth Cause of Action

This is an action by the plaintiff, Noreen Marsters, against the defendant, Ford Motor Company, for double or treble damages pursuant to Massachusetts General Laws, Chapter 93A, Section 9.

Fifth Cause of Action

This is an action by the plaintiff, John Marsters, against the defendant, Ford Motor Company, for negligence resulting in loss of consortium.

Sixth Cause of Action

This is an action by the plaintiff, John Marsters, against the defendant, Ford Motor Company, for breach of implied warranty of merchantability resulting in loss of consortium.

Seventh Cause of Action

This is an action by the plaintiff, John Marsters, against the defendant, Ford Motor Company, for damages pursuant to Massachusetts General Laws, Chapter 93A for unfair or deceptive acts and practices arising out of the defendant's breach of implied

warranty of merchantability resulting in loss of consortium.

Eighth Cause of Action

This is an action by the plaintiff, John Marsters, against the defendant, Ford Motor Company, for double or treble damages pursuant to Massachusetts General Laws, Chapter 93A, Section 9.

DEMANDS FOR RELIEF

A. The plaintiff, Noreen Marsters, demands judgment against the defendant, Ford Motor Company, in the amount of her damages, with interest and costs, as to the First and Second Causes of Action, in the amount of her damages, with interest, costs, and attorneys' fees as to the Third Cause of Action, and for double or treble damages, with interest, costs, and attorneys' fees, as to the Fourth Cause of Action.

B. The plaintiff, John Marsters, demands judgment against the defendant, Ford Motor Company, in the amount of his damages, with interest and costs, as to the Fifth and Sixth Causes of Action, in the amount of his damages, with interest, costs, and attorneys' fees as to the Seventh Cause of Action, and for double or treble damages, with interest, costs, and attorneys' fees, as to the Eighth Cause of Action.

JURY CLAIM

The plaintiffs claim a trial by jury.

By their Attorneys,

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(1952-1999)

JAMES E. LYONS
(1921-1993)

CERTIFIED MAIL
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NO: 7002 0460 0001 9849 2255

FORD MOTOR COMPANY
RECEIVED
CLAIMS
APR 14 2004
OFFICE OF
GENERAL COUNSEL

April 9, 2004

Ford Motor Company
One American Road
Dearborn, MI 48121

Re: Claimants: [redacted]
VIN: 1FMZU34E3WZ[redacted]
Type: 1998 Ford Explorer
Date of Accident: June 29, 2003

Dear Sirs and Mesdames:

This letter is written pursuant to the requirements of Massachusetts General Laws, Chapter 106, Section 2-314, et seq. and Chapter 93A, Section 2.

This office has been retained to represent [redacted] of Mashpee, Massachusetts in connection with their action against Ford Motor Company for breach of implied warranties and violation of the Massachusetts Consumer Protection Statute arising out of a motor vehicle accident involving the above referenced Ford Explorer Sport Utility Vehicle which occurred on June 29, 2003 and which resulted in serious personal injuries and other consequential damages.

The motor vehicle accident in question involved a collision in which the 1998 Ford Explorer Sport Utility Vehicle owned and operated by [redacted] was struck from behind and burst into flames. As a consequence, [redacted] received very serious injuries including burns over more than sixty percent of his body caused by the fire. Mr. [redacted] injuries required extensive medical treatment including treatment in the Intensive Care Burn Unit of Massachusetts General Hospital where he was hospitalized for more than three months and where he underwent numerous surgeries and skin graft procedures. To date, Mr. [redacted] medical expenses alone exceed 1.5 million dollars.

Violation of Massachusetts General Laws, Chapter 106, Section 2-314

Defective Design

Massachusetts General Laws, Chapter 106, Section 2-314 provides that a manufacturer or seller of goods impliedly warrants that such goods shall be merchantable. Merchantability, as defined in Subsection 2(c) of Section 2-314, requires that such goods shall be fit for the ordinary purposes for which such goods are used.

The 1998 Ford Explorer Sport Utility Vehicle described above was defective and was not reasonably suitable for the ordinary uses for which goods of that kind and description are sold. Furthermore, the defect existed at the time the vehicle was manufactured and sold and was the proximate cause of our clients' injuries.

Based upon our review and analysis, when the above referenced 1998 Ford Explorer Sport Utility Vehicle was impacted from behind the rear axle housing and/or rear suspension of the 1998 Ford Explorer was pushed forward into the rear of the fuel tank causing the rear fuel tank to fail above the tank seam. Inspection of the vehicle revealed that there is a metal shield covering the bottom of the fuel tank but that there was no shield covering the rear of the fuel tank which would have prevented suspension components from contacting the rear of the fuel tank and compromising the tank.

Ford Motor Company has performed rear impact crash testing with speeds of up to 55 m.p.h. on prototype vehicles comparable to the 1998 Ford Explorer Sport Utility Vehicle involved in this motor vehicle accident. During these tests, rear suspension components were noted to have contacted the rear of the fuel tank and compromised the fuel tank. Thus, the failure of the fuel tank of the 1998 Ford Explorer Sport Utility Vehicle involved in this motor vehicle accident and resulting fire was foreseeable.

Ford uses a polymer shield to cover the rear of the fuel tank on vehicles comparable to the 1998 Ford Explorer Sport Utility Vehicle involved in this motor vehicle accident and installs shields over sections of the rear axle assembly on other comparable vehicles to prevent the fuel tank from being compromised by the rear axle assembly in a rear-end collision. Thus, a cost effective and safer alternative design was available and the failure of the fuel tank of the 1998 Ford

Explorer Sport Utility Vehicle involved in this motor vehicle accident was preventable.

The failure to provide a shield to cover the rear of the fuel tank of the 1998 Ford Explorer Sport Utility Vehicle involved in this motor vehicle accident to protect the fuel tank from being compromised by the rear axle assembly in a rear-end collision, which was both foreseeable and preventable, constitutes a breach of the implied warranty of merchantability and is a violation of Massachusetts General Laws, Chapter 106, Section 2-314.

Failure to Warn

Furthermore, under Massachusetts law, a failure to provide an adequate warning constitutes a breach of the implied warranty of merchantability. For the reasons stated above, Ford Motor Company was fully informed of the defective nature of the design of the fuel tank of the 1998 Ford Explorer Sport Utility Vehicle involved in this motor vehicle accident and aware of all risks associated with the product at issue. These risks were reasonably foreseeable at the time of sale and in fact had been discovered by Ford Motor Company by way of testing prior to sale and by way of the failure of fuel tanks in like or comparable vehicles after the sale. The failure of Ford Motor Company to warn Allen Bagg and other customers of the risks and dangers presented by this defective design constitutes a breach of the implied warranty of merchantability and a violation of Massachusetts General Laws, Chapter 106, Section 2-314.

Under Massachusetts law, Ford Motor Company also had a continuing duty to warn where it knew or reasonably should have known of the risks and dangers presented by this defective design. The users of such vehicles are readily identifiable and Ford Motor Company had the means of effectively communicating such a warning. The failure of Ford Motor Company to warn Allen Bagg and other customers of the risks and dangers presented by this defective design constitutes a breach of its continuing duty to warn and a breach of the implied warranty of merchantability and is a violation of Massachusetts General Laws, Chapter 106, Section 2-314.

Violation of Massachusetts General Laws, Chapter 93A, Section 2

Under Massachusetts law, a breach of an implied warranty of merchantability constitutes an unfair and deceptive act pursuant to Massachusetts General Laws, Chapter 93A, Section 2, the Massachusetts

Consumer Protection Statute and may subject Ford Motor Company to an award of double or treble damages plus attorneys fees in addition to any award for its breach of implied warranty of merchantability.

For the reasons stated above, Ford Motor Company's failure to provide a shield to cover the rear of the fuel tank of the 1998 Ford Explorer Sport Utility Vehicle involved in this motor vehicle accident to protect the fuel tank from being compromised by the rear axle assembly in a rear-end collision which was both foreseeable and preventable constitutes an unfair and deceptive act within the meaning of Section 2 and a violation of Massachusetts General Laws, Chapter 93A.

Furthermore, Ford Motor Company's failure to warn where it knew or reasonably should have known that the rear suspension components of the 1998 Ford Explorer Sports Utility Vehicle involved in this motor vehicle accident were likely to contact the rear of the fuel tank in a rear impact crash causing it to fail and result in a fire constitutes an unfair and deceptive act within the meaning of Section 2 and a violation of Massachusetts General Laws, Chapter 93A.

Accordingly, and pursuant to the requirements of Massachusetts General Laws, Chapter 93A, demand is hereby made for the payment of the sum of 15 million dollars. If payment, or an acceptable offer in compromise as that term is defined by Chapter 93A, is not received within thirty (30) days from the date of this letter, we have been instructed to commence suit against you in order to enforce all of our clients' rights and remedies.

Very truly yours,

Stephen J. Lyons

SJL/pjk

cc: CT Corporation, Resident Agent (Certified Mail, Return Receipt Requested No: 7002 2030 0000 1703 3000)

LAW OFFICES OF
SUGARMAN AND SUGARMAN, P.C.

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Robert W. Casby
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May 24, 2006

BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

JUN 02 2006

Ford Motor Company
President
One American Road
Dearborn, MI 48121

Re: Claimants: [redacted]
VIN: 1FMZU34E3WZ[redacted]
Make and Model: 1998 Ford Explorer
Date of Accident: June 29, 2003

Dear Sir or Madam:

This letter will constitute notice of breaches of warranty, unfair and deceptive trade practices, and demand for relief pursuant to Massachusetts General Laws, Chapter 93A on behalf of [redacted] Mashpee, MA with respect to personal injuries sustained by Mrs. [redacted] in a motor vehicle accident that occurred on June 29, 2003.

On June 29, 2003, Mrs. [redacted] sustained serious, permanent and disabling injuries as a result of the defective design, manufacture, assembly and/or condition at the time of sale of a 1998 Ford Explorer, VIN 1FMZU34E3WZ[redacted], designed, manufactured, assembled, sold and/or distributed (or any combination of these activities) by Ford Motor Company. The motor vehicle accident occurred on June 29, 2003 on Falmouth Road in Cotuit, MA. At the time of the accident, Mrs. [redacted] was a passenger in the right front seat of the subject Ford Explorer. A motor vehicle struck the subject Ford Explorer from behind. As a result of the collision, the seat in which Mrs. [redacted] was sitting failed, causing the seat back to collapse and ejecting Mrs. [redacted] from the vehicle.

The subject Ford Explorer was dangerous and defective at the time of sale because it lacked appropriate seatback support to prevent the seat from failing and collapsing as a result of a rear impact. As a result of these dangerous and defective conditions, the front seats of the subject Ford Explorer were not of merchantable quality

and were not fit for its intended use. Further, the subject Ford Explorer was dangerous and defective and breached the implied warranties of merchantability and fitness in that it was designed, manufactured, assembled, distributed, and/or sold with inadequate warnings.

The dangerous and defective condition of the subject 1998 Ford Explorer was a breach of the warranty of merchantability and an unfair and deceptive act or practice in violation of Massachusetts General Laws, Chapter 93A. This letter is intended to provide you and/or any other person, firm, or entity involved in the design, manufacture, assembly, sale, and/or distribution of the subject Ford Explorer with notice of the breach of warranty by said company(ies) and with notice of our intention to pursue any and all actions which Mr. and Mrs. [redacted] may have as a result of the described breaches of warranty. You are also advised that Mr. and Mrs. [redacted] intend to hold Ford Motor Company liable for its negligence with respect to the design, manufacture, assembly, sale, and/or distribution of the subject Ford Explorer.

This letter will constitute our clients' demand pursuant to Massachusetts General Laws, Chapter 93A, for unfair and deceptive acts or practices of Ford Motor Company as a result of the dangerous and defective condition of the subject Ford Explorer so as to breach the warranty of merchantability as well as other warranties. Chapter 93A exposes you to double or treble damages if, (1) "violations of the action were willful and knowing," or (2) "you refused to grant relief upon demand in bad faith and with knowledge or reason to know that your breaches of warranty violated the act."

At the time of the accident, Mrs. [redacted] was the owner of Shear Express, Inc., self-employed as a hair dresser and earning approximately $450.00 per week. As a result of the described breaches of warranty and negligence, Mrs. Marsters suffered serious and permanent injuries, including fractures of her C1, T3 and T4 vertebral bodies, LeFort fractures and splenic lacerations. As a result of these injuries, Mrs. [redacted] was rendered a paraplegic. To date, she remains under active medical care, out of work and permanently disabled. Demand is hereby made for settlement of the personal injury claims of Mr. and Mrs. [redacted] in the amount of Twenty Million Dollars ($20.000,000.00). This demand is for present settlement purposes only.

Under the provisions of Massachusetts General Laws, Chapter 93A, you have thirty (30) days to provide a written response. You are advised to turn this letter over to your attorneys and insurers for immediate attention. Further, if you believe that any other person, firm, or entity is responsible in whole or in part for the above described occurrence, then you are requested to send them a copy of this letter. With respect to any claim by you that it was another person, firm or entity that was responsible for the design, manufacture, assembly, sale, and/or distribution of the subject Ford Explorer, you are requested pursuant to Chapter 93A to provide the name and address of any such person or entity.

Should you require further information, please do not hesitate to contact me.

Thank you for your attention this matter.

Very truly yours,

SUGARMAN AND SUGARMAN, P.C.

Robert W. Casby

April 13, 2009

[redacted]

v

Lear Corporation
Ford Motor Company

v

[redacted]

In the Superior Court Department of Trial Court, Commonwealth of Massachusetts
Case No: 2006-2687

From the Commonwealth of Massachusetts Motor Vehicle Crash Police Report (03-865-AC)
Officer: Ptl. Brian D. Morrison (narrative), badge 205.
From Supplemental Report of Crash reconstructionist: Daniel Parkka

Vehicle 1 (case vehicle)
- 1998 Ford Explorer, blue, 4DR SUV.
- VIN: 1FMZU34E3WZ[redacted].
- Plate: [redacted] MA.
- Purchased vehicle: January 2000 with 9,463 miles.
  - Note: Vehicle was in a prior crash in April 1999. The vehicle was repaired in December 1999 (significant repair).
- Event sequence: 1 – MVA in traffic, 23 – light pole, 40 – went off the road right, 45 – fire/explosion
- Most harmful event: 45 – fire/explosion
- Underride/override: 3 - override
- Towed by AAA Davis Towing

RFP: [redacted], 31 year old female (DOB: [redacted]).
- Address: [redacted], Mashpee MA [redacted]
- Occupation: Hair dresser/owner of a salon.
- Education: High school degree + hairdresser school.
- Height/Weight: 5'7" and 154 lb.
- Restraint: 0 – Unbelted.
- Ejection: 2 – totally ejected.
- Injuries: 2 - Incapacitating
  - Possible internal injuries, severe laceration, other major injury.
- Taken to Cape Cod Hospital

Driver: [redacted], 42 year old male (DOB: [redacted]).
- Address: [redacted], Mashpee MA.
- Employer: Steamship Authority.
- Height/Weight:
  - 5'10" (employment records)
  - About 6' and 91 kg/203 lb (Massachusetts General Hospital)
- Restraint: 1 – Shoulder-lap belt.
- Ejection: 1 – partially ejected. Trapped on driver's side.
- Injuries: 2 - Incapacitating
  - Apparent Broken Bone, Possible Internal Injuries, Severe Laceration.
- Taken to Falmouth Hospital.

Vehicle 2
- 2003 A4 Audi station wagon
- VIN: WAUVC68E43[redacted].
- Plate: [redacted] MA.
- Event sequence: 1 – MVA in traffic, 45– fire/explosion

- Towed by AAA Davis Towing

Driver: [redacted], 25 year old male (DOB: [redacted]).
- Address: [redacted], Cotuit MA.
- Height/Weight: 5'9" and 185 lb.
- Restraint: Lap-shoulder belt.
- Injury: 3 – Non-incapacitating.
- Offenses: #K3027835 - Operating to endanger, OUI - alcohol, speed greater than reasonable, #K3027836 - operating after revocation.

Crash
On Sunday, June 29, 2003, **V1** was traveling North on Falmouth Road. V2 was also traveling North on Falmouth Road, behind **V1**. V2's front struck the rear of **V1**. **V1** started spinning onto the northbound shoulder into some bushes and a tree. **V1**'s RFP was ejected into the middle of Route 28. **V1** driver was trapped on the driver's side. V2 spun as well and came to rest in the center line of Falmouth Road. Both vehicles caught on fire.

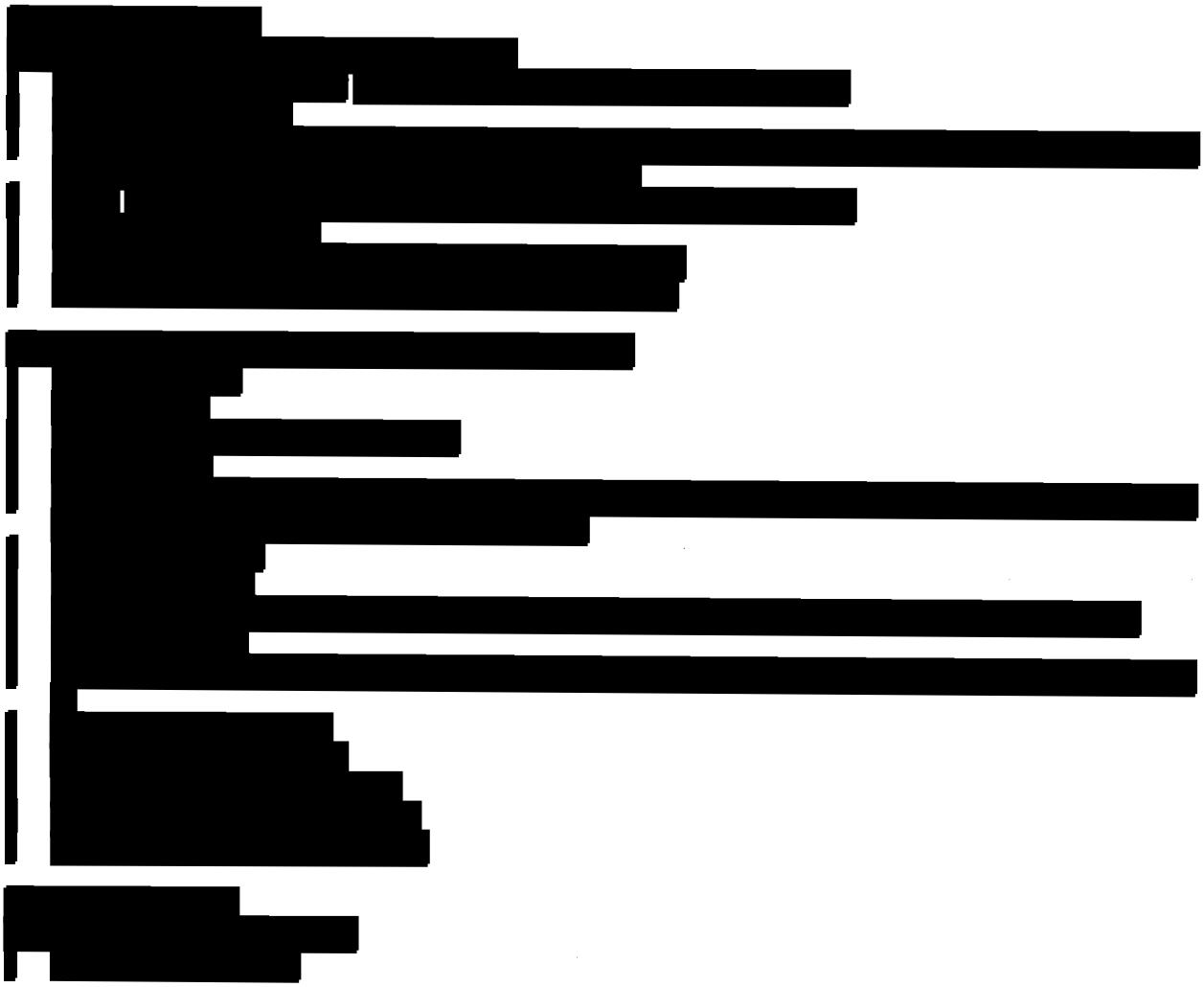
Environment:
- Date: 6-29-03
- Time: 3:09 am
- Location: 4418 Falmouth Rd, close to the intersection with Route 28, 40 feet north of Route 28 and Anchor Lane, 100 feet south of the Gas Station, City of Cotuit, MA
- Road surface: 1 – Dry.
- Weather: 1 – Clear.
- Lighting: 4 - Dark, lighted roadway.
- Manner of collision: 2- Rear-end.
- Posted speed: 40 mph (Note: 50 mph in same report).
- Contributing factors (V2): 2 – Exceeded authorized speed limit, 10 – Operating in erratic/reckless/careless/negligence or aggressive manner.

Witness
- [redacted]

[redacted] **Injuries**
EMS
Arrival: 3:30
- [redacted]

[redacted]

To protect the privacy of individuals, NHTSA does not make medical records available to the public without authorization. For this reason, documents falling into this category have not been included in this complaint record.



Court Filings

- Complaint
- 1st Amended Complaint
- [redacted] Answer to Ford Complaint & Baggs Cross Claims
- [redacted]
  - Answer to Ford's 3rd ROGS
  - Answer to Ford's 4th ROGS
  - Responses to Ford's 2nd RPD
  - Responses to Ford's 3rd RPD
  - Responses to Ford's 4th RQA
  - Responses to Ford's 5th RQA
  - Ans to Fd's 1st ROGS
  - Responses to Ford's 1st RQA
  - Responses to Ford's 2nd RQA
- Answer of [redacted] to Third Party Complaint and Cross Claims of [redacted] Against Co-Third Party Defendants [redacted]
- [redacted] Supplemental Answer to Defendant, Ford Motor Company's First Set of Interrogatories regarding expert witnesses
  - [redacted] - exhibits to plaintiffs expert disclosures
    - Wallingford, Schulz
- [redacted] response to Lear's Interrogatories;
- [redacted] response to Lear's Interrogatories; and

- [redacted] response to Lear's Request for Production of Documents.
- Ford's Answer to Complaint
- Ford's Answer to 2nd Amended Complaint
- Ford's 3rd Party Complaint
- Ford's Response to Plaintiff [redacted] RPD
- Ford's Response to Plaintiff [redacted] ROG
- Ford's Response to Plaintiff [redacted] ROG
- Ford's Response to Plaintiff [redacted] 2nd ROG
- Ford's Response to Plaintiff RPD included in Depo Notice
- Ford's Supp Response to [redacted]
- Lear's Response to [redacted] ROG
- Lear's Response to [redacted] RPD
- [redacted] Corp 3rd Party Complaint
- [redacted] Corp's Answer to Complaint
- [redacted] response to second request of plaintiff for production of document or other items
- [redacted] Answer to Ford's Complaint and Cross Claims
- [redacted] Answer to [redacted] Cross Claims
- [redacted] Answer to 3rd Party Cross Claims and Jury Demand
- [redacted] Answer to Plaintiffs' Claims and [redacted] Cross Claims and Jury Demand
- [redacted] Response to Fords 1st RQA
- [redacted] Response to Fords RPD
- [redacted] Response to Fords 1st ROG
- [redacted] Answer to [redacted] ROG
- [redacted] Answer to [redacted] ROG
- [redacted] Supplemental Answers to Interrogatories Propounded by Ford
- [redacted] Answer to [redacted]' ROG
- [redacted] Answer to [redacted]' ROG
- Scheduling Order
- [redacted] Answer to [redacted] Cross Claim
- [redacted] Answer to 3rd Party Complaint
- [redacted] Answer to Plaintiff Rule 14 Claims

Materials reviewed

- Barnstable Police Department – Summons Report
- Ms. [redacted]' medicals
  - Ambulance report
  - Cape Cod admission
  - Cape Cod Hospital (including radiology reports and lab tests)
  - Cape & Island Urology
  - Boston Med Flight
  - Boston Medical Center
  - Rehab Hosp of Cape and Islands
  - Harvard Pilgrim Health Care
  - Mass Rehab Commission
  - Boston Medical Center: Chest portable (6-29-03, 7-3-03, 7-4-03, 7-5-03, 7-6-03 and 7-7-03)
  - Boston Medical Center: SP IVC filter placement on 6-30-03, CT Cervical Spine w/out contrast on 6-29-03, CT brain w/out contrast on 6-29-03 and CT of thorax with contrast on 6-29-03 (1 disk)
  - Boston medical neurological documents
  - MassHealth records
- Mr. [redacted] medicals
  - Boston Med Flight
  - Cape Cod Hospital
  - Cape Cod Healthcare Diagnostic Imaging – Tibia/fibula on 7-26-05 (post amputation) (1 disk)
  - Massachusetts General Hospital
  - Visiting Nurse Association of Cape Cod
  - Rehab Hospital of Cape Cod

- Dr. M. Barnett
- Falmouth Hospital
- MGH Burn Associates
- Rosenfeld med records

- Mr. [redacted] employment records
- MGA rest report for the Explorer Front Row Seat FMVSS 207
- Ms. [redacted] journal
- Professional Cut records for Ms. [redacted]
- Voicemail left by [redacted]
- Audio of the 911 recordings obtained from the Barnstable Police Department
- Title History
- Hanover Insurance
- Safety Insurance
- Horace Mann Insurance Co.
- Reynolds Wrecking
- Route 18 Auto Center
- Sha-Nic
- Wareham Ford
- Community Rehabilitation Center
- Ford material: Crash Test Videos of:
  - MDS_3075 – 1991 Ford Explorer rear impact, run 20461
  - MDS_2178: 9-24-99 – 1987 Aerostar
  - MDT_6016 50 mph moving barrier into rear of 1971 car.
  - Tests 8385, 8428, 8454 (21 mph delta V), 8874, 9108, 9146, 9176 (no movies/photos), 9250, 9218, 9240

Photographs/videos

- Daniel Parkka VI and SI photos
- Aerial video of crash scene/house
- Dobson Explorer VI photos 9-10-03
- Lewis photos of Explorer at Salvage Yard (produced by Plaintiff) Date Unknown
- Medical Photos of A Bagg in Hospital Date Unknown (Produced by PI)
- Newell Audi VI photos 9-25-08
- Pre & Post Accident Photos of A Bagg Date Unknown (Produced by PI)
- Sharma's Audi VI 5-22-06

Depositions

[redacted] (Ex 1-5)
11-15-06
on 6-25-08 (Exhibit 1-8)
ett on 4-11-08
ers on 1-5-09 (+ exhibits)
on on 2-28-09(+ exhibits)
10-28-08 (Ex 1-7)
10-16-08 (Exhibit 1-13)
edian on 3-28-07
er on 4-26-07
on 2-27-09
n 2-5-09
4-23-07 (Exhibits 1-3)
on 4-20-06 (Exhibit 1-2)
on 4-6-06
dri on 2-5-09
[redacted] on 7-28-08 (Ex 1-27)
2-27-09
on 4-2-07

[redacted] ol II on 5-14-07 (Exhibit 29a-29c, 41)
[redacted] on 12-4-08 (Ex 1-7)
[redacted] Prasad on 2-6-09
[redacted], III on 4-2-07
[redacted] n 3-14-08 (Exhibit 1-9)

Depositions from [redacted] Criminal Trial

[redacted] v

[redacted] on 10-31-05 & 11-1-05

[redacted] 10-12-04
[redacted] on 12-4-04
[redacted] s (should be [redacted])

[redacted] on 12-13-04

Expert Reports:

- [redacted]
- [redacted] – Life Care Plan on 12-30-08
- [redacted] – Care Expenses on 1-9-09

Conclusions Regarding the Crash of Mr. [redacted]

1) Based on the police report, the crash occurred on Sunday, June 29, 2003 at 3:09 am. Mr. [redacted] (42 year old male, 203 lb, 6') was driving a 4 door 1998 Ford Explorer (VIN: 1FMZU34E3W[redacted]). Ms. [redacted] (31 year old female, 154 lb, 5'7") was the right-front passenger. Mr. [redacted] was listed as belted in the police report and Ms. [redacted] was listed as unbelted.

The Explorer was traveling North on Falmouth Road (Route 28) at about 40 to 45 mph. Falmouth Road is a 2-lane roadway. At the time of the crash, the roadway was dry. It was dark and the roadway was lighted. The crash occurred at 4418 Falmouth Road, 40 feet north of its intersection with Anchor Lane, and 100 feet south of the Santuit Gas Station (Citgo), in Cotuit City, Massachusetts. The posted speed was originally 50 mph on Falmouth. There was a posted speed sign of 45 mph at the collision site.

[redacted] (25 year old male) was driving the 2003 A4 Audi station wagon. The Audi was also traveling North on Falmouth Road, behind the Explorer. The Audi's front struck the left rear of the Explorer.

According to the police crash reconstruction, the Audi impacted the Explorer with a speed ranging from 77 to 86 mph (after braking). The overlap was about 55 inches and the PDOF for the Explorer was 180 degrees. The delta V for the Explorer was about 17 mph and 19 mph for the Audi. The Audi frontal airbag deployed.

The Explorer yawed clockwise (about 280-290 degrees according to the diagram) after the collision. It went onto the northbound shoulder, crossed driveway # 4462, and went off road. The Explorer tripped on the soil with a passenger side lead and rolled 100° to 120°. During the rollover, the Explorer's top impacted a tree located at the western edge of the driveway. There was a contact mark noted on the tree located 6 feet from its base. The impact location on the Explorer was between the A-pillar to B-pillar on the passenger side (64 inches aft of the front axle) with a PDOF of 0 degree in the z-direction.

Mr. [redacted], the police crash reconstructionist, noted some roof deformation between the A- and B-pillars, extending down to the middle hump of the occupant compartment and compressing both front seating positions. The Explorer rotated clockwise (sic) around the base of the tree to the northern side of the roadway. The vehicle disengaged from the tree and rolled back onto its wheels to a point of rest. The vehicle was facing northeast.

The Audi yawed counterclockwise and proceeded across the eastbound lane. Its right side struck a 14.8" tree off the shoulder of the roadway with a PDOF of 143 degree. The tree was uprooted. The vehicle continued to yaw and came to rest facing in a southerly direction in the eastbound travel lane. Both vehicles caught on fire.

2) The crash reconstruction was provided by David Mecaldi from Scientific Boston. According to Mr. [redacted], the Explorer was traveling approximately 35 mph and the Audi at about 90 mph. The closing speed between the two vehicles was 50-60 mph. The right-front of the Audi impacted the left rear of the Explorer (about 50% offset). The impact resulted in under-ride of the Explorer. The PDOF for the Explorer was 173 to 175 degrees.

The delta V for the Explorer was about 20-25 mph, and 35 mph for the Audi. After the impact, the Explorer was pushed forward at 45-50 mph. The vehicle yawed clockwise. The Explorer went off the roadway on the right side, crossed a driveway and tripped. The vehicle rolled more than ¼ turn during impacting a tree at 30-35 mph. The vehicle then rotated around the tree.

3) The Explorer was involved in a prior crash in December 1999. It was repaired prior to being sold to Mr. [redacted]. At the time of this crash, the Explorer had been significantly altered and was not in the same condition as it left Ford's possession.

4) Mr. [redacted] caused the crash by excessive speed. He was traveling 90 mph. There was a posted speed sign of 45 mph in the area of the crash. Mr. [redacted] was traveling about 45 mph in excess of posted speed.

Mr. [redacted] had been drinking prior to the crash. His BAC was 0.13 grams of ethanol per 100 milliliters. Mr. [redacted] was cited for driving while intoxicated, driving to endanger and speeding (Citation #K3027835).

Mr. [redacted] was 25 years old at the time of the crash. His driving records showed two prior speeding tickets, one in 2000 and another in 2002. His license was suspended on May 1, 2003 and then revoked on May 7, 2003. Mr. [redacted] was also cited for driving with a revoked license (Citation #K3027836).

Conclusions Regarding Ms. [redacted]' Injuries

5) Ms. [redacted] was completely ejected. She was found in the middle of the roadway. According to Mr. [redacted] 2nd exhibit, Ms. [redacted] was found on the south-lane of Route 28, east of the Audi's final rest position, and west of the Ford's final rest position. According to Mr. [redacted] statement, he "dragged her to the other side of the roadway to get her away from the burning vehicles".

6) EMS arrived at 3:30 am and found Ms. [redacted] supine on the roadway. According to the EMS record, she was ejected 25-30 feet. Ms. [redacted] was complaining of back and shoulder pain. She was numb from her waist down. Ms. [redacted] was initially taken to Cape Cod Hospital but was later air lifted to Mass General Hospital. The medical records noted some blood and fluid in right ear, multiple facial abrasions, and lacerations on her occipital scalp (5-6 cm), right lateral knee area (2-7.6 cm) and to her spleen.

Ms. [redacted] was diagnosed with subarachnoid hemorrhages in the left temporal lobe, superior cerebellar cistern, and interpeduncular fossa. She had multiple facial fractures including LeFort II/III fractures and orbital wall fractures. Ms. [redacted] had a comminuted nondisplaced fracture of the right inferior facet of C1, comminuted and displaced fractures of the spinous processes of C7, T1 and T2, cord transection at T2-T3 cord, burst fractures of T3 and T4 vertebral bodies with distraction and retropulsion of bone fragments, large anterior and superior mediastinal hematoma and posterior left mediastinal hematoma at T10 level and multiple rib fractures.

7) Assuming that Ms. [redacted] was seated in the right-front seat, she was a far-sided occupant in a left offset rear impact with under-ride. She moved to the rear and down during the impact with the Audi. Ms. [redacted] moved inboard during the clockwise vehicle motion.

8) Ms. [redacted] was subsequently ejected. Ms. [redacted]' post crash position points out to a complete ejection during the rapid yaw motion of the Explorer. The ejection most likely occurred out the passenger window when the vehicle had yawed about 220 to 270 degrees, prior to completing its yaw motion, tripping and to contacting the tree.

Viano reviewed 14 NASS-CDS electronic rear impact cases for the 1997 to 2004 calendar years. The cases included completely ejected drivers and right-front occupants with serious injury. Rollovers were excluded in the analysis. The vehicle kinematics and occupant location were obtained from the crash scene diagrams and narratives. The results indicate that ejection most often occurs during vehicle spinout post impact. The ejection trajectory could be estimated in 11 of the 14 cases. All occurred during spinout. The ejection details were unknown in the 3 remaining cases. It should be noted that one case included a belted driver in a convertible.

9) Ms. [redacted] injuries are consistent with at least two hard impacts with the roadway after ejection. Her ejection path is not conclusive since interior witness marks were not noted in the material reviewed and the vehicle is no longer available for inspection. I believe that she was most likely ejected from the passenger's side window. The following summarizes the analysis that supports this conclusion.

An analysis was conducted using the throw model, which is based on the work of Hay (1993) and includes the effects of aerodynamic drag. The most likely scenario considered was for the right-front passenger's ejection from the passenger side window. The analysis assumed that the right-front passenger's rest position is 67' from her initial ejection. Ms. [redacted] was ejected in the air about 40' or more and then subsequently rolled on the roadway.

According to Mr. [redacted] the vehicle yaw rate at ejection was 127 deg/sec (2.2 rad/s) and the vehicle velocity was about 38 mph at the point of possible ejection. Ms. [redacted] ejection velocity would have been 42 mph (38 mph vehicle velocity + 3.9 mph rotational velocity, assuming a 2.6' radius) assuming loss of velocity during the ejection process.

An ejection velocity of 42 mph and upward angle of 4.2 degrees gives a throw distance of 40'. Impact with the ground is at 41.9 mph. The downward trajectory of the right-front passenger was -15.9 degrees at ground impact with a 4.51 feet maximum vertical displacement. The time from ejection to ground impact is about 0.67 seconds.

10) Ms. [redacted] ground impact velocity is 41.9 mph (18.7 m/s). Her energy is somewhat equivalent to a free fall height of 58.7'. Ms. [redacted]' kinematics cannot not fully be compared to fall accidents from

buildings due to the shallow impact angle, however, some of Ms. [redacted] injuries are somewhat consistent with those of victims of falls from heights (Lau et al. 1998, Tuttle-Newhall et al. 1997, Türk, Tsokos 2004).

Some of Mrs. [redacted] injuries are consistent with an initial blunt impact to the head/face with the ground. Ms. [redacted] may have subsequently rolled on her back, explaining her occipital laceration and bilateral posterior rib fractures. Torso, head, abdominal and spine injuries are common in fall accidents (Yagmur et al. 2004, Lau et al. 1998). Lau et al. (1998) reported that almost 50% of fall victims sustained a combination of head, thoracic and abdominal injuries.

Ms. [redacted] sustained multiple LeFort II and III facial fractures. Figure 1 shows the facial fracture severity level based on impact velocity (Yoganandan et al. 1993). Clearly, Ms. [redacted] impact with the ground exceeded the level for LeFort III fractures.

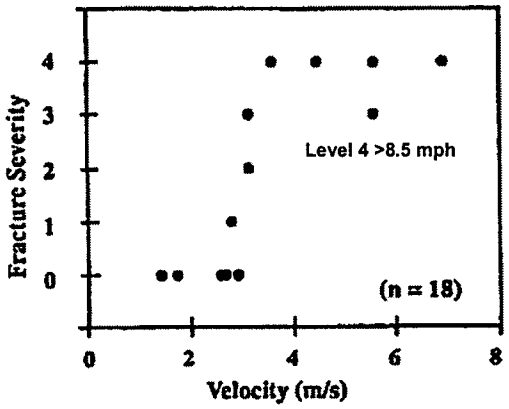


Figure 1: Fracture severity versus impact velocity
(Level 0 = no fracture and Level 4 = most severe case - LeFort III)
(Yoganandan et al. 1993).

11) The risk of serious injury is higher for ejected occupants than non-ejected occupants. O'Day, Scott (1984) found that the rate of fatal injury was 40 times higher for ejected occupants than for non-ejected. Huelke et al. (1981) reviewed tow-away crashes and found that 1 out of 300 occupants sustained a severe neck injury. The injury rate rose to 1 out of 14 occupants for those ejected (21.4 times higher). They also noted that severe neck injuries were rare in vehicles struck in the rear.

12) Ms. [redacted] was unbelted. Hartemann et al. (1977) carried a matched pair analysis and estimated that seatbelts could reduce crash fatalities by 23% solely by mitigating ejections. Huelke (1966) investigated fatal crashes and postulated that 80% of ejections could have been prevented with the seatbelt.

13) Numerous studies in the literature have found significant belt effectiveness in rear crashes, in particular in preventing ejection outside the vehicle:

- Levine (1972) found that seatbelts reduced the risk of injury by 12% in rear impacts and of serious injury by more than 57%.
- According to Evans (1991), seatbelt use is 49% effective in preventing fatal injury in rear impacts where 23% of the effectiveness is preventing ejection (Figure 2).

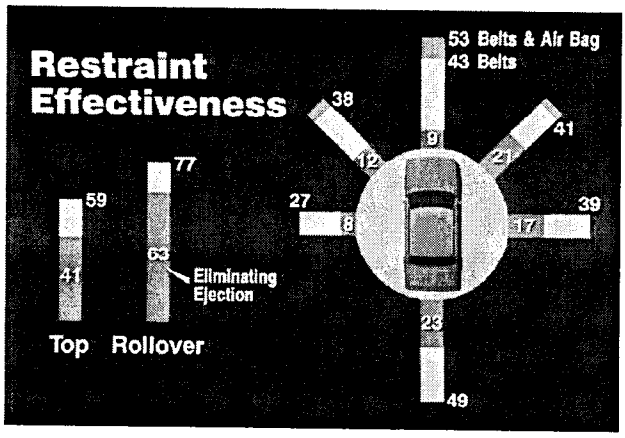
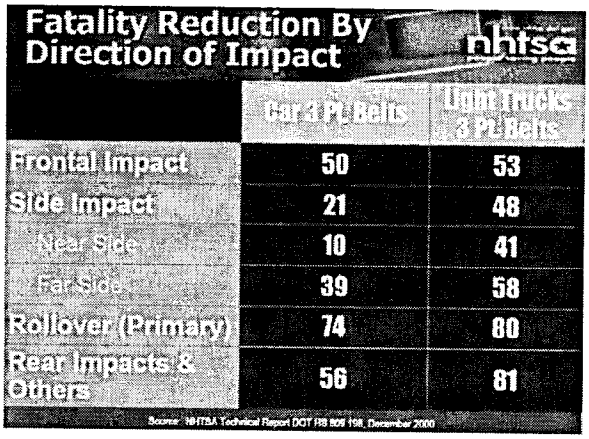


Figure 2: Restraint effectiveness by crash direction (Evans 1991).

- Three-point belts have been reported to reduce 56-81% in rear and other impacts (Table 1 from Kanianthra 2005).

Table 1: Fatality reduction by impact direction (Kanianthra 2005).



- Viano, Parenteau (2004) found a 76.6% belt effectiveness in reducing spinal injury risks in rear impacts.
- The 2004 Viano study was reanalyzed using more recent data. In the new analysis, NASS-CDS data was obtained for 1993 to 2007 calendar year. The data only included towaways (towpar = 1) in 1993+ model year vehicles. Table 2 shows the risk of serious (AIS 3+) injury by body region and belt usage for non-ejected occupants in rear impacts. Seatbelts were 64% effective in reducing serious spine injury for non-ejected occupants in rear impacts.

  The data was also analyzed for complete ejection. Seatbelts were 99.9% effective in preventing complete ejection in rear impacts. There were 2 unweighted cases (51 weighted) where a belted occupant was completely ejected when belted. One case involved a 2-seater convertible with the top down (NASS-CDS case #2001-49-67) and the other involved a significant impact by a Freightliner (NASS-CDS case #2005-11-37). The left rear door was opened during the crash and the belted driver was ejected during the yawing motion post impact.

  Table 3 shows the risk of serious (AIS 3+) injury by body region and belt usage for completely ejected occupants. There was 1 unweighted case (122 weighted) where the unbelted occupants sustained a

serious spinal injury (case # 2001-75-1). This case involved two significant rear impacts causing the vehicle to yaw counterclockwise and ejecting the driver more than 25' through the 2nd row left window. The driver was fatally injured.

Table 2: Injury for non-ejected occupants in rear impacts

	Non-Ejected in Rear (GAD1='B' and Rollover <=0)									
	Head	Face	Neck	Thorax	Abdomen	Spine	UX	LX	Unk	All
All Occ n=	**1,917,358**									
AIS 1	147,866	163,937	35,250	84,655	26,550	697,214	241,359	274,587	22,507	1,693,925
AIS 2	26,484	1,058	181	2,566	2,208	11,880	4,160	9,900	0	58,437
AIS 3-6	12,068	154	58	3,346	279	1,881	336	1,834	240	20,195
AIS Unk	1,514	0	315	1,518	1,543	0	86	2,098	1,068,155	1,075,230
Total	**187,932**	**165,149**	**35,804**	**92,085**	**30,580**	**710,975**	**245,942**	**288,419**	**1,090,902**	**2,847,787**
Belted Occ n=	**1,673,574**									
AIS 1	124,160	131,684	33,315	68,792	15,644	628,463	213,741	220,561	20,830	1,457,190
AIS 2	19,327	542	177	1,871	368	5,375	3,592	4,124	0	35,375
AIS 3-6	3,657	0	58	2,243	162	1,282	195	913	0	8,510
AIS Unk	722	0	315	1,518	1,543	0	86	2,098	934,851	941,133
Total	**147,865**	**132,226**	**33,865**	**74,424**	**17,716**	**635,121**	**217,614**	**227,697**	**955,681**	**2,442,209**
Unbelted Occ n=	**154,761**									
AIS 1	19,887	22,761	959	11,036	9,435	36,058	19,565	45,213	953	165,867
AIS 2	6,506	464	4	593	1,584	5,790	504	5,565	0	21,009
AIS 3-6	8,226	101	0	1,052	118	333	90	787	240	10,947
AIS Unk	73	0	0	0	0	0	0	0	79,958	80,031
Total	**34,691**	**23,326**	**963**	**12,680**	**11,136**	**42,181**	**20,159**	**51,565**	**81,151**	**277,853**
Risk AIS 3+										
Belted	0.2%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%		0.5%
Unbelted	5.3%	0.1%	0.0%	0.7%	0.1%	0.2%	0.1%	0.5%		7.1%
% Diff	-95.9%	-100.0%		-80.3%	-87.3%	-64.4%	-80.0%	-89.3%		-92.8%

Table 3: Injury for ejected occupants in rear impacts.

	Completely Ejected in Rear (GAD1='B' and Rollover <=0)									
	Head	Face	Neck	Thorax	Abdomen	Spine	UX	LX	Unk	All
All Occ n=	**7,801**									
AIS 1	2,047	1,183	96	2,773	895	3,306	3,105	2,033	0	15,439
AIS 2	589	0	7	255	605	578	419	315	0	2,769
AIS 3-6	368	0	0	589	122	122	104	301	0	1,606
AIS Unk	0	0	0	0	0	22	0	0	3,805	3,827
Total	**3,005**	**1,183**	**103**	**3,617**	**1,622**	**4,029**	**3,627**	**2,650**	**3,805**	**23,641**
Belted Occ n=	**51**									
AIS 1	51	0	0	11	40	0	0	11	0	112
AIS 2	11	0	0	0	0	40	11	80	0	141
AIS 3-6	40	0	0	40	0	0	0	91	0	170
AIS Unk	0	0	0	0	0	0	0	0	0	0
Total	**101**	**0**	**0**	**51**	**40**	**40**	**11**	**181**	**0**	**424**
Unbelted Occ n=	**7,750**									
AIS 1	1,997	1,183	96	2,763	856	3,306	3,105	2,022	0	15,327
AIS 2	579	0	7	255	605	538	408	236	0	2,627
AIS 3-6	328	0	0	549	122	122	104	211	0	1,436
AIS Unk	0	0	0	0	0	22	0	0	3,805	3,827
Total	**2,904**	**1,183**	**103**	**3,567**	**1,582**	**3,989**	**3,617**	**2,469**	**3,805**	**23,217**

- Partyka (1992) found a 41% lower injury risk for belted than unbelted occupants in rear impacts. Belts were found effective in reducing rebound injuries. The injury risks by frontal components were 54% lower for belted occupants than unbelted occupants.
- Digges et al. (1993) found that nearly half of the restrained occupants in severe rear impacts were injured from frontal components.
- Prasad (1997) reviewed field accidents with front seat occupants ejected from the rear window in rear impacts and found 1 case out of 2,223 where the occupant was restrained with a 3 point belt. The details of the case were not included.
- Viano reviewed FARS 2000-2004 data and compared the ejection rates for front seat occupants in rear impacts. Rollovers were excluded. Table 4 shows that seatbelts were 84.5% effective in reducing partial ejection and 96.4% in reducing complete ejection.

Table 4: Ejection path in rear impacts (FARS).

	Ejection Path										
Driver & RFP	Not Ejected	Side Door	Side Window	Windshield	Back Window	Back Door	Roof Opening	Roof-Converible	Other Path	Unknown	Total
Non-ejected	21,415	0	0	0	0	0	0	0	0	0	21,415
Compl. Ejected	0	56	115	28	71	15	8	3	84	947	1,327
Partial Ejected	0	17	32	6	6	2	7	0	2	160	232
Unknown	0	0	0	0	0	0	0	0	0	67	67
Total	21,415	73	147	34	77	17	15	3	86	1,174	23,041
D & RFP - Belted (Lap-shoulder)											
Non-ejected	11,980	0	0	0	0	0	0	0	0	0	11,980
Compl. Ejected	0	4	5	0	5	2	0	0	3	62	81
Partial Ejected	0	3	6	3	2	0	0	0	1	35	50
Unknown	0	0	0	0	0	0	0	0	0	14	14
Total	11,980	7	11	3	7	2	0	0	4	111	12,125
D & RFP - Unbelted											
Non-ejected	4,588	0	0	0	0	0	0	0	0	0	4,588
Compl. Ejected	0	49	107	28	62	12	8	3	75	756	1,100
Partial Ejected	0	13	23	3	4	2	7	0	1	102	155
Unknown	0	0	0	0	0	0	0	0	0	22	22
Total	4,588	62	130	31	66	14	15	3	76	880	5,865

Ejection risk	Partial	Complete
Belted	0.41%	0.67%
Unbelted	2.7%	18.8%
% Diff	84.5%	96.4%

- Strother and James (1987) found that seatbelts were beneficial in rear impacts by 1) controlling or eliminating ramping up the seatback, 2) reducing the velocity of the occupant relative to the vehicle interior, 3) minimizing the potential for occupants to be out-of position at impact, and 4) controlling forward rebound.
- Strother, James compared the belted and unbelted dummy biomechanical responses in FMVSS 301 NCAP tests and did not find significant differences. The authors also reviewed the kinematics and found that head strikes were generally higher for unbelted occupants than belted occupants. They observed a higher probability unpadded structure contacts for unbelted occupants than for belted occupants. The videos with the belted dummies showed the thighs and knees jack-knifing upward and rearward in response to the forward vehicle acceleration. This motion prevented the belted dummies to slip out of their lap belts.
- Viano et al. (2008) investigated full-width FMVSS 301 rigid barrier tests with belted occupants in vehicles from the early 1990s through 2000s. Table 5 summarizes the biomechanical responses for the head and chest of the driver and right-front passenger. The average is consistently below IARVs. A review of the available videos indicated that the seatbelt helped retain the occupants in their seats, although most of the restraint was provided by yielding seatbacks and other interior contacts.

Table 5: Summary of occupant responses in rigid barrier rear crashes.

	HIC	Head Peak Acc	Chest Peak Acc	HIC	Head Peak Acc	Chest Peak Acc
Mobility		**Driver**			**RFP**	
Average	245	49.4	19.9	351	60.6	14.7
sd	281	35.5	9.3			
1995+		**Driver**			**RFP**	
Average	148	35.2	18.4	199	45.6	50.1
sd	99	13.3	21.5	155	30.9	50.5
IARV						
5th	1000	193	73	1000	193	73
50th	1000	180	60	1000	180	60

12) Ms. [redacted] was involved in a 20-25 mph rear impact. Figure 3 shows the risk of serious (MAIS 3+) and severe (MAIS 4+) injuries in rear impacts by delta V (Viano, Parenteau, 2008). The MAIS 4+ risk is 0.26% in 20 to 25 mph delta V crashes. The field data shows that only 1 in 385 occupants exposed to rear crashes of 20-25 mph delta V experience severe-to-fatal injury. This safety performance exceeds the protection afforded by seatbelts and airbags in frontal crashes and the safety in side impacts of similar severity (Figure 4).

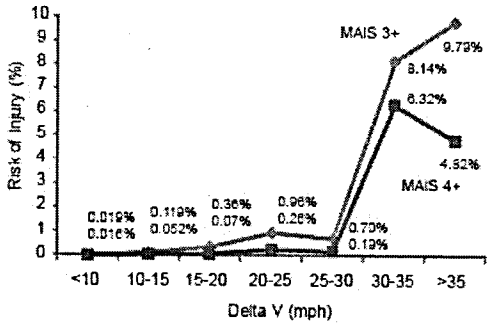


Figure 3: Risk of serious (MAIS 3+) and severe (MAIS 4+) injury to front-seat occupants in tow-away rear impacts (Viano, Parenteau 2008b).

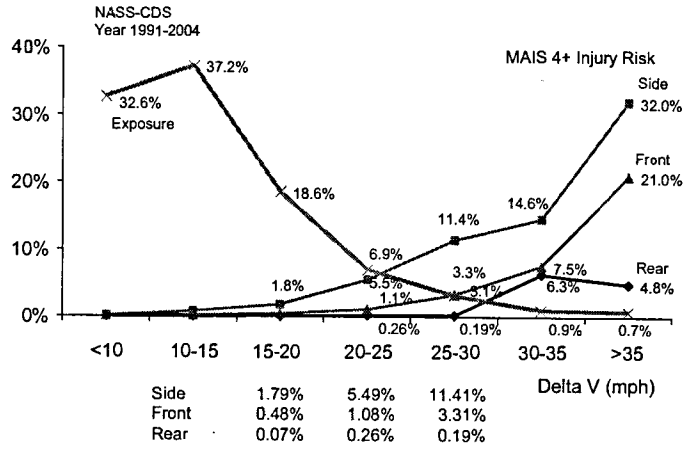


Figure 4: Risk of serious and severe injury (MAIS 3+ and MAIS 4+) to occupants in tow-away rear impacts.

13) The right-front passenger seat is no longer available for inspection. The Explorer photos taken by Mr. Parkka, Mr. Dobson and Mr. Lewis after the crash were reviewed. The photos indicate that the right-front passenger seatback was slightly reclined. As pointed out by Mr. Parkka in his report, the seatback rotation may have been caused by the vehicle crush during the tree impact.

Mr. Roger Burnett from Ford will describe the seat track, cushion, recliner, pivot and seatback as seen in the available photos. The post crash vehicle inspection photos showed essentially no significant deformation that would be consistent with seatback yield in a rear impact.

14) ABTS seats (all belts to seat) were used in the late 1990s. Their ability to carry shoulder belt load made them heavier and more expensive than conventional seats and their use would have required re-engineering of the vehicle floor and body structures. It was not a design defect that the 1998 Ford Explorer did not use ABTS. Furthermore, there are known downsides with stronger seats; real-world crashes have demonstrated some of these, including increased rebound, ramping and injuries associated with loss of head or upper body support (Viano et al. 2009).

15) Seats with greater moment-carrying capability in rear crashes were in the market place in the 1990s. However, the 1998 Ford Explorer had a seat that was consistent in design and exceeded in strength most of the volume-produced vehicles. The seat was subjected to rigorous development testing and refinement before being introduced in production.

Figure 5 shows forty years of seat strength in rear loading by a body block. Defense's testing of the Ford Explorer seat showed a peak load of 1,102 lb and moment strength of 13,775 inlb with a 12.5" moment arm in a FMVSS 207 tests (MGA report C04Q7-146.1). The Ford Explorer has strength that exceeds the historic average.

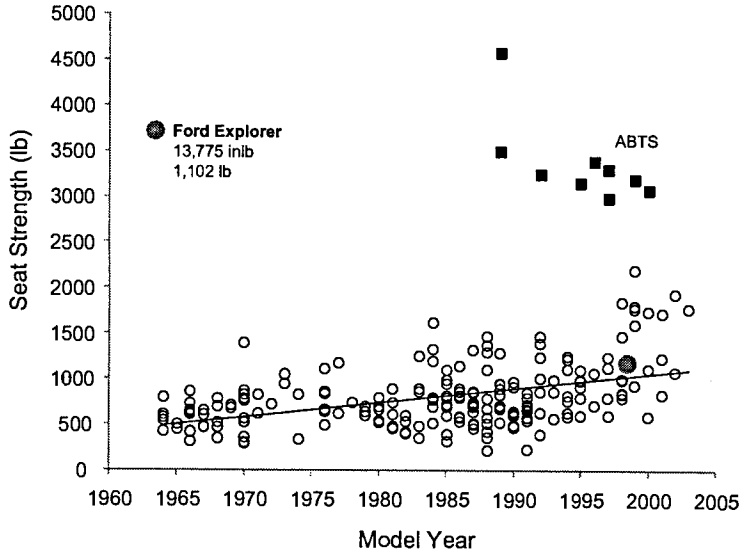


Figure 5: Historic seat strength data from pull tests (Viano et al. 2009) with data from MGA 207 test of the Ford Explorer.

16) Rear-ended vehicles are often involved in pre-crash maneuvers. Campbell et al. (2003) investigated police-reported crashes using the 2000 GES database and found that 60% of the rear-ended vehicles were decelerating prior to impact. Warner et al. (1991) used NASS 1982-1984 and found that 67% of rear-ended vehicles were involved in braking, swerving, spinning/yawing or other maneuvers prior to impact (Table 6). The authors inferred that some occupants may be out-of-position prior to being rear-ended depending on magnitude of the maneuvers prior to impact. Tests with out-of-position occupants show higher occupant responses in rigid seats than in yielding seats (Melvin 1971, Viano et al. 2009).

Table 6: Distribution of pre-crash scenarios for rear-end vehicles (NHTSA 2003).

Lead Vehicle Decelerating	Lead Vehicle Stopped	Lead Vehicle Moving at Lower Constant Speed	Total (All Scenarios)
864,000	432,000	144,000	1,440,000
60%	30%	10%	100%

17) There was no design, manufacturing or performance defect in the passenger seat or its attachments to the vehicle. Field data analyses by NHTSA, industry and researchers have confirmed the safety performance of yielding seatbacks of the type in the 1998 Ford Explorer.

Conclusions Regarding Mr. [redacted] Injuries

18) Mr. [redacted] extricated himself from the Explorer through the right-front passenger door. Bystanders assisted him at the scene. Mr. [redacted] was airlifted to Massachusetts General Hospital in Boston. He was diagnosed severe burns on his back, chest, arms, and face. His non-burn related injuries consisted of a left sacral fracture, left superior/inferior pubic rami fractures, a left open tibia/fibula fracture, and a left

close ankle fracture. Hematomas on his pelvis, abdomen, and shoulder were also noted. Mr. [redacted] fractures are not consistent with the rear impact.

19) Mr. [redacted] was involved in a quarter-turn rollover arrested by a tree impact. Digges, Eigen (2003) investigated the risk of serious injury for non-ejected occupants in single vehicle rollovers by quarter turns. They found that more than 30% of seriously injured unbelted occupants were involved in quarter-turn rollovers where the injury rate was highest (Figure 6). They also discovered that most quarter-turn rollovers had impacts with fixed objects before or after the rollover. They reviewed individual cases of quarter-turn rollovers and found that 28% of serious injuries were from impacts with fixed objects prior to the rollover, and 66% were from impacts during or after the rollover, excluding ground impacts. Fixed object impacts during a rollover event are clearly injurious. Mr. [redacted] was belted but his skeletal injuries are consistent with the impact with the tree.

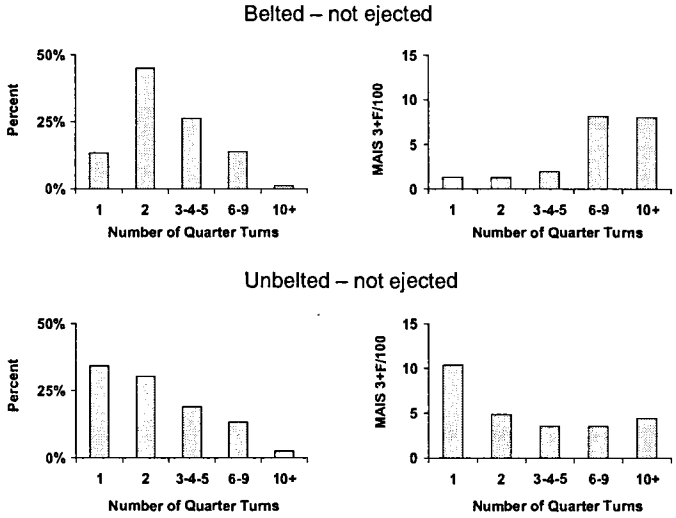


Figure 6: Distribution and risks serious injury (MAIS 3+F) by number of quarter turns (Digges, Eigen 2003).

20) The post crash Explorer photos were reviewed and indicate that the driver seatback was also slightly reclined. However, the police officer removed it from the vehicle after the crash. Photos show it was not significantly deformed in the crash (see Mr. Burnett's report).

Shoemaker (1959) described the risk of occupant injury by diving to the ground in a rollover. He used the work of Smith (1953) to show that an upright-seated occupant loading the top of their head when inverted involves nearly 60% of the occupant's kinetic energy loading through the neck and head when the roof is nearly perpendicular to the head, neck and torso axis.

Figure 7 shows that the energy directed to the head is influenced by body orientation and angle of the impact surface. For an upright-seated occupant in a frontal or near-side impact, less than 10% of their energy is directed through the head as loads occur directly on the chest, pelvis and lower extremities.

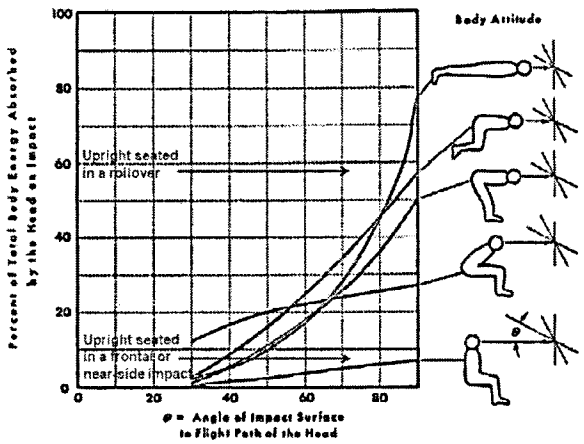


Figure 7: Head impact are influenced by the body orientation and the angle of the impact surface (from Shoemaker 1959 with additions).

Viano et al. (2009) discusses an approach to reduce diving injuries in rollovers. The approach is to recline the occupants prior to the roof impact. By reclining the occupant, the clearance between the head and roof increases and the torso kinetic energy is directed less through the neck. Mr. [redacted] benefited from the inclination of his seatback prior his vehicle impact with the tree. Mr. [redacted] was not diagnosed with head or face contact injury. If Mr. [redacted] was seated upright by a rigid seat, his head would have been in the path of the tree impact and he would most likely have been fatally injured.

21) According to the police report, Mr. [redacted] was belted. The restraint system was not available for inspection. Assuming that Mr. [redacted] was belted, the belt system reduced his excursion during the multi-impact crash. Mr. [redacted] remained restrained by the seat and belt system during the rear impact, vehicle yaw and roof impact. His lap and shoulder belt also reduced his upper and lower torso contact forces with the interior, and prevented his head from contacting the interior. Mr. [redacted] benefited from both his seat and belt system throughout the crash. They allowed him to be alert and extricate himself from the vehicle as it burned from a fire originating from the Audi's engine compartment.

NHTSA (2000) carried out safety benefit analysis for the seatbelts using FARS passenger car data in a double-pair comparison. The results indicated that front occupants reduced their injury risk by a factor of 2.4 to 2.7 when restrained (Table 6).

Table 6: Matched-pair analysis for seatbelts (NHTSA 2000).

Fatalities	Driver Fatalities	RF Fatalities	Driver/RF Risk Ratio
Both unrestrained	23,476	23,579	0.996
Driver unrestrained, RF belted	3,934	1,622	2.425
Driver belted, RF unrestrained	1,815	4,820	0.377
Both belted	11,225	12,901	0.870

22) Mr. [redacted] was involved in a multiple-impact crash. Digges, Bahout (2003) showed that the rate of serious injury was high in crashes with two impacts (Table 7). The risk was 7.6 times higher in two-impact crashes than in single impact rear crashes (3.21% v. 0.42%). Table 5 shows that the risk of serious injury was 6.12 times higher for belted occupants in two-impact crashes than in single rear impacts.

The results also indicate that top vehicle impact is the most injurious single-impact crash mode. The seatbelt is less effective in this type of crash than other crashes, including two or three+ impacts. Using the data in Table 8, seatbelts are 41.9% in reducing serious injury in single-top impacts, while they are 82.0% effective in single-rear impacts.

Table 7: Distribution by crash direction, number of crashes, MAIS 3+ injuries, and MAIS 3+ injury rate per 100 exposed (Digges, Bahout 2003).

Crash Mode	People %	MAIS 3+ %	Rate
Front Single	45%	32%	1.65
Back Single	5%	1.0%	0.42
Side Single	21%	17%	1.79
Top Single	5%	8%	3.85
Two Impacts	17%	24%	3.21
Three+ Impacts	6%	18%	6.25

Table 8: Distribution by crash direction: Single vs. multiple impact for belted and unbelted; by number of crashes, MAIS 3+ injuries, and MAIS 3+ injury rate per 100 exposed (Digges, Bahout 2003).

	Belted			Unbelted		
Crash Mode	People	MAIS 3+	Rate	People	MAIS 3+	Rate
Front Single	45%	29%	0.93	39%	33%	5.92
Back Single	6%	1.4%	0.34	3%	0.7%	1.89
Side Single	22%	21%	1.36	19%	13%	4.76
Top Single	4%	10%	3.15	11%	8%	5.42
Two Impacts	17%	24%	2.08	21%	25%	8.36
Three+ Impacts	6%	15%	3.52	9%	21%	16.69

23) Based on the evidence providence and despite the prior damage, the 1998 Ford Explorer seatbelt system, seats or interior performed well in this crash. The restraint system was within the state-of-art for vehicles of that seatbelt system, seats or interior. They surpassed the applicable Federal Motor Vehicle Safety standards.

24) Mr. Pozzi and Dr. Benda claim that seatback rotation caused Mr. [redacted] to lose vehicle control.

Mr. Pozzi's and Dr. Benda's claim is misleading and incorrect. First, even with ABTS seats, a high severity rear collision causes the driver's head and shoulders to displace rearward more than 12" as the occupant is accelerated forward. This pulls the hands off the steering wheel. Even in cases where a driver is aware of an impending rear impact and grips the steering wheel, the crash forces of a severe collision can deform the rim; but, the inertial forces of the arms and shoulders are sufficient to pull the hands off the wheel. Drivers are not strong enough to hold the wheel in severe rear impacts. Rearward deformation of the upper rim of the steering wheel has been seen after severe rear crashes, showing the results of the driver's grip until their hands pull off. The inertial effects of severe rear crashes also affect the feet, which move rearward from the controls due to crash dynamics.

Second, in a severe rear crash, the driver is subjected to complex vehicle motions that accelerate the interior forward and cause rapid yaw, pitch and roll motions. The vehicle motions rapidly move the steering wheel and foot controls away from the driver in a complex path. The driver's visual perception and motor reactions would have a difficult time locking in on, grabbing and taking control of the vehicle. It is unlikely that a driver can compensate for the effects of vehicle motion after a severe crash.

Third, FMVSS 301 crash tests involve significant occupant rebound after the rear crash. [redacted] (2008) found rebound velocities of 9-14 mph for belted occupants. Forward velocity in the vehicle would make it extremely difficult to visualize the steering wheel, grip the rim and provide meaningful steering input. These effects would be further complicated by rapid yaw and lateral vehicle motion. It is unlikely

under these circumstances that a driver would have the skill and wherewithal to regain control of the vehicle before it comes to rest after a severe rear collision.

Fourth, human reaction times vary greatly and depend on the circumstances and familiarity with the perceived event during normal driving (Shinar 2007). For normal, expected situations like observing a stop sign, brake reaction times vary from 0.68-1.65 s. The largest delays with common but unexpected events are about 1.25 s and can increase to 1.75 s for rare, unexpected events. For complex situations not part of normal driving, reaction times increase dramatically. Studies with young drivers 17-18 years old confronted with something darting into their path, the reaction time was 7.38 s. Even with training for complex situations, the reaction time was lowered to only 6.85 s. Obviously, an unexpected, severe rear impact disrupts cognitive and somatic senses of a driver leading to larger delays in reactions and perception of a need to regain control of the vehicle than what has been measured in normal driving without an accident.

25) There was no design, manufacturing or performance defect in the driver seat or its attachments to the vehicle. Field data analyses by NHTSA, industry and researchers have confirmed the safety performance of yielding seatbacks of the type in the 1998 Ford Explorer.

The findings and opinions in this report are offered to a reasonable degree of biomechanical, engineering and medical certainty based on the materials reviewed and analysis of facts to date. The vehicle is not available for inspection. I have relied on investigations of other experts and reserve the right to refine my opinions should additional information, activities or materials provide new facts and evidence. I also reserve the right to amend my report and to address statements and conclusions in supplemental reports by plaintiff experts. My billing rate is $450/hr. I have included a synopsis of my education, background and experience, and attached a copy of my CV.

Sincerely,

D Viano

David C Viano, Dr. med., Ph.D.

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Biography

Professor David C. Viano is a principal of ProBiomechanics LLC, which is a company specializing in research, teaching and consulting in the areas of occupant restraints preventing crash injuries, impact injury biomechanics, forensic analyses, vehicle and occupant kinematics, blunt ballistic impact injury, protective vests and helmets and armored passenger vehicles. His career has included research, education and consulting on biomechanics, automotive safety, sport, military-law enforcement protection.

Since 1997, he has been a consultant to the National Football League. He is co-chairman of the NFL Committee on Mild Traumatic Brain Injury (concussions) and a member of the Injury and Safety panel. He twice served on the Advisory Committee for Injury Prevention and Control at the Centers for Disease Control (CDC), Department of Health and Human Services.

He is Adjunct Professor of Biomedical Engineering at Wayne State University, Detroit, Michigan (1989-present) and since 2002 is the Director of the Sport Biomechanics Laboratory. He has been the thesis advisor for five doctoral students from Chalmers University of Technology, two from Wayne State University and one from the University of Calgary. He is currently advising one doctoral student.

In 2002, Dr. Viano retired from General Motors Corporation where he was Principal Scientist from 1987. During 1998-2001, he was on international assignment at Saab Automobile AB, where he managed advanced vehicle body, interior and safety. From 1974-1998, he worked at the GM Research

Laboratories. During his career, he published over 300 technical papers in medical, engineering and safety journals.

He has written or edited five books covering the role of the seat in rear crash safety, seatbelts the essential safety system, vehicle and occupant kinematics in rollovers, airbags, and the debate between yielding and stiff seats. He has lectured on seat safety and rollover crashes in professional development courses offered by the Society of Automotive Engineers.

During his career, Dr. Viano has been involved in technology innovation and automotive safety development. He holds seventeen US and European patents for crash safety systems, seats, occupant restraints, airbags, seatbelts, rollover prevention and advanced crash dummies. Six of his patents have been put into production and he has been involved in the introduction of industry firsts for advanced safety airbags (1986 Cadillac Deville), self-aligning steering wheel (1989 Chevrolet Cavalier), side impact protection (1988 Oldsmobile 88), active head restraint for whiplash prevention (1997 Saab 9-5), head-torso side airbag (1997 Saab 9-5), high retention seat (1997 Pontiac Grand Prix and Cadillac Seville), Catcher's Mitt seat (1999 Buick Park Avenue), rollover sensing (2004 Saab 9-5) and dual-depth airbag (2006 Buick Lucerne and Cadillac DTS).

Dr. Viano received a Bachelor of Science in electrical engineering (cum laude) from the University of Santa Clara, CA (1968), Masters of Science in applied mechanics from the California Institute of Technology, CA (1969) and Ph.D. in applied mechanics from the California Institute of Technology, CA (1972). He completed a postdoctoral fellowship in Biomedical Science at the Swiss Institute of Technology, Zurich, Switzerland (1974) and Doctor of Medicine at the Karolinska Medical University, Stockholm, Sweden (1998).

He is Editor of Traffic Injury Prevention, a scientific journal indexed by Medline, Current Contents and Science Citation Index. The journal serves four international organizations dealing with traffic injury prevention. He has served on numerous national committees, including National Academy of Science Committees on seat belt use, reminders and interlocks, speed limits, school bus safety, Federal trauma research and occupant restraints.

Dr. Viano is a Fellow of the Society of Automotive Engineers, Association for the Advancement of Automotive Medicine and American Society of Mechanical Engineers.

He is President of the Del Harder Rehabilitation Foundation. He is past Treasurer and Executive Committee member of the National Head Injury Foundation (Head Trauma Foundation) and Executive Committee member of the Rehabilitation Institute of Michigan, Detroit Medical Center.

He has received numerous awards, including the Excellence in Safety Engineering from the National Highway Traffic Safety Administration (1989) and the Ed Cole Award for Technology Innovation from the Society of Automotive Engineers (2003). He is a four-time winner of the Isbrandt Medal (1981, 1985, 1986, 1993) and seven-time winner of the Colwell award (3-1982, 1988, 2-1989, 1992) from the Society of Automotive Engineers and a three-time winner of the "Boss" Kettering Award from General Motors (1990, 1996, 1998).

Supplemental Conclusions Regarding Mr. [redacted] and Ms. [redacted] Crash and Injury:

26) Ford carried out a series of "due care" rear impact tests with the Explorer prior to introducing the 1998 Ford Explorer. Table 1 shows they conducted 8 developmental and 2 certification rear impact tests from 1992-1994 with the 1995-1996 Explorer. The developmental tests were offset impacts (6 at 50 mph, 1 at 17.3 mph and 1 at an unknown speed) by a passenger car and 2 certification tests were NCAP tests at 35 mph with a rigid barrier. The tests show that the Explorer has excellent crashworthiness of vehicle structures and components.

Table 1: "Due care" rear impact tests with the Ford Explorer.

Crash tests	Vehicle	Offset	Impact speed (mph)	Calcul. Delta V (mph)	Striking vehicle	Date	Front Occupants	Rear Occupants
8385	1995 Explorer (4 x 4) 4-door wagon	50%	UNK		1992 Sable 4 door	4/29/1992	Water bottles	
8428	1995.25 Explorer (4 x 4) 4-door	50%	50.5		1992 Taurus 4-door	5/28/1992	Water bottles	
8454	1995 Explorer (4 x 4) 4-door wagon	50%	50.3		1992 Sable 4 door	6/19/1992	Water bottles	Water bottle LR
8874	1996 Explorer (4 x 2) 2-door wagon	50%	49.8		1992 Taurus 4-door	4/13/1993	Water bottles	Water bottles
9108	199X Explorer (4 x 2) 2-door wagon - production modified prototype	50%	50.3		1992 Taurus 4-door	11/15/1993	Water bottles	Water bottles
9146	1995.25 Explorer (4 x 4) 2-door wagon	50%	50.3	22.4	1990 Taurus 4-door*	12/11/1993	HII	
9176	1995.25 Explorer (4 x 2) 2-door wagon - conformation prototype	50%	17.3**		1991 Sable 4-door	12/31/1993	HII	
9218	1995.25 Explorer (4 x 2) 4-door wagon - conformation prototype	50%	50.1	22.2	1992 Taurus 4-door	1/25/1994	HII	Water bottles
9240	1995.25 Explorer (4 x 2) 4-door wagon - certification program, conformation prototype	0%	34.4	16.8	Barrier	2/7/1994	HII	
9250	1995 Explorer 2-door wagon - certification program, conformation prototype	0%	35.1	17.7	Barrier	2/14/1994	HII	Water bottle RR

*1992 on video, **Error in test speed

FMVSS 301 assesses fuel system integrity. It originally consisted of a 30 mph rear impact test with a 4,000 lb rigid moving barrier. FMVSS 301 was revised in 2003 by implementing a more severe offset test using a lighter moving deformable barrier (3,015 lb), but at a higher test speed of 50 mph and a 70% offset (NHTSA 2003). The revised standard was phased-in over a three year period beginning September 1, 2006, according to the following production percentages: 40%, 70%, and 100%. Vehicles manufactured after September 1, 2008 had to comply.

The revised FMVSS 301 has higher kinetic energy than the original standard and the offset loading of the rear structures caused more vehicle deformation due to asymmetric loading in the rear. The average delta V in a series of tests conducted for NHTSA was 27 ± 3 mph (Viano et al. 2008). The left rear structures of Mr. [redacted] 1998 Ford Explorer withstood substantial forces during the offset, rear crash. Occupant compartment integrity was maintained with minimal intrusion.

The revised FMVSS 301 standard uses 50th percentile male dummies in the driver and right-front passenger seats. Dummy instrumentation is not required and no biomechanical criteria are included. A 50th male Hybrid II dummy was placed in the driver and passenger seats in 3 of Ford's offset tests (9146, 9176 and 9218) and in the 2 NCAP tests. However, there were no photos or videos produced in test 9176 due to an error with the impact speed. Biomechanical responses in the Ford offset developmental tests were not measured. Occupant kinematics was assessed by reviewing videos and photos. Figures 1 shows the dummy position after the offset crash tests. The front, belted dummies remained in their seats after the crash.

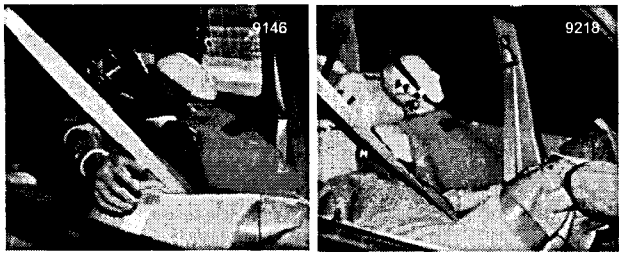

Figure 1: Post-crash dummy position in test 9146 with 22.4 mph delta V and test 9218 with 22.2 mph delta V.

27) Mr. [redacted] claims that Ms. [redacted]' ejection risk would not have been reduced had she worn her seatbelt (Pozzi depo P39, L9). Mr. [redacted] is incorrect. Numerous studies have shown significant seatbelt effectiveness in all crash types in preventing ejection from a vehicle. Hartemann et al. (1977) carried out a matched-pair analysis and estimated that seatbelts reduced crash fatalities by 23% solely by mitigating ejection. Huelke (1966) investigated fatal crashes and determined that 80% of ejections could have been prevented with the use of seatbelt.

According to Evans (1991), seatbelt effectiveness in preventing fatal injury of the driver is 77 ± 6% in rollovers, 49 ± 14% in rear impacts, 43 ± 8% in frontal impacts, 39 ± 15% in far-side impacts and 27 ± 17% in near-side impacts. Seatbelt effectiveness in preventing ejection varied from 8 ± 1% in near-side impacts to 63 ± 1% in rollovers with 22 ± 1% in rear impacts.

Viano, Parenteau (2010, in press) analyzed tow-away crashes in NASS-CDS 1993-2007 and found that the risk for complete ejection was 2.69% ± 1.53% for unbelted occupants in rear impacts and 0.0032% ± 0.0026% for lap-shoulder belted occupants. Ejection was >800 times more likely with unbelted than belted occupants in rear impacts. Belted occupants were least likely to be completely ejected in rear impacts than in other crash modes.

28) Electronic cases were reviewed involving serious-to-fatal injury (MAIS 3+F) with complete ejection in rear impacts (Viano, Parenteau 2010, in press). Vehicle kinematics and occupant location were obtained from the crash scene diagrams and narratives. There were two belted cases involving complete ejection. One was in a convertible with an open top and another involved ejection out a door opened by severe crash deformation from the impacting Freightliner. Review of the cases indicated that both ejections occurred during vehicle yaw after the rear impact.

There were 14 unbelted cases. Half of the collisions involved three of more impacts in the crash sequence; there were only two cases of a single impact accident. The most serious injury was caused by ground contact in 8 (57%) of the cases. Four of 14 cases involved 2nd row occupants. Half of the ejections were judged to have occurred during vehicle yaw motion after the rear impact. Ms. [redacted] was completely ejected. It is unlikely that she was belted.

29) Seatbelts and yielding seats are also effective in preventing ramping. Saunders et al. (2003) at NHTSA reviewed a series of FMVSS 301 crash tests of 2002 model year vehicles with instrumented 50th percentile male Hybrid III dummies. The videos were analyzed and "showed no noticeable translation of the dummy up the seatback (ramping) for the vehicles tested, even for the seat that collapsed."

Mr. [redacted]i is mistaken when stating that seatbelts are not helpful in rear impacts (Pozzi's depo P42, L11). Strother, James (1987) found that seatbelts were beneficial in rear impacts by 1) controlling or eliminating ramping up the seatback, 2) reducing the velocity of the occupant relative to the vehicle interior, 3) minimizing the potential for occupants to be out-of position at impact and 4) controlling forward rebound. These findings are consistent with later studies (James et al. 1991, Warner et al. 1991).

30) Mr. [redacted] referred to the Schnaibel vs. Chrysler case in his deposition. He claims that Mr. [redacted] was 90% ejected and that his belt was found around his ankles. Mr. [redacted] is incorrect. Mr. [redacted]

vehicle was involved in rear and front impacts. He was listed as non-ejected in the police report. Mr. [redacted] post-crash location was ambiguous. EMS found Mr. [redacted] in the driver's seat at arrival. There was no indication of a nearly complete ejection. There was no documentation of Mr. [redacted] seatbelt location in the case material reviewed. He was in a rear and then front impact and rebounded back into his seat. He was not 90% ejected.

31) Plaintiffs carried out 3 rear impact tests at KARCO Engineering involving a 50th Hybrid III driver (186 lb) and right-front passenger (154 lb) in a stiff reinforced Explorer seat (test 1) and in a yielding 1998 Explorer seat (test 2) and a 1997 Explorer seat (test 3). The dummies were unbelted in tests 1 and 2, and they were lap-shoulder belted in test 3. The delta V was 25.5 mph in test 1, 26.4 mph in test 2 and 28.5 mph in test 3. Test 3 used 1997 Explorer seats, which are a different design from the 1998 Explorer seats in the Bagg-Marsters' vehicle.

Table 2 summarizes peak occupant responses. For the right-front passenger, the peak chest response was highest in test 1 at 42% of IARV (Mertz et al. 2003). The highest response for test 3 was HIC at 52% of IARV. The head acceleration peaked at 163 ms. The peak neck flexion was high in test 3 at 11% of IARV and was only 14% higher than in test 1. Test 3 involved 25% more energy than test 1.

Table 2: Peak occupant responses in KARCO sled test series P26199.

Vehicle: 1999 Ford Explorer
KARCO series: P26199
Buck mounted 170 degrees to the path of travel with 5 degrees pitch nose down.

Occ	Test #	Weight	Explorer Seat	Delta V (mph) Tunnel	Delta V (mph) Sled	Upper Neck Ant. Shear (N)	Upper Neck Post. Shear (N)	Upper Neck Tension Fz (N)	Upper Neck Comp. Fz (N)	Upper Neck Flexion My (Nm)	Upper Neck Extension My (Nm)	Head Peak g	Head HIC36	Chest Peak g	Chest 3ms
D - 50th - unbelted	1	186	98 reinforced	25.5	26.1	239	-181	699	-457	9	-12	36	170	23.1*	22.7*
P - 50th - unbelted	1	154	98 reinforced	25.5	26.1	212	-142	522	-444	19	-8	39	195	25.6	25.3
D - 50th - unbelted	2	186	98 OEM	26.4	27.2	202	-95	2270	-468	8	-3	75.2**	573.1**	26.2***	25.3***
P - 50th - unbelted	2	154	98 OEM	26.4	27.2	445	-73	1806	-464	20	-22	55	409	19.5	19.1
D - 50th - Belted	3	186	97 OEM	28.5	28.1	250	-104	1810	-791	11	-2	106	665	23.5	22.5
P - 50th - Belted	3	154	97 OEM	28.5	28.1	607	-83	1792	-1312	22	-39	61	517	22.6	22.1
			IARVs (SAE 2003-22-0009)			3100	-3100	4170	-4000	190	-96	180	1000	60	60
						% IARV									
D - 50th - unbelted	1	186	98 reinforced	25.5	26.1	8%	6%	17%	11%	5%	12%	20%	17%	39%	38%
P - 50th - unbelted	1	154	98 reinforced	25.5	26.1	7%	5%	13%	11%	10%	9%	22%	19%	43%	42%
D - 50th - unbelted	2	186	98 OEM	26.4	27.2	7%	3%	54%	12%	4%	3%	42%	57%	44%	42%
P - 50th - unbelted	2	154	98 OEM	26.4	27.2	14%	2%	43%	12%	11%	22%	31%	41%	33%	32%
D - 50th - Belted	3	186	97 OEM	28.5	28.1	8%	3%	43%	20%	6%	2%	59%	66%	39%	38%
P - 50th - Belted	3	154	97 OEM	28.5	28.1	20%	3%	43%	33%	11%	41%	34%	52%	38%	37%

* Failed channel at 230 ms, ** Failed channel at 250 ms, *** Failed channel at 200 ms

32) Test 1 videos were reviewed with the rigidized seats. The right-front passenger moved rearward during the rear impact and loaded the seat. The passenger then rebounded forward. The dummy's head was near the windshield, which was removed prior to the test, so head to windshield impact could not be recorded.

Figure 2 illustrates the right passenger rebound position in test 1. Field accident studies and crash tests over the last forty years have shown that rebound movement after a rear impact is associated with injuries by contact with the frontal interior (Schwimmer, Wolf 1961, Severy et al. 1967, Partyka 1992, Prasad et al. 1997). Figure 2 also highlights the potential of being out-of-position prior to airbag deployment in frontal crashes following a rear impact.

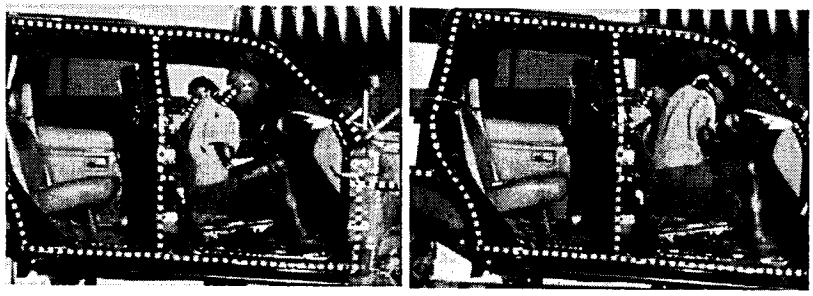

Figure 2: Right-front passenger movement on rebound in test 1.

33) Seat strength in the three KARCO tests was different. According to Roger Burnett in Lloyd, the 1998-2001 4-door Explorer shares the same platform as the 1998-2000 2-door Explorer and the 1998-2001 Mercury Mountaineer. The platform is referred to as UN150. The 2001, 2-door Explorer is referred to as U207.

Seat strength for the UN150 platform is 13,000-15,000 inlb and the seat strength for the U207 is 14,000-16,000 inlb. The 1995-1997 Ford Explorers and the 1997 Mercury Mountaineers have the UN105 platform with a seat-strength of 12,000-13,000 inlb. The seat strength was 12,000-13,000 inlb in test 3 and 13,000-15,000 inlb in test 2. The seat used for test 3 is not representative of Mr. [redacted] vehicle.

Mr. [redacted] 1998 Ford Explorer was involved in a prior crash in April 1999. The influence of the prior crash on the crashworthiness of the vehicle, seats and components is uncertain. Production seats in the 1998 Ford Explorer have strength of approximately 13,000-15,000 inlb.

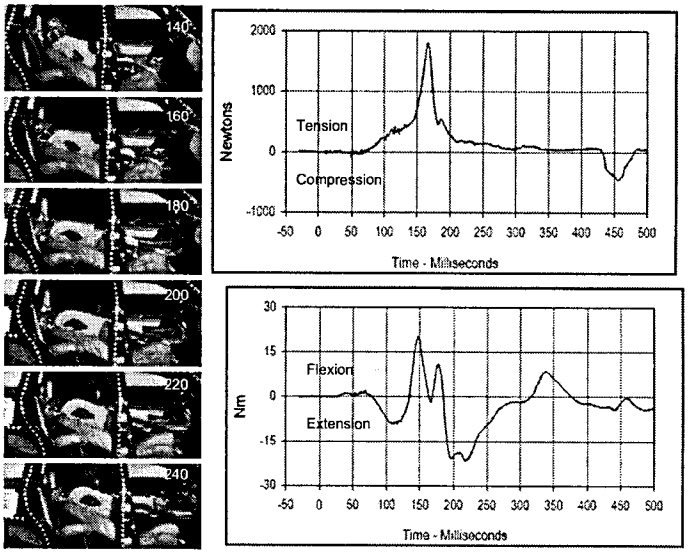

Figure 3: Test 2 upper neck responses during rear loading; a roof impact at 533 ms is not shown.

34) Test 2 was carried out with a 1998 Ford Explorer seat and with an unbelted 50th male Hybrid III right-front passenger dummy weighing 154 lb. The delta V was 26.4 mph at the tunnel. According to Mr. Mercaldi, the delta V for the Explorer in the [redacted] rear crash was about 20-25 mph. Test 2 of the KARCO series P26199 is the most interesting with regard to the Bagg-Marsters crash.

A review of the test video indicates that the right-front passenger moved rearward and loaded the seat. The seatback rotated and the passenger neck was in tension throughout the rear load. There was a glancing head contact with the 2nd row but the neck load remained in tension. The dummy then rebounded up and forward. The dummy's head contacted the roof at about 560 msec. The data was

available for 500 ms, so the head to roof contact cannot be seen in the plot. Test 2 illustrates the potential for rebound injuries for unbelted occupants in rear impacts.

The KARCO tests involved 5 deg pitch of the buck, but do not simulate the dynamic under-ride of the [redacted] crash. The rear impact lifted the back of the occupant compartment. This caused the seat cushions to be lifted up compressing the occupants into the seat. This increased retention of the occupants on their seats.

35) Ford ran a rear sled test with a 149 lb, 5th female Hybrid III dummy in a 1998 Explorer buck (S2011). The 25 mph delta V is at the upper end of the severity range in Ms [redacted] crash. Figure 4 shows the lower neck responses and occupant kinematics at 160-220 ms. This time-period includes head contact on the 2nd row seatback. The neck is in tension and extension until contact with the 2nd row. The peak neck compression force was 350 lb with a flexion moment of about 250 inlb. The responses are below injury thresholds.

Since Ms. [redacted]' crash involved under-ride and lift of the rear of the Explorer, her motion would be been reduced by her being forced down into the seat cushion. She was unbelted but belt loads were not substantial in test S2011 because the seat provided most of the restraint. Ms. [redacted] is taller than the 5th female Hybrid III. The clockwise yaw from the rear impact would have Ms. [redacted] moving to the right against the door assuming an initially normal seated position. If she was leaning to the right or left, or out of position, her kinematics and interaction with the seat would be different than the crash testing with dummies normally seated.

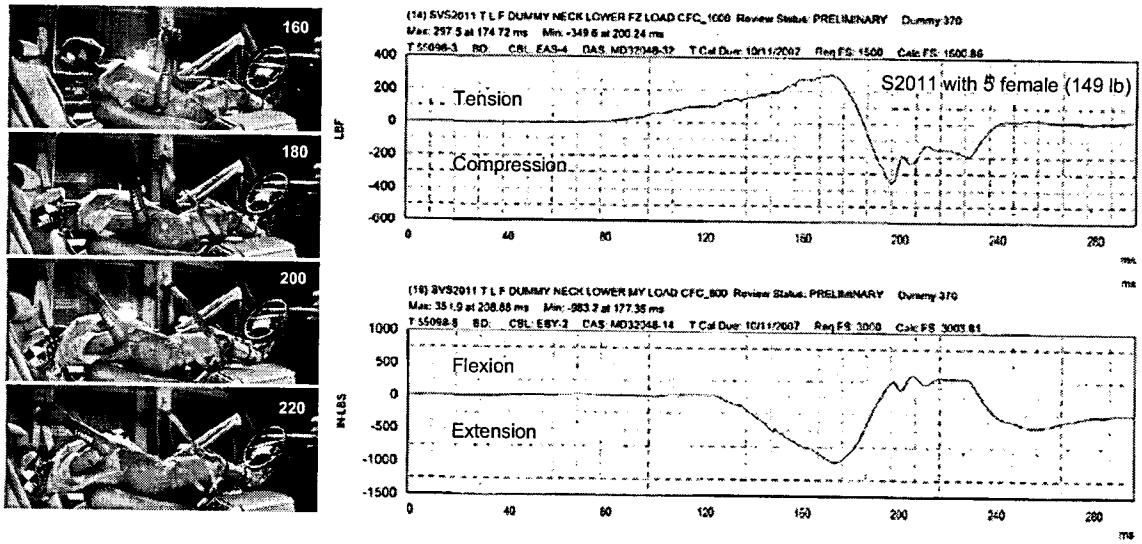

Figure 4: Lower neck responses in 25 mph rear sled test with a 1998 Ford Explorer and a 149 lb, 5th female Hybrid III dummy (S2011).

36) Ford ran 3 rear sled tests with the 2000 Explorer at a 25 mph rear delta V using a belted 50th Hybrid III dummy (H25843, H25844 and H25866). The normalized HIC averaged 20.5 ± 4.4% of IARV. The normalized neck compression force averaged 42.3 ± 14.3% in the upper neck and 39.0 ± 8.5% in the lower neck. The injury reference values used for normalizing the data was 899 lb for upper and lower neck compression (Mertz et al. 2003). The average normalized flexion moment was 6.1 ± 2% in the upper neck and 9.1 ± 10.2% in the lower neck.

Figure 5 shows the lower neck force and moment as a function of time for test H25886. The response is similar to what was found in Figure 4 with the 5th female Hybrid III. Dr. Benda claims that a force of 1100 lb is required to cause the burst fracture at T3-T4 thoracic spine of Ms. [redacted]. No reference is given for the tolerance level; however, the data from the Ford 5th female Hybrid III test (S2011) and Ford 50th

male Hybrid III tests (H25843, H25844 and H25866) were well below 1100 lb. The KARCO P26199 test 2 involved only tension on the spine during the rear loading.

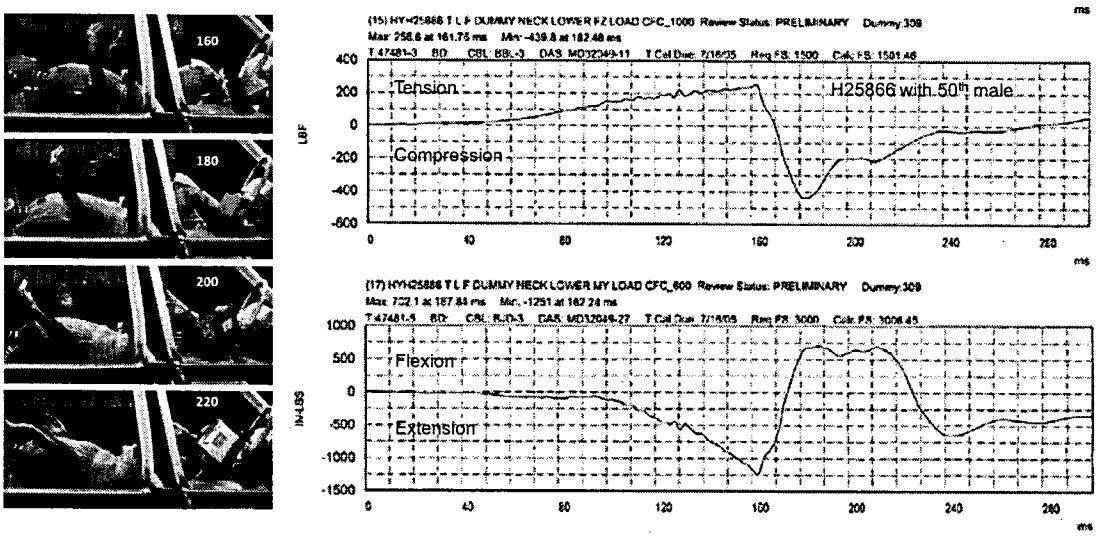

Figure 5: Lower neck responses for the left-front dummy in test H25886 with 25 mph rear delta V.

37) The most relevant injury criteria for human neck injury in automotive crashes were published by Mertz et al. (2003). This comprehensive work includes neck tolerances for serious cervical injury based on biomechanical data. Table 3 lists the upper and lower neck tolerances for AIS 3+ injury for the 5th female, 50th male and 95th male.

Table 3: Neck tolerances (Mertz et al. 2003).

	5% Female	50% Male	95% Male
Neck			
Tension (lb)	465	739	892
Compression (lb)	566	899	1,085
Upper Neck			
Flexion (inlb)	840	1,681	2,229
Extension (inlb)	345	690	911
Lower Neck			
Flexion (inlb)	1,681	3,361	4,458
Extension (inlb)	690	1,380	1,822

38) Dr. Benda opines that Ms. [redacted]' spine injuries are the result of head, neck and shoulder loading of the 2nd row while she was in a "chin to chest posture." This opinion is not supported by the plaintiffs' tests or the Ford's tests. The 1998 Explorer seat is reasonably strong and causes neck extension as the seat yields rearward. This results in the top of the head and then forehead interacting with the 2nd row seatback, as shown in Figure 4. The neck compresses and the lower neck loading shifts from extension to flexion. However, the head-neck appears to remain in an extended position. There is no chin to chest kinematic. There is no shoulder loading compressing the spine. In KARCO test 2, only neck tension is seen.

The head to 2nd row seatback impacts in the Ford tests with the 5th and 50th Hybrid III dummies resulted in a relatively long duration compression force. This is consistent with a head impact into a padded surface without a risk for serious head, neck or spine injury.

39) Ms. [redacted] sustained a comminuted non-displaced fracture of C1 right inferior facet, C7, T1 and T2 comminuted and displaced fractures of the spinous processes, and burst fractures of T3 and T4 vertebral bodies with distraction, retropulsion of bone fragments into central canal. The lower cervical injuries are consistent with flexion-compression with a head impact and shoulder loading. However, shoulder loading does not occur with the neck extended as demonstrated in the KARCO and Ford tests. Also, head loading of soft 2nd row seatback padding as seen in the Ford tests would not be associated with the brain injuries Ms. [redacted] experienced.

Her spinal injuries are more consistent with a fall injury. McElhaney, Myers. (1993) reported a similar injury pattern in a motorcycle rider who was ejected 50 feet on the ground at 30 mph. The testing by Ford shows neck extension at contact with the 2nd row. This would not be consistent with the cervical and thoracic spine fractures of Ms. [redacted].

Yoganandan et al. (1989) found a strong association between craniofacial trauma and serious injury of the cervical (70%) or thoracolumbar (57%) spine. Ms. [redacted] spinal injuries are consistent with facial, head and other injuries associated with a ground impact.

40) Ms. [redacted] spinal injuries are comparable to fall injuries (Richter et al. 1996, Moeller et al. 1997, Lau et al. 1998, Türk et al. 2004, Yagmur, 20004). Richter et al. (1996) reviewed medical records of fall victims from suicide and accidents. Table 4 shows that fractures of the thoracic and lumbar spine were most common (83.0%). Similarly, Moeller et al. (1997) reported that spinal injuries most often (>66%) consisted of compression and bursting vertebral fractures of the thoracolumbar spine.

Table 4: Fall injuries described by Richter et al. (1996), Table III.

Table III. Number of injuries after intentional and accidental falls

	Suicide (N = 39)	*Accident (N = 62)*	*All (N = 101)*
Head	12 (30.8%)	15 (24.2%)	27 (26.7%)
Spine	35 (89.8%)	49 (79.0%)	84 (83.0%)
Cervical	2 (5.1%)	5 (8.0%)	7 (6.9%)
Thoracic	13 (33.3%)	21 (33.9%)	34 (33.9%)
Lumbar	32 (82.0%)	35 (56.5%)	67 (66.3%)
Thoracic	10 (25.6%)	11 (17.7%)	21 (20.8%)
Abdominal	3 (7.7%)	3 (4.8%)	6 (5.9%)
Pelvis fracture	9 (23.1%)	9 (14.5%)	18 (17.8%)
Arms	8 (20.5%)	17 (27.4%)	25 (24.8%)
Legs	21 (53.8%)	24 (38.7%)	45 (44.6%)

41) Ms. [redacted]' thoracic spine injuries are consistent with a head impact with little or no padding. Yoganandan et al. (1986), Sances et al. (1986) and Nusholtz et al. (1983) carried out inverted drop tests on the heads of post-mortem human subjects. Nusholtz et al. (1981), Alem et al. (1984) and Culver et al. (1978) carried out pendulum tests on the head of post-mortem human subjects.

The test data was recently analyzed by Viano, Parenteau (2009). Thoracic spine fractures occurred in a number of the tests with different alignments of the head, neck and torso with the impact axis and thin padding on the impactor (Appendices A and B). For the drop tests, spinal fractures occurred from a height of 4.0 ± 0.9 feet and impact velocity of 10.9 ± 1.2 mph. The impact force averaged 1,982 ± 845 lb. For the pendulum impact tests, spinal fractures occurred with an impact velocity of 18.5 ± 4.9 mph and force of 1,797 ± 484 lb.

42) Ms. [redacted]' spine and other injuries are the result of ejection and ground impact. Huelke et al. (1981) found that severe neck injuries 21.4 times higher when ejected than non-ejected. They also noted that severe neck injuries were rare in vehicles struck in the rear. These results are consistent with a more recent study. Viano, Parenteau (2010, in press) found that the risk for serious spinal injury was 41 times higher when an occupant was ejected than non-ejected for all crashes and 28 times greater in rear impacts.

43) Dr. Benda opines that Ms. [redacted] was in the 2nd row and was likely ejected after the tripping phase of the rollover. Dr. Benda opinion is not consistent with the facts. While the vehicle trips its motion is towards the tree and there is little yaw. Ejection of Ms Marsters from a side window or sunroof would have her motion towards the tree, not the road. This would be inconsistent with Mr. Valente's rest position for Ms. [redacted] that Dr. Benda relies upon.

The possibility of Ms. [redacted]' ejecting during the clockwise rotation of the Explorer during the tree impact was reconsidered. If Ms. [redacted] was in the rear area of the vehicle, ejection toward the road could be possible. For this scenario #4, the ejection distance would be about 30' with a tumble distance to reach the rest position at 42'. The vehicle's translational motion would have been essentially stopped by the tree as it rotated clockwise around it. Ms. [redacted]' ejection velocity would have to be from vehicle rotation (pitch rotation around the tree). Assuming 7.5' from the center of rotation to the exit point from the rear hatch, vehicle rotation would have to be about 300 deg/s to have an ejection velocity of 25 mph for one ejection calculation that is consistent with the rest position of Ms. [redacted]. However, Ms. [redacted] had no burns and this scenario would have involved ejection from an area of the vehicle in fire.

If Ms. [redacted] was ejected from the rear hatch during rotation around the tree, she would have experienced the forces of the tree impact before ejection. Impact with the tree was at 30-35 mph with the vehicle at more than 90 deg roll angle and first contact with the driver's side roof rail. Ms. [redacted] would have to be in the 2nd row or rear cargo area at the time of impact with the tree and she would have a severe impact with the roof area, since the delta V of the roof impact was more than 30 mph. Some of Ms. [redacted]' spinal and other injuries could have occurred during the tree impact, prior to ejection from the rear hatch in this scenario.

44) Other ejection scenarios were considered. Scenario #1 would be ejection from the driver-side windows at about 131' from her rest position. Scenario #2 would be from the rear hatch at about 110' from her rest position. Both of these scenarios seem to involve too great distances from the rest position of Ms Marsters. The ejection velocities would be 49-52 mph using ejection calculations based on several assumptions.

Scenario #3 was discussed in my original report and would involve a distance of about 67' to the rest position of Ms. [redacted]. Several different ejection calculations were made by changing the upward trajectory at ejection. With a greater angle, the ejection velocity ranged from 30-42 mph and involved a vertical impact velocity of 11-13 mph on the road. Scenario #3 still seems to be the most reasonable in this crash and Ms. [redacted]' injuries are consistent with a fall onto the road.

45) MGA carried out of series of FMVSS 207 tests with 1999 Sport Utility vehicle seats and with a 2000 Ford Explorer seat. The tests were sponsored by Ford. Table 5 summarizes the peak loads. The highest load was with the 2000 Ford Explorer seat at 1102 lb indicating that the seat strength of the Bagg-[redacted]' Explorer exceeds that of other SUVs.

Table 5: Seat strength data from FMVSS 207 testing.

MGA	Seat	Max. load (lb)
SC6250	1999 Isuzu Trooper	701
SC6251	1999 Dodge Durango	891
SC6252	1999 Mitsubishi Montero	912
SC6249	1999 Toyota 4-Runner	1049
SC4283	2000 Ford Explorer	1102

46) NHTSA and the automotive manufacturers have studied seat performance in rear crashes for more than four decades and concluded that yielding seats offer a balance of occupant protection in all crashes. Neither NHTSA nor the automotive manufactures have ignored the issues presented by plaintiff experts calling for more rigid front seats (see Lloyd report).

The studies by NHTSA have led them to the conclusion that seat performance is complex and that increasing seatback strength is only one consideration for occupant safety in rear impacts. The automotive industry has also conducted in-depth studies and investigated real-world crashes. They have concluded that the use of yielding seats is fundamental to occupant protection and that making front seats more rigid may increase harm to the motoring public in some crashes (Viano 2008, Viano et al. 2009).

For optimal front-seat occupant protection in rear impacts, the seat needs to provide energy management, containment and occupant restraint in low-to-high-speed crashes. In low-speed crashes, the seat and head restraint need to control head and neck kinematics to lower whiplash risks for all occupants.

Yielding seats are also needed to protect older occupants with spinal stenosis from disabling spinal cord injury in low-speed rear impacts. Low-speed rear crashes involve long duration loading of the neck that can injure the spinal cord in older occupants with stenosis. This represents 14% of severe injury in rear crashes. More rigid seats increase the risks for paralysis in those with spinal degeneration (Viano, Parenteau 2009).

Rear impact protection is complex and depends on many independent aspects of occupant safety, such as crash severity, injury mechanisms, restraint systems (e.g., head restraint height and gap, seatbelt systems, airbags and seat design), occupant biometrics (e.g., age, gender, height, weight, medical history), occupant seating position, other occupants in the vehicle and type of crash (e.g., single- or multi-vehicle impacts).

47) The design of automotive seats has evolved as better understandings of crash injuries and safety performance have been reached (Anderson 1961, Prasad et al. 1997, Burnett et al. 2004, Viano 2008). NHTSA has primary regulatory responsibility over automotive seats, which are specified in FMVSS 207. Since the 1960s, NHTSA has undergone regular study of seat performance in rear crashes and considered standards specifying seat safety requirements.

48) Viano, Parenteau (2008) studied frontal impact cases with MAIS 3+F injury to the head or spine of 2nd row seated child. Children were most commonly injured by contact with the seatback, B-pillar or other structures in front of them, even when lap-shoulder belted. Most severe-to-fatal injury occurred in rear crashes where intrusion caused the injury or the intrusion pushed the child into a relatively upright front seatback. Improvements in child safety in the 2nd row were discussed but stiffening the front seats was not recommended.

49) Exponent Failure Analysis (2002) carried out a 33.5 mph frontal sled test with an unbelted 6 year old child dummy seated behind a BMW ABTS seat. Figure 6 shows the head impact, which resulted in a head response (HIC = 5303) that was 733% above the IARV for the child. The HIC level is consistent with an extremely high risk of fatal head injury by contact with a stiff front seatback. The compression-flexion neck response was 256% above the IARV. Accident data and test findings suggest that more rigid front seats are not a reasonable approach to improving safety of 2nd row seated children in more frequent frontal crashes.

Figure 6: Unbelted 6 year old child dummy seated behind a BMW ABTS seat in a frontal impact.

50) NASS-CDS electronic cases were reviewed for injury to adults seated in the 2nd row in rear impacts (Lloyd v. Ford). There was only one case with a moderately injured 2nd row adult in a Ford Explorer. The

case (1999-78-18J) involved a 1998 Ford Explorer and a 67 year old female seated behind an unoccupied right-front seat. The Explorer sustained a severe rear impact, yawed and departed the road.

Figure 7 shows the vehicle damage and contact marks on the passenger seatback. The right 2nd row adult was pushed forward by the rear intrusion. She contacted the back of the passenger seat and sustained a rib fracture, an orbital fracture and other injuries. The passenger seatback yielded forward. Her injuries would have been more severe had she been sitting behind a more rigid front seat.

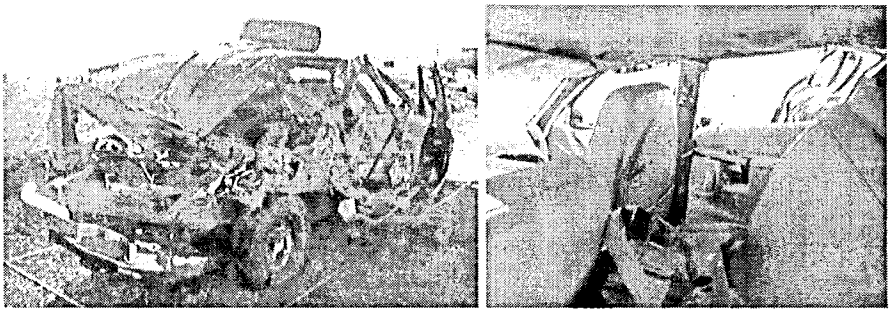

Figure 7: Vehicle deformation, intrusion and contact marks (Case 1999-78-18J).

51) Partyka (1990) found that seatbelts prevent front-seat occupants from rebounding into front interior components. Digges et al. (1993) found that non-contact injuries were most harmful in rear impact and that contact injuries were most commonly attributed to the seat and frontal components. More than half of the occupants in severe rear crashes received injuries from frontal contacts, and some were in seats that did not deform during the crash.

52) CRA (Collision Research and Analysis) impacted a yielding and more rigid (stiff) seat to demonstrate the effect of energy stored in the stiff seat being returned to the occupant as rebound velocity. In the tests, a weight is dropped onto the seatback. The photos in Figure 8 are aligned horizontally to simulate the direction of occupant loading in a rear impact. The yielding seat deforms and absorbs energy. The more rigid seat deforms but springs back throwing the weight back with rebound velocity.

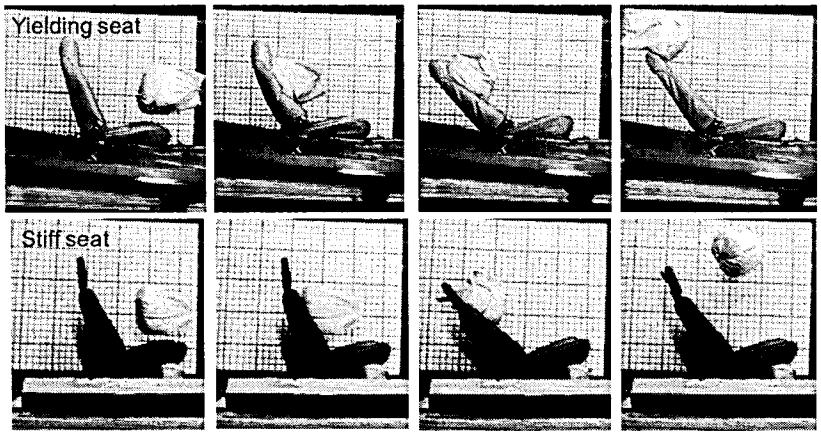

Figure 8: Energy absorbed by a yielding seat and elastic rebound with a more rigid seat.

53) Rebound was compared with a 5th female Hybrid III leaning in-board on a rigid ABTS and yielding seat (Viano et al. 2009). Figure 9 shows that rebound was greater and earlier with the more rigid seat than with the yielding seat. Ford also carried out rear impact sled tests that compare rebound of a 50th male Hybrid III on ABTS and yielding seats. Figure 10 shows earlier and increased rebound with the ABTS seat than the yielding seat.

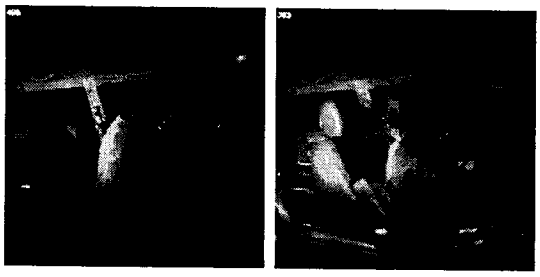

Figure 9: Greater rebound in the Sebring ABTS (right test #S1704) compared to the Ford Explorer (left test #S1703) sled tests (Viano et al. 2009).

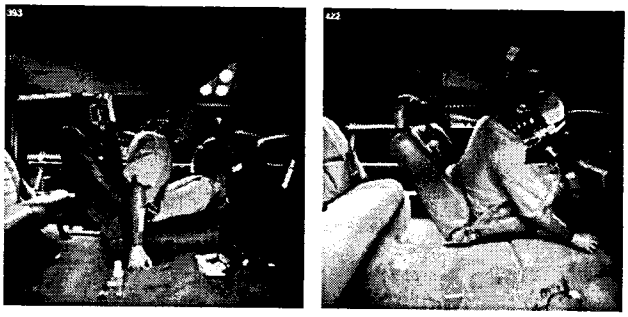

Figure 10: Greater rebound with the LeSabre ABTS (right test #H29744) compared to the Ford Explorer (left test #H29743) at 16 mph.

54) Ford carried out a 29 mph rear impact sled test with a 300 lb unbelted 95th male right-front passenger dummy in a LeSabre ABTS seat (test H29799). Figure 11 shows the kinematics of the occupant's upper body moving rearward and inboard of the passenger seat frame (100-200 ms). This caused the upper body to wrap around the seat frame, which twisted inboard. The dummy's head contacted the 2nd row at about 200 ms.

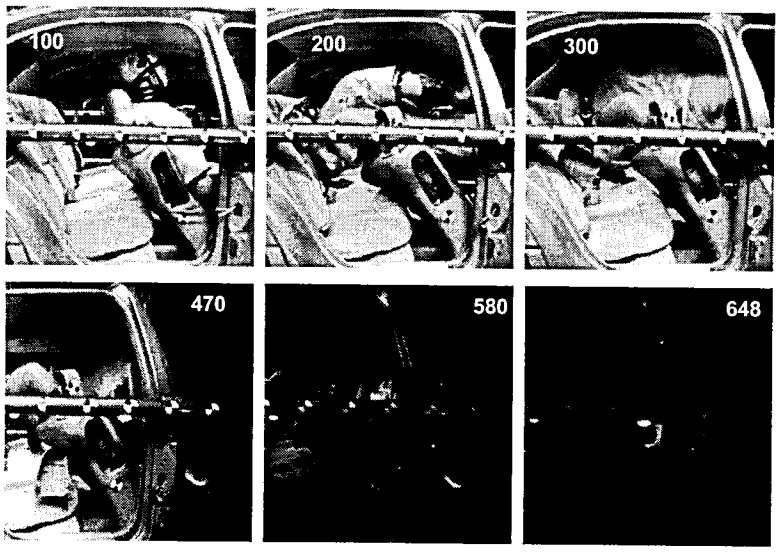

Figure 11: Dummy kinematics and rebound in sled test H29799.

55) Mr. [redacted] often discusses the risk of injury in rear impacts using test data from vehicles of 1970-1980's; however focusing on vehicles of that era is mis-leading. Ms. [redacted] was involved in a crash in a 1998 Ford Explorer. There have been incremental improvements in vehicle structures and seats over

the past 30-40 years. The performance of seats and seatbelts in vehicles from 1979-1980 would not be representative of those used in the 1998 Ford Explorer. Seat and belt system designs, vehicle and interior components and testing have advanced.

Mr. [redacted] also refers to the older tests as showing seatbelts are ineffective in restraining occupants in rear impacts. Sled and crash testing indicates that the lap belt minimizes rear excursion of the dummy and compliments the restraint provided by the seat. Lap-shoulder belts minimize forward excursion of the dummy during rebound. However, the sled and crash tests do not reflect the full effectiveness of seatbelts in preventing injury in rear impacts. The extensive field data is the most objective data on the effectiveness of seatbelts in rear crashes.

56) Prasad et al. (1997) have investigated the effect of the standing (pedestrian) and standard seated pelvises and found no differences in occupant responses in rear impact testing. Testing with the standard pelvis and the field accident data confirm the effectiveness of seatbelt use in rear impacts. Mr. [redacted] often refers to KARCO testing as showing differences with the standing and seated pelvises. A review of the available KARCO tests found only two matched tests. The tests show virtually identical occupant kinematics with the standing and seated pelvises. It is unclear what testing supports Mr. [redacted] comment. In addition, recent matched tests carried out with a Hybrid III dummy fit with a pedestrian or seated pelvis show essentially no difference in dummy responses in the 25 mph rear delta V tests.

The findings and opinions in this supplemental report are offered to a reasonable degree of biomechanical, engineering and medical certainty based on the materials reviewed and analysis of facts to date. I reserve the right to further refine my opinions as additional information, activities and materials provide new facts and evidence. I also reserve the right to amend my initial and supplemental reports and to further rebut statements and conclusions in reports of plaintiff's experts. My billing rate for the work performed is $450/hr.

Sincerely,

D Viano

David C Viano, Dr. med., Ph.D.

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Appendix A: Cadaver drop test results summarized by Viano, Parenteau (2009).

Test No	Cadaver #	Padding (cm)	Impact location	Initial Condition	Drop Height (m)	Impact Velocity (m/s)	Head Velocity (m/s)	Impact Force (N)	Serious Injury	Some Pathology Information
Nusholtz et al. (1983)										
82L484	1	0.6		Constrained	1.0	4.4	5.4	6,700	Yes	T3 fx - Flexion-Compression Type.
82L485	2	2.5		Constrained	1.8	5.9	7.2		Yes	C1, C3-C4 fx laminae, C2-C5 fx. T1, T3, T4 - fracture of laminae, T2 - Fractured body
82L499	6	2.5		Unconstrained	0.9	4.2	4.3	3,200	Yes	C5-C7 disc rupture, T2 fx - Flexion-Compression Type.
82L500	7	2.5		Constrained	1.5	5.4	6.6	10,800	Yes	C1 fx, cervical disc ruptures, T3 chip fx. Flexion-Compression Type.
82L501	8	2.5		Unconstrained	0.8	4.0	4.2	5,600	Yes	C7 fx. T1 - Compression of anterior superior body, T2 - compression of anterior body
Yoganandan et al. (1986) & Sances et al. (1986)										
834212763	HS76	0.0	5 cm posterior of vertex	Free	0.9	4.2	5.2	4,687	Yes	Posterior ligament disruption C5-C6, C6 disc rupture. Compression fracture of T7 and T10
834211753	HS75	0.0	2.5 cm posterior of vertex	Free	0.9	4.2	5.2	6,405	Yes	Linear parietal temporal skull fx. T4-T5 compression vertebral bodies, linear parietal temporal skull fracture
834225804	HS80	0.0	Occipital proturbance	Free	1.2	4.8	5.9	5,684	Yes	T7 wedge compression fx
834226814	HS81	0.0	10 cm posterior of vertex	Free	1.2	4.8	5.9	6,191	Yes	Disruption of posterior ligaments C6-C7
844247845	HS84	0.0	2.5 cm anterior of vertex	Free	1.5	5.4	6.6	7,185	Yes	Type I odontoid fx avulsion of posterior ligaments C1-C2. T7 mid compression fx.
844248855	HS85	0.0	1.5 cm posterior of vertex	Restrained	1.5	5.4	6.6	14,922	Yes	Bilateral basilar skull fx. T3 compression fx.
844250865	HS86	0.0	on vertex	Restrained	1.5	5.4	6.6	14,329	Yes	Jefferson fx. C1. T4 burst fx.
844279884	HS88	1.2	2.5 cm left of saggital plane & 4 cm posterior of vertex	Restrained	1.2	4.8	5.9		Yes	Right parietal skull fx into base. T1-T2 dislocation
844285894	HS89	1.2	3 cm posterior of vertex	Restrained	1.2	4.8	5.9	9,786	Yes	T6 compression fx
844290914	HS91	1.2	4-6 cm posterior of vertex	Restrained	1.2	4.8	5.9	11,560	Yes	C6 spinous process fx. T7 fx
844300924	HS92	1.2	on vertex	Restrained	1.2	4.8	5.9	12,840	Yes	C2 fx. T1 wedge fx
844314934	HS93	1.2	on vertex	Restrained	1.2	4.8	5.9	12,440	Yes	C3 spinous process fx. T8 compression fx
				Average	1.2	4.9	5.8	8,822		
				sd	0.3	0.5	0.8	3,761		

Appendix B: Cadaver head impact results summarized by Viano, Parenteau (2009).

Test No	Head Angle (°)	Neck Angle (°)	Torso Angle (°)	Mass (kg)	Stroke (cm)	Impact Velocity (m/s)	Head Velocity (m/s)	Impact Force (N)	Calculated Peak Resultant Acc (g)	Serious Injury	Some Pathology Information
Alem et al. (1984)											
H402		20		10	5.1	10.9	9.1	11,000		Yes	Bilateral fx. T2 lamina at base of spinous process
H403	100	25		10	5.1	10.9	8.1	10,500	160	Yes	Anerior-inferior chip fx. of C2. C3/C4 spinous process tip fx. Fracture of T2 left transverse process. Partial seperation of anterior longitudinal ligament at upper body of T2. All interspinal ligaments torn between T1-T2. Left first rib fractured adjacent to T1
H406	80	5		10	5.1	8.0	5.8	4,000	70	Yes	Bilateral fx.of posterior C1 arch. Fx. of C2 dens. Fracture of right lamina of C7. Fracture of anterior superior T1 body
H408	100	10		10	5.1	9.7	5.9	6,000	85	Yes	Bilateral fx. of C1 posterior arch, anterio-inferior C2 body fx. extending through C2-C3 disk. Anterior inferior C2 body fracture extending through C2-C3 disc. Compression fracture of upper body of T2. Compression fracture of lower body of T3.
Nusholtz et al. (1981)											
79L092	-45	10		56	3.0	5.6	6.7	6,200	302	Yes	‹ C7. Fx. T1 spinous proces
80L123	10	25	-22	56	0.0	5.7	6.3	6,000	116	Yes	Fx T2 - Flexion/compression
80L128	-30	10	-22	56	11.9	5.6	6.4	7,100	133	Yes	Fx T4 - Flexion/compression
80L134	-30	5	-15	56	17.8	5.6	6.3	11,100	217	Yes	Fx T3 Extension/compression
80L139	-10	25	-25	56	15.2	5.6	6.3	10,300	228	Yes	Fx T1 Flexion/compression
Culver et al. (1978)											
77H104				9.9	20.3	10.0	8.4	8,850		Yes	C5 & T1 fx, T2 crushed
77H105				9.9	20.3	9.6	5.9	7,450	57	Yes	C2 fx. T1 left facet crush.
78H107				9.9	10.2	10.2	8.3	8,450	106	Yes	C3-C4 fx. Chip fx. T2.
78H108				9.9	10.2	9.9	9.3	8,000	156	Yes	C1 fx, C2, C4, C7, T1, T2
78H109				9.9	10.2	8.4	7.9	7,030	122	Yes	C7, T1 fx
				Average	10.0	8.3	7.2	7,999	146.0		
				sd	6.5	2.2	1.3	2,155	72.0		

March 31, 2010

Subject: Second supplemental report in [redacted]

57) Mr. [redacted] opines that Ms. [redacted] was belted and slipped out of the lap-shoulder belt as the seatback rotated rearward >10 degrees. This view is inconsistent with more than forty years of rear crash testing and field accident experiences.

NHTSA (Partyka 1992) reviewed videos of 12 FMVSS 301 tests and found that seats and seatbelts were restraining the occupant. Furthermore, no ramping was observed. Viano et al (2008) investigated full-width rigid barrier and offset deformable barrier FMVSS 301 tests with belted and instrumented dummies in the front seats of model year 1979-2005 vehicles. The test videos were reviewed. The dummies were restrained by the seats supplemented by the safety belts. Occupant ramping was not observed.

Saunders et al. (2003) at NHTSA reviewed a series of FMVSS 301 crash tests of 2002 model year vehicles with instrumented 50th percentile male Hybrid III dummies. They analyzed videos and found "no noticeable translation of the dummy up the seatback (ramping) for the vehicles tested, even for the seat that collapsed."

Field accident data shows good performance of yielding seats with very low injury risks for AIS 4+F in rear crashes up to 30 mph delta V (Viano, Parenteau 2010). This recent analysis is consistent with earlier NHTSA work on the safety performance of yielding seats (Partyka 1992).

58) Mr. [redacted]i refers to rear crash tests carried out in the 1960's and 1970's. He comments about occupant kinematics in very old vehicles and seats. Focusing on vehicles of that era and alluding to "similar" circumstances in modern vehicles is mis-leading.

Ms. [redacted] was involved in a crash with a 1998 Ford Explorer. There have been incremental improvements in vehicle structures, seats and safety systems over the past years. The performance of seats and seatbelts in vehicles from 1960s-1980s is not representative of the safety performance of the 1998 Ford Explorer. Seat designs, belt system systems, vehicle structures and interior components have incrementally advanced as have the test methods and dummies used to evaluate product safety.

59) Mr. [redacted] claims that properly belted front seat occupants can eject from their seats and be completely or partially eject from the vehicle while the seatbelt remains latched. This comment is inconsistent with crash testing and field accident data, except in very rare circumstances.

Viano, Parenteau (2010b) found that complete ejection was >800 times more likely while unbelted than belted in rear impacts. They reviewed 16 NASS-CDS cases involving serious-to-fatal injury (MAIS 3+F) with complete ejection in rear impacts. There were 14 unbelted cases. Half of the collisions involved three of more impacts in the crash sequence; there were only two cases of a single impact accident. Four of the 14 unbelted cases involved 2nd row occupants.

There were only two belted cases involving complete ejection. One was in a Mercedes convertible with an open top and another involved ejection out a door deformed opened by an impacting Freightliner. These cases were unusual, multi-impact collisions with vehicle yaw allowing the occupant to move out a large opening in the vehicle.

Viano, Parenteau (2010b) also reported that the risk for partial ejection was lower in rear impacts than other crash modes.

60) Mr. Pozzi refers to the Carlson v Chrysler LLC, in the District Court of Lancaster County Nebraska Case No: 07-540. The case involved a 2004 PT Cruiser in a multi-impact collision and rollover. Ms. [redacted] was the right-front passenger and was listed as belted in the police report.

The [redacted] collision sequence was complex. It involved a frontal impact where the airbags and pretensioners deployed followed by a driver-side rollover. The vehicle pirouetted and sustained a rear impact while inverted on its roof. During the rollover, Ms. [redacted] was the far-side occupant. She moved up and outward by centrifugal forces. The rear impact to the roof caused her to move rearward loading the seatback, which remained upright. The seat and belts restrained her motion.

The impacts, rollover and centrifugal accelerations caused Ms. [redacted] head to partially eject out the broken 2nd row right window. Her head was against the roof rail while her torso motion continued upward, outward and rearward causing neck injury by torso augmentation. Partial ejection is uncommon in rear impacts, irrespective of belt use. Ms. [redacted] was unbelted and was completely ejected.

59) Mr. Pozzi implies that ejection of belted occupants in rear impacts is common. This implication is untrue and misleading. NHTSA (Parsyka 1992) reported that ejection was uncommon in rear impacts. They also found that ejection risks were similar with and without permanent seat deformation.

60) Mr. Pozzi implies belted occupants often slip out of their lap belts in rear impacts. This implication is untrue and misleading, even when plaintiff's own sled testing is examined.

A 28.6 mph delta V rear impact sled test was conducted at KARCO Engineering with a 50th Hybrid III belted driver (186 lb) and a 50th Hybrid III belted right-front passenger (154 lb) in a 1997 Explorer seat (P26199 test 3). Mr. Burnett inspected the seats after the test and noted damage from a prior frontal crash.

Despite the prior damage, an older and different seat design and higher crash severity than the [redacted] crash (1.3-2.0 times higher), the driver and right-front passenger remained belted and were not ejected out of their belts or vehicle. The results of this test are consistent with other crash tests and field accident experiences.

61) Mr. Pozzi opines that a post-crash photo of the seatbelt buckle under the remains of the passenger seat is not representative of Ms. [redacted] lack of seatbelt use. This view is untrue. The buckle was supported by a relatively stiff plastic sheath that is slightly bent outboard for ease of latching the belts. Its location after the fire is representative of falling from its normal position. The position after the crash indicates Ms. Marsters was unbelted in the accident.

62) Mr. Pozzi claims that the RCF-67 seat belt buckles are defective due to their ability to unlatch in impacts of all kinds. This comment is irrelevant to the [redacted] accident and any TV coverage of unlatching is based on parlor tricks that have been refuted by the industry and government. Ms. [redacted] was unbelted. Her buckle did not unlatch during the crash.

Most importantly, the 1998 Ford Explorer was not equipped with a RCF-67 side-release buckle. It was equipped with an end release buckle. Furthermore, NHTSA denied a petition for safety recalls and new regulations addressing the alleged "inertial unlatching" issue. NHTSA found a lack of evidence for inertial unlatching in real world accidents (Bochly, Felrice 1992). Moffatt et al. (1995) demonstrated the unrealistic aspects of the parlor trick.

63) Mr. Pozzi opines that Ms. [redacted] was belted because Mr. [redacted] was belted. He cites Nambisan, Vasudan (2007). This study was based on survey data on seatbelt use during daylight hours in Nevada. It provides unrelated information to Ms. [redacted] belt usage.

Viano, Parenteau (2009) showed the fraction of unbelted occupants increased with the severity of injury in an accident. This reflects the affects of crashes at different times of the day, different impact severities and types of crashes. Figure 1 shows the lowest fraction of unbelted occupants (<10%) occurs in accidents during mostly daylight hours resulting in no injury or only minor injury. The highest fraction of unbelted (>50%) are serious-injury accidents that occur late at night accidents. The [redacted]' crash occurred at 3:09 am and falls into the latter category with a large fraction of unbelted occupants.

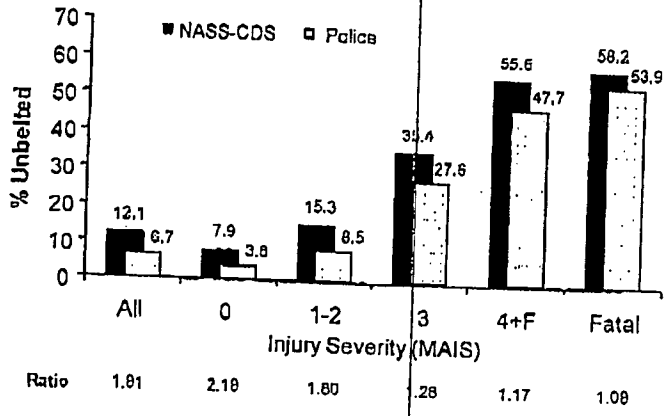

Figure 1: Percentage reported unbelted by NASS-CDS and police for different injury severities in towaway crashes. The ratio is the NASS-CDS divided by the police-reported unbelted rate (from Viano, Parenteau 2009).

The Nambisan, Vasudan (2007) study is not relevant to the [redacted]' crash. It was based on observations in only the State of Nevada and the data was collected during daylight hours from 8 am to 6 pm. The results are not representative of belt use during night time or in other states.

Many studies have shown lower belt use during nighttime than daytime driving (Chaudhary et al. 2010). Figure 2 shows the seatbelt use by time of day. Seatbelt use was lowest between midnight and 4:00 am.

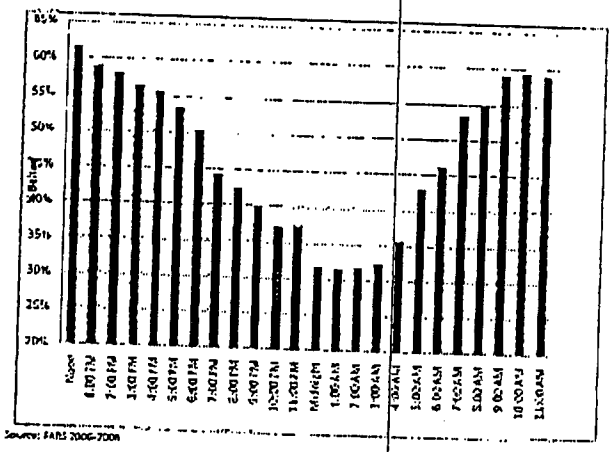

Figure 2: Percent belted for fatally injured front-seat occupants (from Chaudhary et al. 2010).

The Nambisan, Vasudan data was collected in the State of Nevada and is representative of a Western state. The [redacted] crash occurred in Massachusetts in the Northeast region. NHTSA (2001) reported lower seatbelt use in the Northeast region than in the Western region based on survey data. The right front passenger shoulder belt use for vans and SUVs was 81% ± 2.5% in the Western region but only 65% ± 1.3% in the Northeast region. Also, seatbelt use was lower for right-front passengers (65% ± 1.3%) than for drivers (73% ± 5.9%) in the Northeast. Seatbelt use was similar for right-front passengers (81% ± 2.5%) and drivers (82% ± 3.4%) in the West.

Survey data on belt use is based on field observations and not on injury data. Viano, Parenteau (2009) found that the fraction of unbelted occupants increased with the severity of injury from 3.8% with no injury to 53.9% with fatalities in the police reports, and from 7.9% to 58.2% in NASS-CDS crash investigated data (Figure 1). Ms. Marsters was seriously injured as a result of complete ejection. Survey data on belt use or the fact the Mr. [redacted] was belted are not indicative o[redacted]' seatbelt use.

According to medical records, Ms. [redacted] was drinking prior to the crash. Seatbelt use is lower among occupants who had been drinking than non-drinking. For example, checkpoint data in Ontario, Canada, showed that only 36% of drinking drivers wore their seat belts as compared with 62% of non-drinking drivers (Solomon et al. 2009). Preusser et al. (1986) found that only 24% of drivers leaving a bar parking lot were belted.

The findings and opinions in this supplemental report are offered to a reasonable degree of biomechanical, engineering and medical certainty based on the materials reviewed and analysis of facts to date. I reserve the right to further refine my opinions as additional information, activities and materials provide new facts and evidence. I also reserve the right to amend my initial and supplemental reports and to further rebut statements and conclusions in reports of plaintiff's experts. My billing rate for the work performed is $450/hr.

Sincerely,

D Viano

David C Viano, Dr. med., Ph.D.

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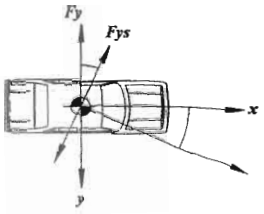


COPY

January 27, 2004

Jerry G. Wallingford, P.E.
Verifact Corporation
Senior Forensic Engineer
11220 W. FM 1604 N.
San Antonio, Texas 78250

Re: 1998 Ford Explorer Fuel Tank // Our Case 030629

Dear Mr. Wallingford,

In reference to the above captioned matter, I conducted a thorough inspection of both the Ford Explorer and the Audi A4 on June 30, 2003 while both vehicles were situated within a secured compound. During the inspection of the Ford, the fuel tank was observed exposed and separated from its shield. A radial, horizontal impression was evident below the midsection seam. This impression was identical to the radial shape of the rear axle housing. The rear axle housing was free to move forward towards the tank as a result of a complete separation from the vehicle on the left side because of the damage sustained to the left leaf spring. The aft section of the tank also contained two indentations just above the midsection seam. These indentations appear to be on the same plain and contained perforations (tears) as evident within digital photographs taken by myself. To help aid you in locating them, I have enclosed a photograph in three different size formats. Each size will require separate coordinate measurements along its frame to locate the points of interest respectively.

First Perforation

- The 8x12 photograph has been labeled 'MVC-005s'. To graphically locate the perforation, measure across 8.6 cm (86 mm) from the left edge of the photograph and 8.7 cm (87 mm) down from the top.

- The 8x10 photograph has been labeled 'MVC-005t'. To graphically locate the perforation, measure across 8.2 cm (82 mm) from the left edge of the photograph and 8.8 cm (88 mm) down from the top. Do not include the white border on the 8x10 photograph during your measurement.

- The 4x6 photograph has been labeled 'MVC-005u'. To graphically locate the perforation, measure across 5.4 cm (54 mm) from the left edge of the photograph and 4.4 cm (44 mm) down from the top.

Second Perforation

- The 8x12 photograph has been labeled 'MVC-005s'. To graphically locate the second perforation, measure across 23.7 cm (237 mm) from the left edge of the photograph and 6.7 cm (67 mm) down from the top.

- The 8x10 photograph has been labeled 'MVC-005t'. To graphically locate the second perforation, measure across 20.1 cm (201 mm) from the left edge of the photograph and 7.4 cm (74 mm) down from the top. Do not include the white border on the 8x10 photograph during your measurement.

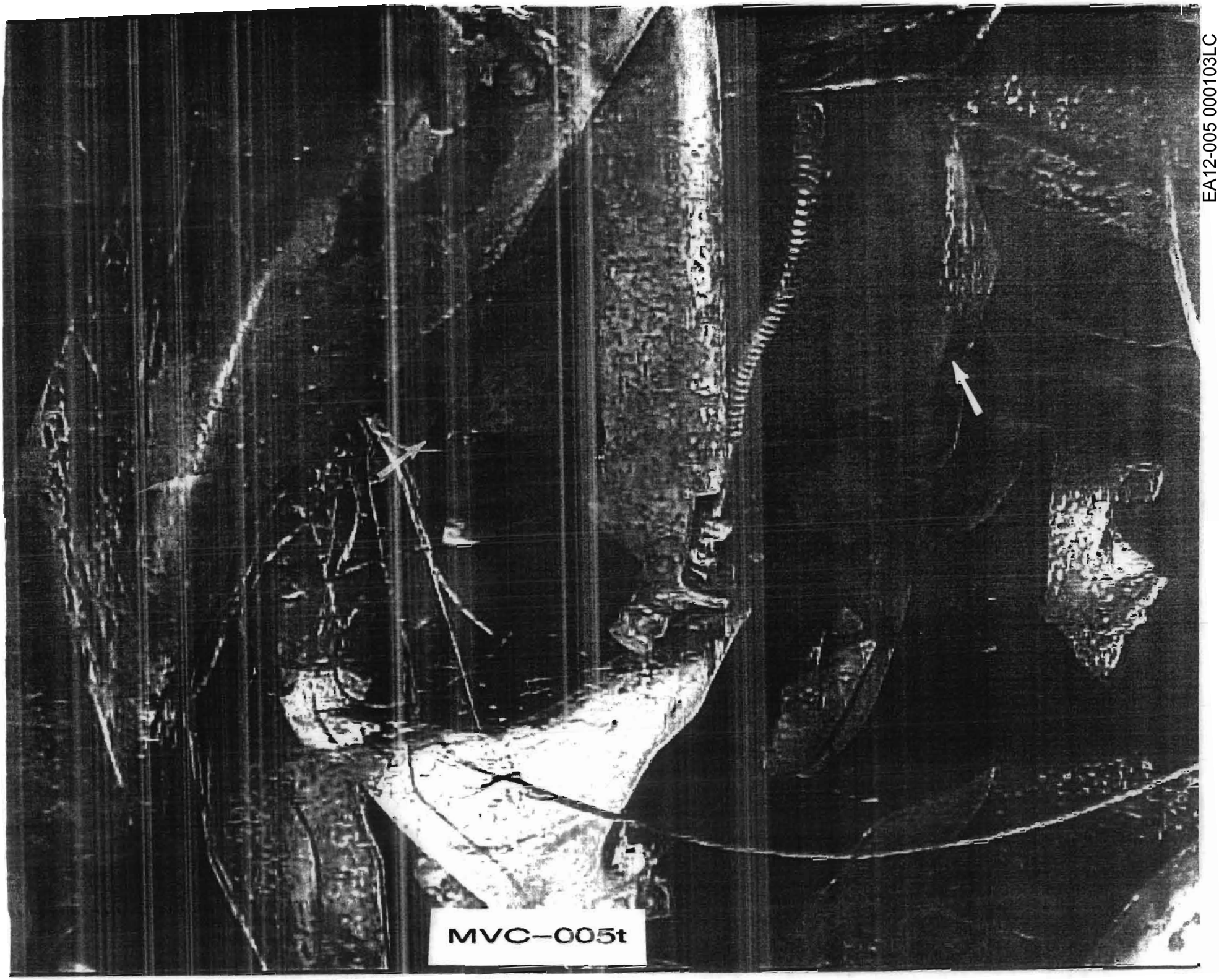
- The 4x6 photograph has been labeled 'MVC-005u'. To graphically locate the second perforation, measure across 11.8 cm (118 mm) from the left edge of the photograph and 3.5 cm (35 mm) down from the top.

- This perforation is also evident in an 8x12 photograph labeled 'MVC-006s'. To graphically locate the second perforation in this photograph, measre across 4.8 cm (48 mm) from the left edge and 16.9 cm (169 mm) down from the top.

It was clearly evident to me; an external object made contact with the fuel tank during the collision and compromised its integrity. As a result, the fuel in the tank was not contained and leaked from the vehicle. During the removal of the Ford from the scene of the collision, fire personnel and myself observed fuel draining from the perforations as the front of the Ford was elevated during the hoisting of the vehicle onto a flatbed wrecker. The fire department personnel delayed the removal of the vehicle until the remaining fuel within the tank was drained through the perforations into a separate container.

Respectfully yours,

Daniel James Parkka
Actar 760 / Collision Reconstructionist
Parkka Collision Consultants



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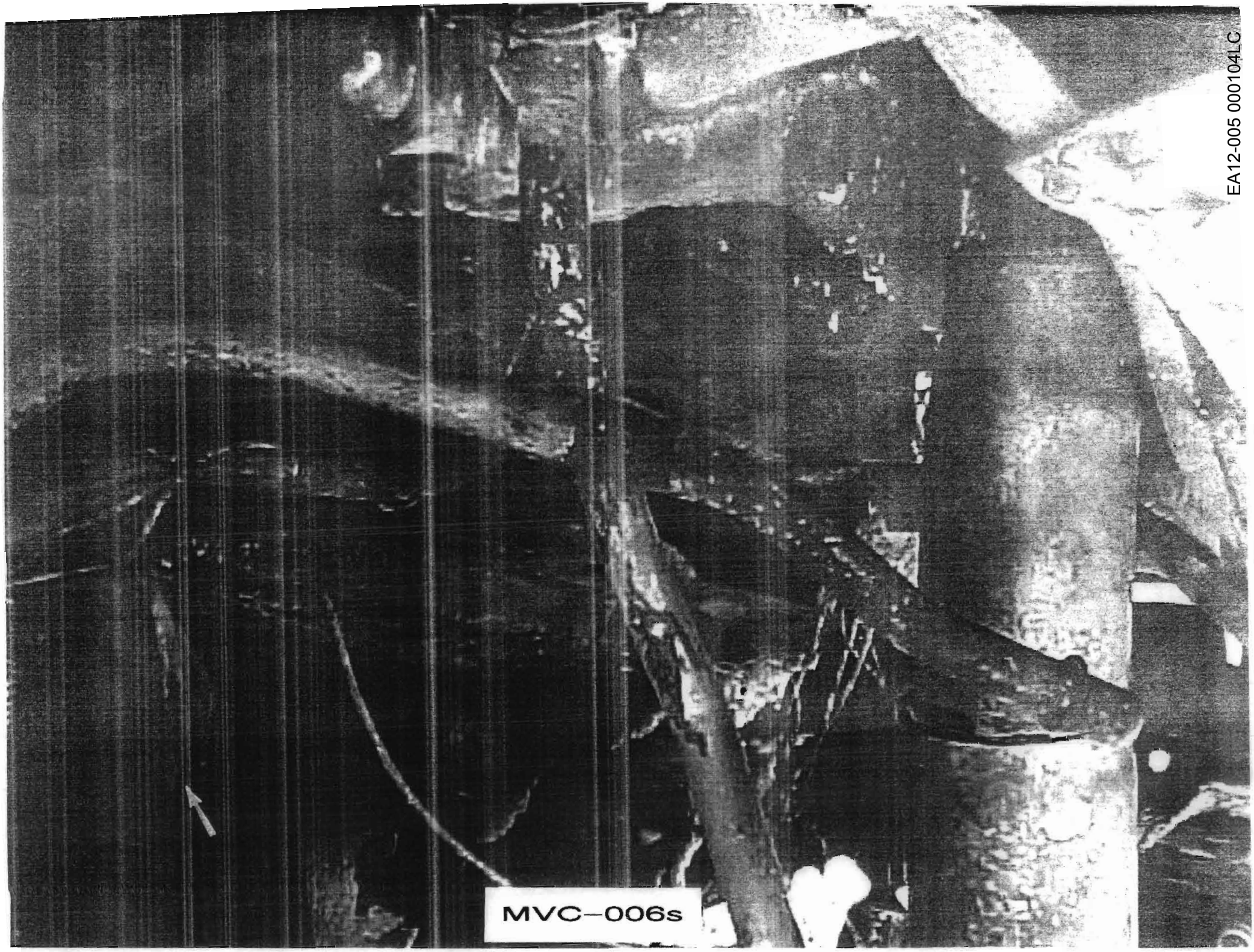

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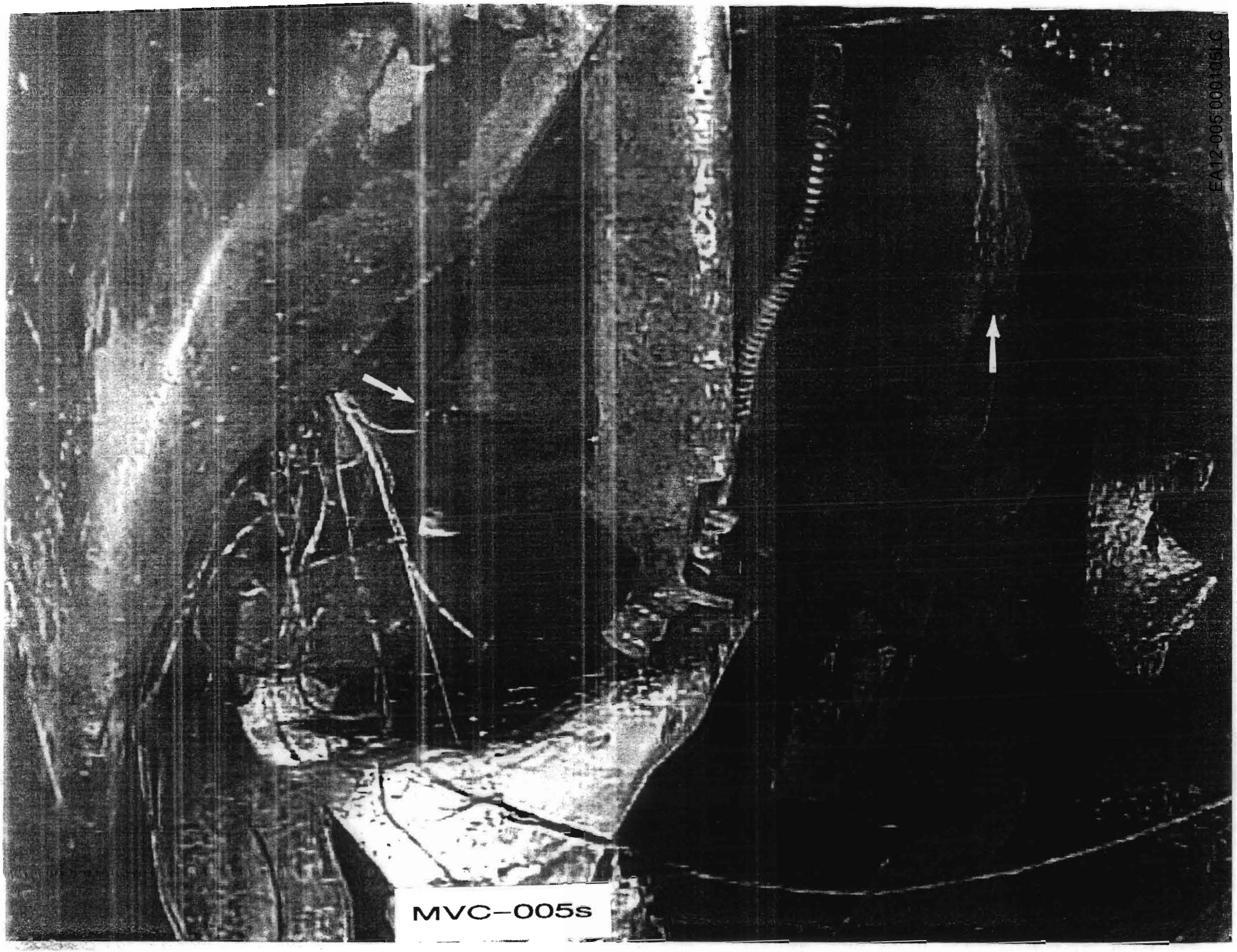
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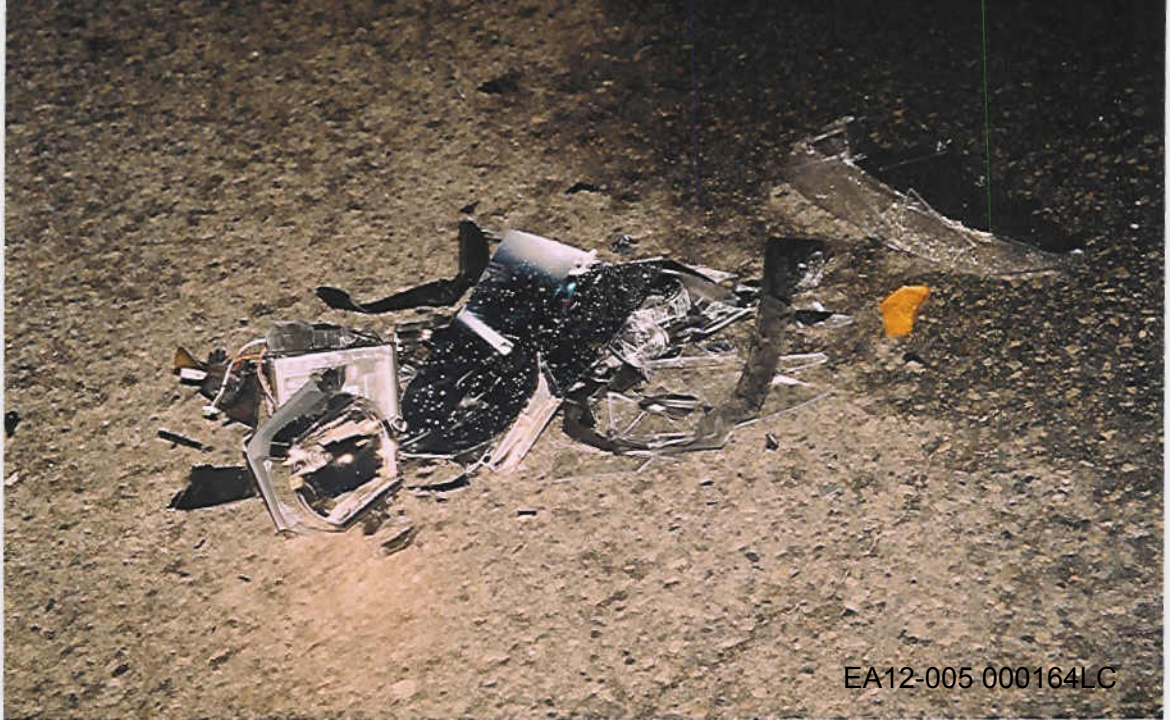
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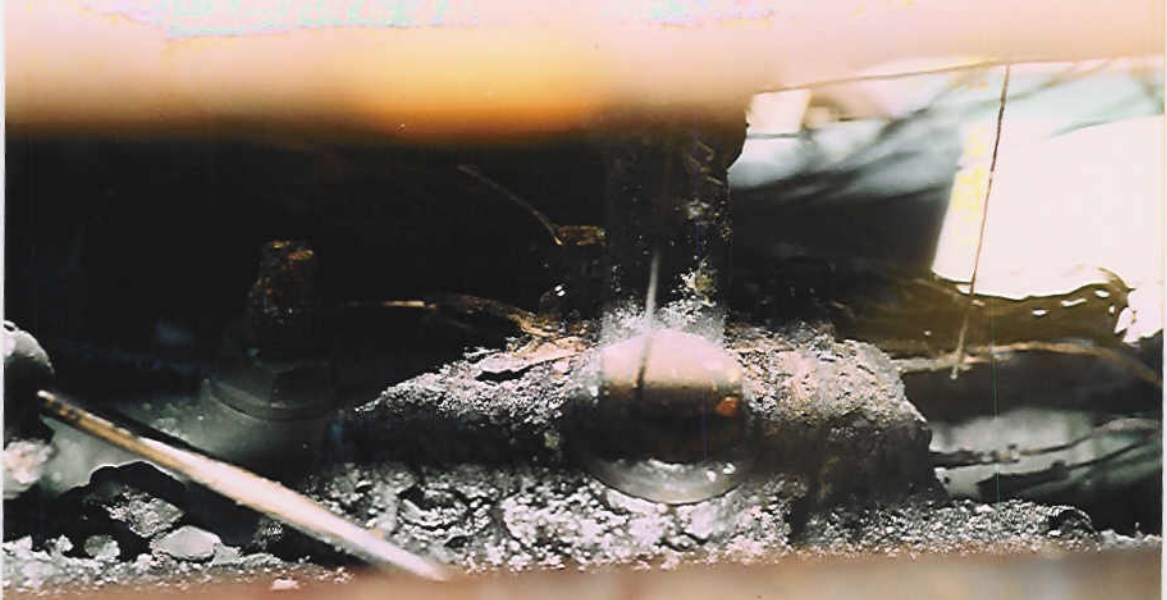

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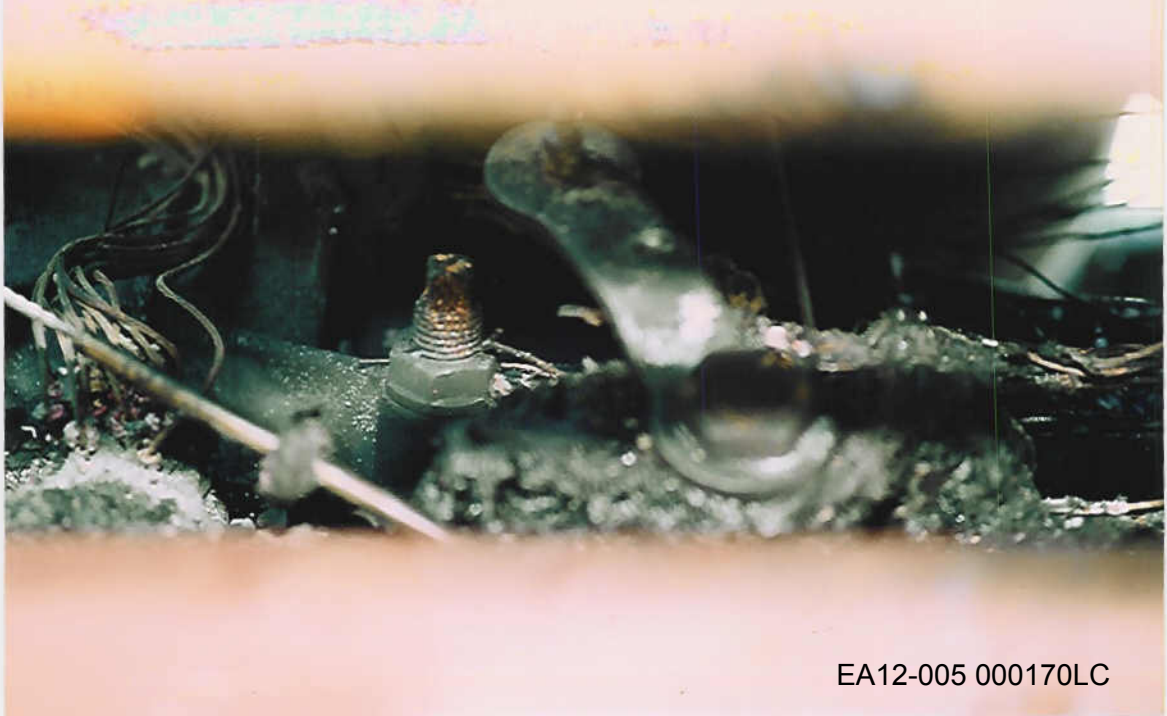

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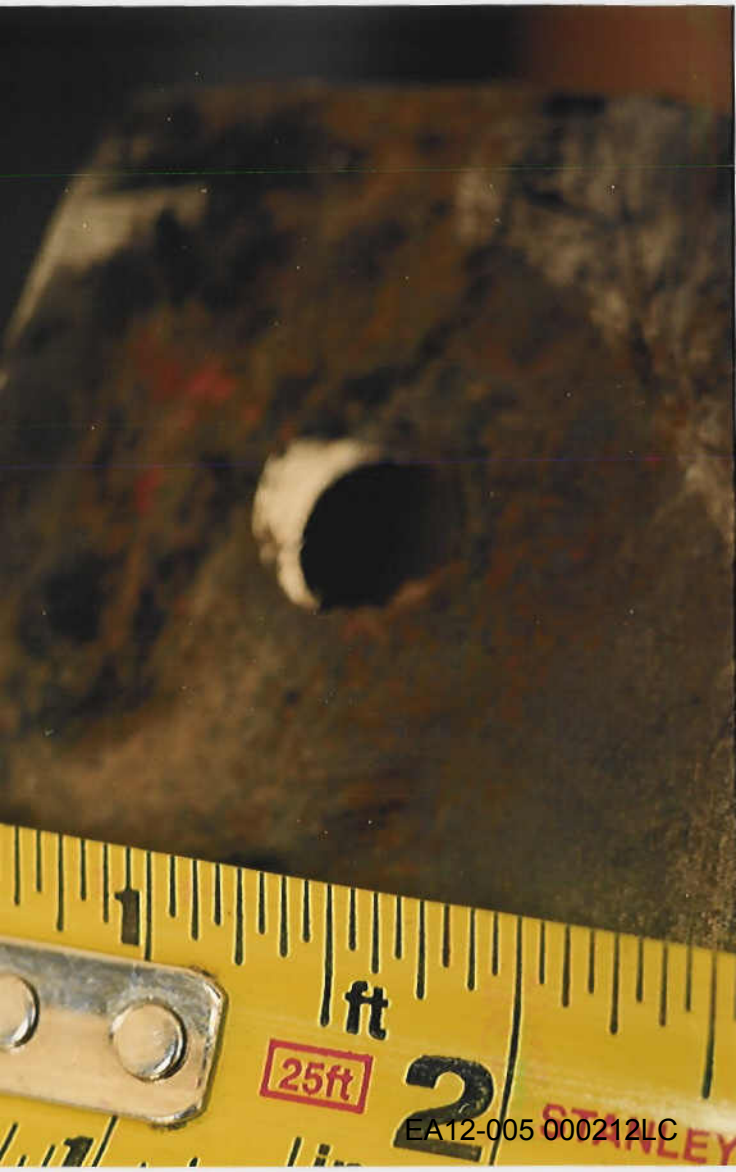
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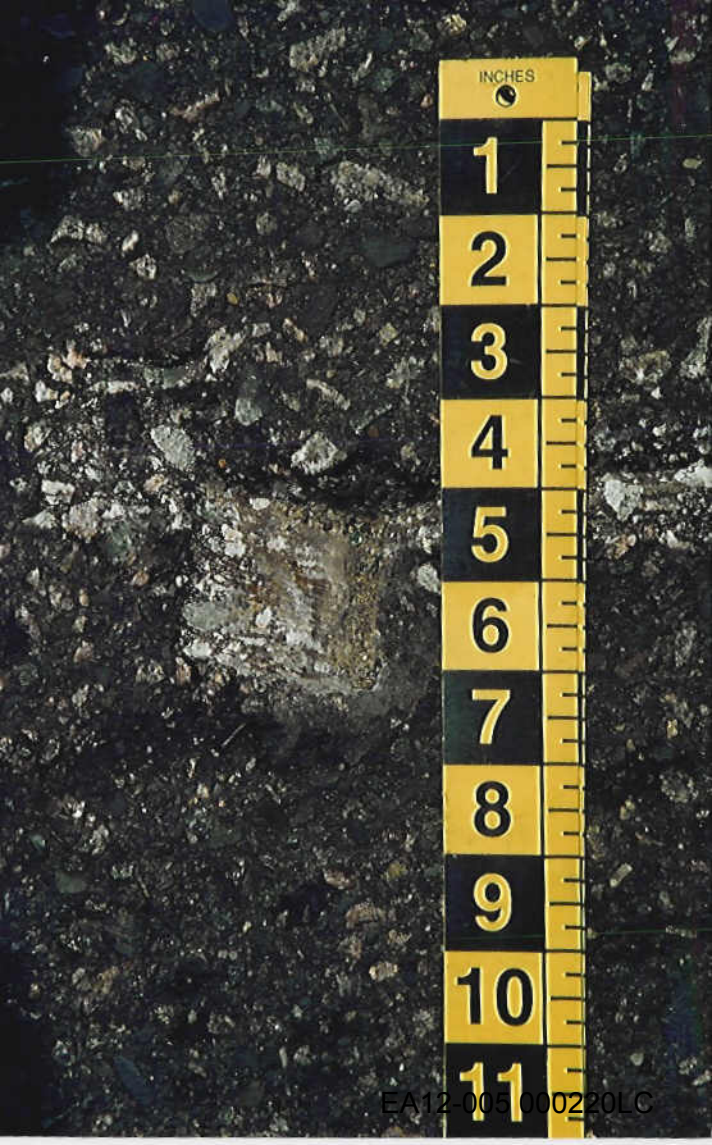


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Collision Reconstruction Report

Case Number: **03-865-AC** Printed on 07/10/2003

RECONSTRUCTIONIST INFORMATION

Name:	Daniel James Parkka	Rank:	Reconstructionist
Department:	Barnstable Police Department	Troop/Div:	Traffic

PRIMARY POLICE INVESTIGATOR INFORMATION

Name:	Brian Morrison	Rank:	Officer
Department:	Barnstable Police Department	Phone:	508-775-0387

COLLISION INFORMATION

Date:	06/29/2003	Time:	0309 Hours
Location:	Intersection of Route 28 ~ Falmouth Road and Area of Anchor Lane		
City/Town:	Cotuit	County:	Barnstable
State/Prov.:	MA.	Type:	Personal Injury
Photos Taken:	Yes	By Whom:	Barnstable County Sheriff's Department
Road Cond'n:	See Report	Road Surface:	Bituminous Asphalt/Concrete
Weather:	See Report	Speed Limit:	45
Alc. Related:	Yes		

COLLIDING ITEMS INFORMATION

Item #1: Automobile
Desc. #1: 1998 Ford Explorer // MA: 8852SP // 1FMZU34E3WZ[redacted]

Item #2: Automobile
Desc. #2: 2003 Audi A4 Stationwagon // MA: 9767ZK // WAUVC68E43[redacted]

Approximately 0315 Hours on 06/29/03, this officer was requested to the scene of a motor vehicle collision which occurred on Route 28 in the area of Anchor Lane. On arrival, conversation was held with Officer Brian Morrison being the preliminary investigating officer. Officer Morrison disclosed the details to the collision.

Reference Point

To compile measurements for this report, this analyst utilized a position 19.2 feet from utility pole 622 and 98.08 feet from utility pole 333/265 as a primary reference point. A point tangent to the northern side of utility pole 333/265 was utilized as the secondary reference point to which all measurements were recorded radially with the use of a Sokkia total station.

Atmospheric Conditions

The atmospheric conditions listed with the National Weather Service, which were recorded at the Hyannis Municipal Airport (KHYA 41-40N 70-16W), were clear indicating less than 1/10th cloud coverage, with no precipitation and a 10-mile visibility. The temperature at 0300 hours was 64 degrees Fahrenheit (17.8 deg C) with winds from the west/southwest at 7 mi/hr. The barometric pressure measured 30.15 in. Hg (1020 hPa). Dewpoint registered at 61 degrees Fahrenheit (16.1 deg C) being the temperature to which the air must be cooled for water vapor to condense. Relative humidity was listed at 87%. In the six hours preceding the collision, no trace of precipitation was noted. It does not appear the weather at the time of the collision was a contributing factor. At the time of this officer's arrival, the above conditions were present.

Ambient Lighting

The moon's position at 0309 hours was negative 11.9 degrees to the horizon with the azimuth bearing negative 37.7 degrees from true north. The moon's virtual reality was zero percent in its given position at the time of the collision. Given the position of the moon relative to the terrain, its virtual reality, weather, and the vehicles involved in this collision, ambient lighting to the scene was not produced by the moon.

Luminary Lighting

Luminary lighting was present due to the placement of utility pole 333/264. This pole was affixed with a common mercury vapor streetlight, which extended out past the roadway edge into the eastbound travel lane. The pole was located along the eastbound shoulder, 51 feet to the east of the impact area.

Roadway Geometry

Route 28 in the area of the collision is composed of bituminous asphalt/concrete. The surface was dry with no general construction in the area pertaining to the roadway. The roadway was clear of any and/or all debris excluding that, which was produced by the collision, as viewed by this officer and as specified in the initial police report prepared by Officer Morrison.

Route 28 travels east to west for clarity of this report and contains two lanes of travel. These lanes are in the order of 12 feet in width and separated by a split-yellow, reflectorized centerline with intermittent,

raised, reflectorized, amber pavement markers depicting a passing zone. Both shoulders are lined with single white reflectorized foglines, which delineate the edge of the travel lanes. All delineators were clean and highly visible. The paved east and westbound shoulders extend for approximately 4.5 to 5 feet from the white foglines to the edge of natural earthen material. The roadway commences a descent, 950 feet to the east of the collision area for eastbound traffic.

Traffic Regulator(s)

A sign depicting a speed limit of 50 mi/hr regulates vehicular traffic proceeding west on Route 28. This sign is clean, highly visible to westbound traffic and was consistent with the Manual on Uniform Traffic Control Devices (MUTCD) as a regulatory notice. The sign is located 8 tenths of a mile from the impact area and is situated along the westbound shoulder.

A secondary sign is located within the collision area depicting a speed limit of 45 mi/hr regulates vehicular traffic proceeding west on Route 28. This sign is clean, highly visible to westbound traffic from the crest of the roadway being 950 feet to the east. The sign was consistent with the MUTCD as a regulatory notice. Though the sign is within the collision area, traffic proceeding west would be required to decelerate from the previous posting of 50 mi/hr to 45 mi/hr prior to entering the new speed zone.

On-scene Investigation

On examination of the scene, the 1998 Ford Explorer was located and listed as MV #1 in the primary report. This vehicle was facing in an northeast direction while situated on the property of # 4462 and to the north of a hedge, lining the property from the roadway. The vehicle had sustained an initial rear impact as a result of being struck by the Audi A4. The principal direction of force was 180 degrees off the vehicle's fixed coordinate system being the physical property imparted to the vehicle during the impulse as a result of being involved in the collision. The vehicle was completely burned out as a result of a rupture to the fuel tank. This damage will be expanded-on within this report forthcoming. A secondary impact was noted to the roof section over the front occupant seating area between pillar posts 'A' & 'B' as a result of making contact with a tree at the base of the driveway to # 4462. The principal direction of force was approximately zero degrees of the '*z* axis'. At the time of the investigation, the operator and his passenger had been removed from the scene by Cotuit and Centerville Rescue personnel. It was reported, both occupants had been ejected from the vehicle after the initial impact. As evident to the damage associated with the tree, both occupants were also ejected prior to the vehicle striking the tree.

The 2003 Audi A4 bearing Massachusetts registration [redacted] was located and listed as MV #2 in the primary report. This vehicle was facing in a southerly direction while situated within the eastbound travel lane. The vehicle had sustained an initial frontal impact as a result of making contact the Ford Explorer. The principal direction of force was approximately zero degrees off the vehicle's fixed coordinate system. The vehicle had sustained a secondary lateral impact as a result of striking a tree along the eastbound shoulder of the roadway. The principal direction of force was approximately 143 degrees off the vehicle's fixed coordinate system. This vehicle also was burned out with only the exterior rear quarters and hatch not inflamed. The operator of the vehicle had been removed from the scene of rescue personnel.

A deep singular gouge was located in the westbound lane, adjacent to several other scratch and scuffmarks. This mark also showed a directional evolution parallel to the travellane. Gouge marks are scars in, or on the roadway surface caused by metal portions of the vehicle making contact with the road and penetrating the surface. These marks are usually caused by metal portions of the vehicle that are

violently forced downward during the collision impulse. While still connected to a section of the vehicle, parts fractured or jarred loose make contact with the roadway under pressure. These particular marks in this collision were developed by one of the leafs making up the left rear leaf spring assembly of the Ford Explorer. This leaf spring assembly measured 21.5 inches from the vehicle's center '*x-axis*'. Further description of the leaf spring contact will be forthcoming within this report.

Leading from the gouge in a westerly direction, a secondary gouge approximately 5 feet in length was evident distinguishing the post-impact movement of the Ford Explorer after the point of maximum engagement. This gouge was also produced by the edge of the leaf spring at an angular displacement to the vehicle. Proceeding in a westerly direction and containing a slight radial path to the north, several lengthy scratch marks (≈ 52 feet) are evident. These marks show a trajectory of the Ford from the initial contact to the vehicle to the point of rest within the property of # 4462.

One specific scuffmark in the westbound lane was located to the north of the initial gouge in the pavement at the time of the maximum engagement. This mark was produced by the Audi's right front tire as a result of the vehicle being overlapped to the Ford at the time of the collision. The mark contained the same groove characteristics of the tires mounted on the Audi. When the leaf spring lowers to the pavement, the right front tire of the Audi located to the north of the gouge, develops a deceleration on the pavement. This mark also has a directional indicated to the southwest being the direction to which the Audi moves during post impact trajectory. A scuffmark to the south of the gouge was produced by the Ford's left rear tire being adjacent to the suspension system. This mark extended in the direction to which the Ford was propelled during post-impact movement.

At the edge of the westbound lane, several furrows were located within the soft shoulder of the roadway. These furrows lead to the edge of the driveway to # 4462. At that point, the drive shaft of the Ford was located embedded under the pavement and extended out at the edge. The directional force of the drive shaft under the pavement was evident as proceeding in a westerly direction at the time of the embedding.

On the paved driveway apron, several gouge and scuffmarks were evident consistent in nature with the commencement of a rollover in the direction of the tree aligning the west side of the drive. The marks extended across the driveway to approximately the middle point.

The tree aligning the driveway showed signs of a heavy contact to the east side of its circumference. The damage at the maximum height was extreme compared to the damage at the base. The damage extended to a height of 6 feet from its base. At this height, small bluish paint chips were located consistent with small amounts found attached to the burned Ford. The damage to the tree also showed signs of a clockwise rotation along its trunk. To the west of the tree and aligning the roadway, a hedge was located showing signs of damage to the eastern end, abutting the edge of the tree. This damage to the hedge is consistent with the rotation of the Ford around the tree in a clockwise rotation after the contact was made.

Also leading from the initial contact point within the westbound lane, numerous scuffmarks were located leading to the eastbound shoulder and in the direction the Audi moved during post-impact. These marks showed signs of rotation and furrowing along the soft eastbound shoulder of the roadway to the point of the secondary collision at the base of the tree lining the eastbound travellane. This tree was split at the base and uprooted. The diameter of the tree was 14.8 inches as measured at the contact point.

A singular radial furrow was located to the west of the tree and along the shoulder. This furrow contained the characteristics of the radial geometry of the Audi's left rear tire and wheel assembly. From this scuffmark, several rotational scuffmarks were located back in the eastbound lane; west of the impact point with the tree. These scuffmarks lead to the Audi's point of rest.

Kinematics Analysis

Utilizing a Vericom VC2000 Accelerometer, a dynamic friction coefficient of 0.833 μ, being the resisting force to motion between two surfaces at their interface, was achieved for the road surface of Route 28 in the area of the collision. The testing was performed in the direction the Ford & Audi were preceding prior to impact. During the first test, a distance of 46 feet was covered during a full lockup in a time frame of 1.89 seconds. The initial speed for the test was 34.5 mi/hr decelerating to a complete stop.

A secondary test was performed in the same manner resulting in a dynamic friction coefficient of 0.841 μ. A distance of 49 feet was covered during a full lockup in a time frame of 1.9 seconds. The initial speed for the test was 35.1 mi/hr. With both test results being within 5% μ (0.96 percent), the lower value of 0.833 μ is utilized.

To determine a velocity/time/distance associated with the vehicle(s) at the time of collision, various algebraic calculations were executed, which derive from accepted and prudent engineering principles and testing performed by individuals specializing in the field of motor vehicle reconstruction.

The utilization of kinetic energy, damage, and a linear momentum analysis comparison all resulted in speed calculations of 77 to 86 mi/hr at impact for the Audi A4. The variables required for the analysis are listed and shown in conjunctive reports accompanying this narrative. The analysis results for the Audi are based on a pre-assigned speeds of zero, 40 and 45 mi/hr assigned to the Ford Explorer as indicated by parties involved; whether being an operator or witness. Calculations involving the Ford's post impact movement energy loss also contributed to the results.

The operator of the Audi indicated to Officer Morrison, the Ford appeared to be stopped in the westbound travellane, driver's door ajar, with the occupants possibly changing positions. If the Ford was at a stand still within the westbound lane, the Audi would need to be traveling approximately 90 mi/hr as calculated to produce the post-impact movements of both vehicles and account for the total energy dissipated and the damage procured by both vehicles. Appling speeds of 40 and 45 mi/hr as specified by independent witnesses, the Audi's speed is reduced to 77 to 86 mi/hr as aforementioned.

Mr. [redacted] indicated to Officer Morrison; he [redacted]) was traveling 45-50 mi/hr and had come over a crest in the roadway (950 ft from impact). He then observed the Ford stopped in the lane and attempted to stop but was not able to in time. The crest in the roadway referred to by Mr. [redacted] is 950 feet to the east of the collision. From that point, the roadway is flat and straight up to the collision area. If traveling at a speed of 45 mi/hr, M[redacted] will require 301.1 to 569.2 feet to stop the vehicle, which includes a perception/reaction time interval of 2 to 3.5 seconds over a normal braking deceleration of 0.2 to 0.4*f*. This deceleration does not indicate heavy extreme braking, which would only increase the ability of Mr. [redacted] to stop in a shorter distance.

If traveling at a speed of 50 mi/hr, Mr. [redacted] will require 355.4 to 674.2 feet to stop including a perception/reaction time of 2 to 3.5 seconds over a normal braking deceleration of 0.2 to 0.4*f*. This

deceleration does not indicate heavy extreme braking, which would only increase the ability of Mr. [redacted] to stop in a shorter distance.

If the Ford was at a stop as indicated by Mr. [redacted], and he had just crested the hill and observed the Ford, Mr. [redacted] would need to be traveling at a greater speed then 88.6 mi/hr (with a perception/reaction of 2 seconds) to indicate that he did not have sufficient time or distance to avoid a collision. This would also coincide with the energy dissipated as aforementioned without accounting for the energy loss due to the damage to which the Ford acquired. Given his statements, Mr. [redacted] acknowledges he had observed the Ford stopped with possibly the driver's door ajar as if the occupants were changing places. If he was able to observe these indications, then the question arises as to why he could not stop while traveling 45-50 mi/hr given the sight distance of 950 feet from the crest; unless he was inattentive to the Ford and was traveling at an extremely high speed which coincides with the kinematics of the collision had the Ford been stopped and or moving.

This officer received a statement from the following person:

[redacted]

Vehicle Examination

A further inspection of both vehicles was conducted at the Davis Towing facility while the vehicle were situated within an outdoors secured storage. BCI Cazeault photographed both vehicles during examination.

On examination of the Ford, the vehicle was completely burned out as aforementioned exclusive of the contact damage sustained as a result of the collision. The vehicle had passed a yearly safety inspection as indicated by the registry of motor vehicles. The inspection sticker affixed to the windshield would have contained the numerical data of 022816390, which indicated an expiration date of April 2004 if it had not been destroyed as a result of the fire.

The primary contact between the Ford and the Audi was evident to the rear of the Ford along the driver's side. The damage indicated an overlap of approximately 60 inches by the Audi. This was determined as a result of the lateral extended damage across the back commencing 10 inches from the vehicle's center *'x-axis'* as shown in photographs. The depth of the damage finalized in the area of the vehicle's 'C' post. This would indicate a depth of approximately 3.5 to 4 feet. As a result, the rear axle and suspension system sustained severe damage resulting in the rear axle housing being forced into the rear panel of the fuel tank. As a result of this forward propulsion, the rear axle housing produced a geometrical impression of its outer shell into the tank. Several splits to the tank were evident in this area of the impression resulting in excessive fuel spillage.

The leaf spring assembly on the driver's side of the Ford was bent around resulting in the assembly breaking away from its securement point on the vehicle. The mainframe rail on the left side was several kinked at this juncture. This resulted in the second leaf of the assembly lowering to the pavement during maximum engagement and gouging into the pavement. The end of the leaf measured 2 inches across which was the same measurement taken across the gouge in the westbound lane of Route 28. The lower left corner also contained inline striations which bored the medal down from its original thickness. When the leaf spring was removed from the vehicle and returned to the collision area by this officer, the butt-end of the leaf fit perfectly within the gouge in the westbound lane. This contact between the two materials was photographed by BCI Cazeault. With the result of the fuel spillage, it is the opinion of this officer; the contact between the leaf and the pavement developed sparks igniting the fuel.

On examination of the Ford's occupant compartment between pillar posts 'A' & 'B', the roof section was collapsed completely to the middle hump and directly over the front seats; expanding the seats down in a flat manner parallel to the floor boards. If both occupants were to remain in the vehicle as a result of wearing seatbelts, they would have been entrapped within the vehicle and presumably expiring from the fire.

The aforementioned damage to the roof section was the result of the Ford rolling over onto the passenger's side after tripping in the area of the driveway to residence of # 4462. The impact with the tree was at the 'B' post; 64 inches aft of the front axle. As the Ford proceeded in towards the tree on the passenger's side, it rolled slightly greater then 90 degrees (100-120°) causing the driver's side to develop a greater crushing environment then the passenger's side. The vehicle's roof damage contained the geometrical shape of the tree due to its resistance to the force applied by the vehicle. Tripping the vehicle onto the passenger's side is also consistent with the 6-foot height of damage noted to the tree.

Within the vehicle, a pair of men's shoes was located melted to the floorboard, forward of the driver's position. On the passenger's side, Ms. [redacted] purse, was found melted to the carpeting directly below the front passenger's seating position.

As a result of statements received from the operator of the Audi indicating the Ford was stopped in the roadway, the transmission of the Ford was inspected by a certified mechanic at Davis Towing. When viewed by this officer and BCI Cazeault, the actual linkage lever was encased in melted plastic and other materials, which kept the linkage from moving. When the materials were removed, the linkage could be moved through each gear with no more then its designed resistance. As a result, the shift linkage to the transmission housing was found in 'drive'. This would indicate to this officer, the transmission was in 'drive' at the time of the collision.

Seven recalls from NHTSA pertains to the Ford Explorer. These recalls accompany this report and are not a contributing factor of this motor vehicle collision as they relate to the mechanisms of the collision itself. These recalls pertain to Firestone Wilderness tires, daytime running lights, vehicle speed control, anti theft controller, fuel system lines/piping/fitting, and hood latch. The Ford Explorer involved in this collision contained four Cooper Discoverer H/T P255/70R16 tires which were in good condition exclusive of the damage received and contained 12 to 13/32nd of tread.

The right rear brake bulb of the Ford contained brake and marker filaments. The brake filament showed no signs of elongation and or fracture to the naked eye rendering the status of the filament to be inconclusive. The marker filament showed signs of elongation to the naked eye. This elongation is consistent with the filament being incandescent at the time of the collision. The glass encasement was broken and missing from the base.

The right front marker light of the Ford was located and examined. The filament showed no signs of elongation and or fracture to the naked eye rendering the status of the bulb to be inconclusive. The glass encasement was broken and missing from the base.

The left front marker light of the Ford was located and examined. The filament showed no signs of elongation and or fracture to the naked eye rendering the status of the bulb to be inconclusive. The glass encasement was broken and missing from the base.

The left front headlight bulb of the Ford was located and examined. The bulb contained high and low filaments which both showed no signs of elongation and or fracture to the naked eye rendering the status of the filaments to be inconclusive. The glass encasement was broken and missing from the base.

The right front headlight bulb of the Ford was located and examined. The bulb contained high and low filaments. The low beam filament showed a slight sign of elongation to the naked eye. This elongation is consistent with the filament being incandescent at the time of the collision. Deposits of a foreign matter were also fused to the filament coil. The glass encasement was broken and missing from the base.

On examination of the Audi, the vehicle was completely burned out as aforementioned exclusive of the contact damage sustained as a result of the collision. The vehicle had passed a yearly safety inspection as indicated by the registry of motor vehicles. The inspection sticker would have been affixed to the windshield and contained the numerical data of 019893277, which indicated an expiration date of December 2003 if it had not been destroyed as a result of the fire.

The primary contact between the Ford and the Audi was evident to the front of the Audi along the passenger's side. The damage indicated an overlap of approximately 60 inches to the Ford as aforementioned. The depth of the damage to the Audi was well over the length of its original front overhang being 36 inches (3 feet) and back to the windshield base measuring 46 inches (3.83 feet) as per manufactured specifications.

A secondary contact point was evident to the passenger's side 'A' pillar post. The damage contained the geometrical shape of the tree due to its resistance to the force applied by the vehicle. The total width of damage measured approximately 18 inches and was located 60 inches forward of the rear axle. The maximum damage depth measured 17 inches. There were no known recalls from NHTSA regarding the 2003 Audi A4.

Four 'Continental Sportcontact II' 235/45R17 tires were mounted on the vehicle. The remaining two rear tires were in good conditions, which were not melted and contained 6 to 7/32nd of tread. The tread pattern of these tires matched distinctive characteristics of marks located a point of maximum engagement as aforementioned.

The right front halogen headlight filaments of the Audi was located and examined. The filament showed obvious signs of elongation to the naked eye. This elongation is consistent with the filament being incandescent at the time of the collision. The glass encasement was intact.

The left front halogen headlight filaments of the Audi was located and examined. The filament showed no signs of elongation and or fracture to the naked eye rendering the status of the filament to be inconclusive. The glass encasement was intact.

The right brake & marker light filaments of the Audi showed slight indications of elongation to the naked eye. These elongations are consistent with the filaments being incandescent at the time of the collision. The glass encasement was intact. The backup filament and turn signal filament within the same housing showed no signs of elongation and or fracture to the naked eye rendering the status of the filaments to be inconclusive.

The left brake & marker light filaments of the Audi showed a slight indication of elongation to the naked eye. These elongations are consistent with the filaments being incandescent at the time of the collision. The glass encasement was intact. The backup filament and turn signal filament within the same housing showed no signs of elongation and or fracture to the naked eye rendering the status of the filaments to be inconclusive.

Conclusion

This report is based on all material received prior to this document's date. It is subject to change upon any further findings and/or the accumulation of any further evidence or documentary. The following conclusion is the opinion of this officer, which is based on the findings, inferences and conclusions of my review, kinematics analysis and/or study of the collision. The culpability for the collision lies with the initiating actions imposed by Mr. [redacted] being the operator of the Audi A4. These actions resulted in the subsequent collision due to Mr. [redacted] inattentiveness to the traffic proceeding directly forward of his vehicle and in the same direction, excessive speed, and the positioning of his vehicle within the roadway while traveling in a westerly direction.

The Ford Explorer being operated by Mr. [redacted] and containing Ms. [redacted] as the right front passenger, was proceeding west in the westbound lane of Route 28 while in the area of Anchor Lane. The Ford's estimated speed of 40-45 mi/hr was determined by [redacted] during their movement east on Route 28 after entering the route from Anchor Lane.

After the Ford had passed their position, the Audi immerged from the crest of the hill located approximately 850 feet to the east of Anchor Lane. The Audi's speed was estimated as being 100 mi/hr [redacted] After the Audi had passed their position, [redacted] observed an explosion in his rear view mirror. [redacted]

It is the opinion of this officer, Mr. [redacted] was traveling at a minimum speed range of 77 to 86 mi/hr at the time of the collision after having applied the braking mechanism. A sign depicting a speed limit of 50 mi/hr regulates vehicular traffic proceeding west on Route 28. This sign was clean, highly visible to westbound traffic and located 8 tenths of a mile from the impact area while situated along the westbound shoulder. The aforementioned speed calculation does not include the energy loss during the initial collision resulting in the damage to the Ford's rear, roof or the Audi's front-end. Nor does the calculation incorporation the rotation of the Ford around the tree prior to ceasing movement. As a result, the minimum speed range of 77 to 86 mi/hr is in fact a lower speed then what the vehicle was originally traveling at the time of the collision.

A secondary sign was located within the collision area depicting a speed limit of 45 mi/hr regulating vehicular traffic proceeding west on Route 28. This sign was clean and highly visible to westbound traffic from the crest of the roadway and 950 feet to the east. Though the sign was within the collision

area, Mr. [redacted] would have been required to decelerate from the previous posting of 50 mi/hr to 45 mi/hr prior to entering the new speed zone.

Mr. [redacted] Audi struck the rear of Mr. [redacted] Ford at a high rate of speed at an offset which would have been consistent with the statements made by [redacted] who indicated the Audi was slightly within their lane. During the initial impact, and as a result of the damage sustained to the rear of the Ford, the left rear leaf spring snapped from its forward support and struck the pavement causing a severe gouge. The rear axle housing was pushed forward into the fuel tank of the Ford with the result of the fuel tank rupturing causing excessive fuel loss. It is the opinion of this officer, the combination of fuel spillage and the contact between the leaf spring and other metal contact, ignited the fuel causing each vehicle to burn.

After the initial contact, the Ford proceeded into a clockwise rotation to the soft shoulder of the roadway. The vehicle then crossed the driveway to # 4462. At this point, the Ford flipped onto the passenger's side at an angle equivalent to approximately 100 to 120°. Both occupants and/or at least the passenger (Ms. [redacted]) were ejected from the vehicle. During the rollover phase, the Ford struck the tree located at the western edge of the driveway resulting in a crushing of the roof between pillars 'A' & 'B'. The damage extended down to the middle hump of the occupant compartment compressing both front seating positions.

During the contact with the tree; the Ford commenced a clockwise rotation around the base of the tree to the northern side of the roadway hedge. At that point, the vehicle disengaged from the tree and rolled back onto its wheels to a point of rest where it burned extensively.

The Audi had acquired a counterclockwise rotation from maximum engagement and proceeded across the eastbound lane. The vehicle entered the soft shoulder and proceeded passenger's side leading into a pine tree at the edge of the eastbound lane. Contact between the tree and the passenger's side 'A' pillar post occurred resulting in the tree snapping at the base with the uprooting of the trunk. The vehicle continued through the tree breakage and continued in a counterclockwise rotation. The vehicle reentered the eastbound lane and came to a halt.

If Mr. [redacted] was traveling the posted speed limit of 50 mph and had observed the Ford after cresting the hill, Mr. [redacted] would have been able to continue at a reasonable speed of 45-50 mph and would not have made contact with the Ford. The Ford was traveling west in the westbound lane at an estimated speed of 40-45 mph by witnesses, coinciding by the kinematics of the collision.

Daniel James Parkka
Actar 760 / Collision Reconstructionist
Barnstable Police Department

CASE NUMBER: 03-865-AC

Item # 2: 2003 Audi A4 // MA Reg: 9769ZK // VIN: WAUVC68E43A[redacted]

* * PERCENTAGE OF ACCEPTABILITY * *

$$\% = \frac{(L\mu - S\mu) \times 100}{S\mu}$$

$L\mu$ = The Largest Drag Factor recorded.
$S\mu$ = The Smallest Drag Factor recorded.

$$\% = \frac{(0.8410 - 0.8330) \times 100}{0.8330}$$

$$\% = \frac{0.0080 \times 100}{0.8330}$$

$$\% = \frac{0.8000}{0.8330}$$

$$\% = 0.9603$$

INPUTS:	
The Largest Drag Factor recorded is:	0.8410
The Smallest Drag Factor recorded is:	0.8330

RESULTS:	
The Percentage of Acceptability is:	0.9603

File Name :	03-865B SLM	Date :	7/3/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	2 Vehicle Collision		

Slam Project Report

	Vehicle 1	Vehicle 2
	AUDI	TREE
Vehicle Description	2003 A4 Wagon	Pine Tree

Licensed to :	[redacted]
Organization :	Barnstable Reconstruction
Serial Number :	SW110-153-144-114073

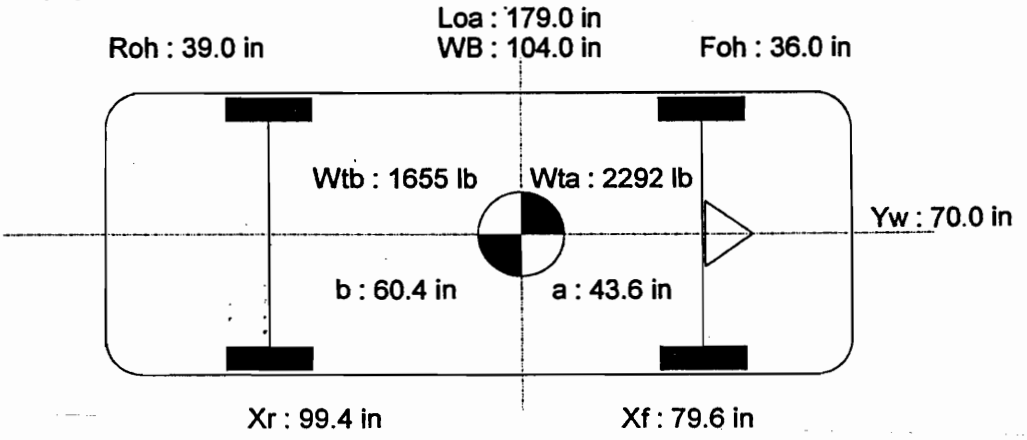
Weight and Car Data

File Name :	03-865B.SLM	Date :	7/3/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	2 Vehicle Collision		

VEHICLE 1 **AUDI**

Default Type	Intermediate
Collision Surface	Right
Weight	3947 lb
Radius of Gyration squared	2757 in2

Vehicle Dimensions



VEHICLE 2 **TREE**

Default Type	Tree/Pole
Collision Surface	Front
Weight	9999999 lb
Radius of Gyration squared	9999999 in2

Vehicle Dimensions

Diameter : 14.8 in

Licensed to :	[redacted]
Organization :	Barnstable Reconstruction
Serial Number :	SW110-153-144-114073

Damage Data

File Name :	03-865B.SLM	Date :	7/3/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	2 Vehicle Collision		

DAMAGE DATA		AUDI	TREE
Profile		Standard	Standard
Damage Width, L		18.0 in	0.0 in
Profile Offset, D		-0.3 in	0.0 in
Damage Offset, LR		-9.3 in	0.0 in
Pdof		143.0 deg	0.0 deg
Force Location		Crush Centroid	Crush Centroid
	Xp	-0.7 in	7.4 in
	Yp	27.5 in	0.0 in
Stiffness, A		95.7 lb/in	9999999 lb/in
Stiffness, B		77.7 lb/in2	9999999 lb/in2
Number of Coefficients		3	0

Damage Dimensions	C	L
1	17.0 in	0.0 in
2	15.0 in	9.0 in
3	13.0 in	18.0 in

Licensed to :	[redacted]
Organization :	Barnstable Reconstruction
Serial Number :	SW110-153-144-114073

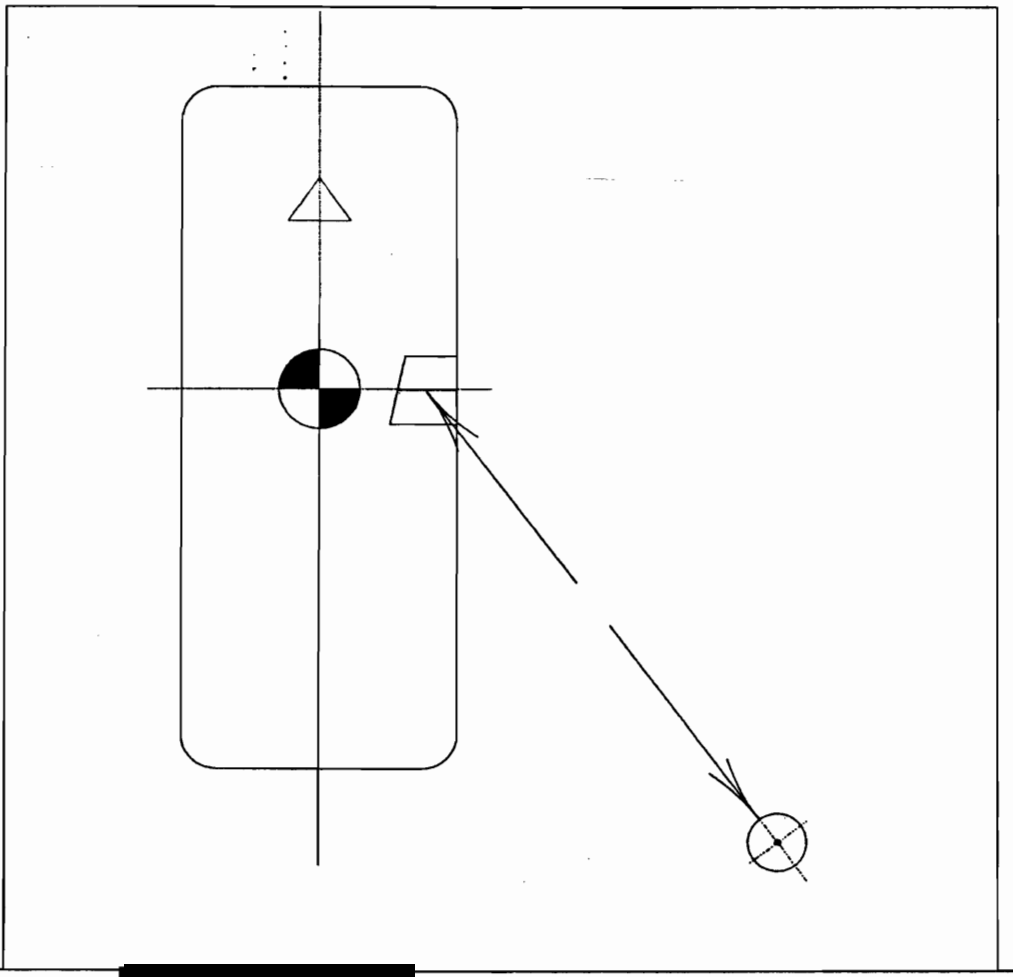
Damage Results

File Name :	03-865B.SLM	Date :	7/3/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	2 Vehicle Collision		

DAMAGE RESULTS	AUDI	TREE
Delta V	14.2 mph +/- 5.0 mph	0.0 mph +/- 0.0 mph
EBS	14.2 mph +/- 5.0 mph	0.0 mph +/- 0.0 mph
Force	37722 lb +/- 9411 lb	0 lb +/- 0 lb
Delta Omega	-1.94 rad/sec +/- 0.74 rad/sec	0.00 rad/sec +/- 0.00 rad/sec
Moment Arm	-21.5 in +/- 3.0 in	0.0 in +/- 0.0 in
Magnification Factor	2.00 +/- 0.70	0.00 +/- 0.00
Mass Ratio	0.86 +/- 0.03	1.00 +/- 0.00
Damage Energy	30862 ft-lb +/- 21710 ft-lb	0 ft-lb +/- 0 ft-lb

COMMON RESULTS

Impulse, IMP	2546.6 lb-sec +/- 897.1 lb-sec
Collision Time, Dt	0.135 sec +/- 0.058 sec
Total Energy, Et	30862 ft-lb +/- 21710 ft-lb
Closing Speed, Vd	16.5 mph +/- 5.9 mph



Project Warnings

File Name :	03-865B.SLM	Date :	7/3/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	2 Vehicle Collision		

Current Warning Flag Settings

Vehicle Warnings **AUDI** **TREE**

No vehicle warnings were noted

Project Warnings

No Project warnings were noted

Confidence levels

A Stiffness Value	10.0 %
B Stiffness Value	10.0 %
Pdof Error	10.0 deg
Distance Error	10.0 %
Lockup Sensitivity	0.1
Separation Heading Error	5.0 deg
Approach Heading Error	5.0 deg

KINETIC ENERGY ~ AUDI

EVENT 1 OF 7 ~ POST IMPACT WITH TREE ~ DECEL: 1.00

WEIGHT = 3947 LB
f (DRAG) = .83

RATE (D) = 26.726 F/S/S
RATE (D) = 18.2222 M/H/S

DISTANCE = 21.14 FT

K ENERGY = 69254.85

VELOCITY = 33.6151 F/S
SPEED = 22.9193 M/H

EVENT 2 OF 7 ~ POST IMPACT WITH TREE ~ DECEL: 1.00 ~ MU: .83 & .5

WEIGHT = 3947 LB
f (DRAG) = .665

RATE (D) = 21.413 F/S/S
RATE (D) = 14.5997 M/H/S

DISTANCE = 20.55 FT

K ENERGY = 53938.71

VELOCITY = 29.666 F/S
SPEED = 20.2268 M/H

EVENT 3 OF 7 ~ POST IMPACT WITH TREE ~ DECEL: 1.00 ~ MU: .5

WEIGHT = 3947 LB
f (DRAG) = .5

RATE (D) = 16.1 F/S/S
RATE (D) = 10.9772 M/H/S

DISTANCE = 10.94 FT

K ENERGY = 21590.09

VELOCITY = 18.7688 F/S
SPEED = 12.7969 M/H

EVENT 4 OF 7 ~ ENERGY ASSOCIATED WITH TREE IMPACT

WEIGHT = 3947 LB

K ENERGY = 30862

VELOCITY = 22.4399 F/S
SPEED = 15.2999 M/H

EVENT 5 OF 7 ~ PRE IMPACT WITH TREE ~ DECEL: 1.00 ~ MU: .5

WEIGHT = 3947 LB
f (DRAG) = .5

RATE (D) = 16.1 F/S/S
RATE (D) = 10.9772 M/H/S

DISTANCE = 40.68 FT

K ENERGY = 80281.98

VELOCITY = 36.1924 F/S
SPEED = 24.6767 M/H

EVENT 6 OF 7 ~ PRE IMPACT WITH TREE ~ DECEL: 1.00 ~ MU: .83

WEIGHT = 3947 LB
f (DRAG) = .83

RATE (D) = 26.726 F/S/S
RATE (D) = 18.2222 M/H/S

DISTANCE = 73.86 FT

K ENERGY = 241966.1

VELOCITY = 62.8328 F/S
SPEED = 42.8405 M/H

EVENT 7 OF 7 ~ PRE IMPACT WITH TREE ~ DECEL: .58 ~ MU: .83

WEIGHT = 3947 LB
f (DRAG) = .4814

RATE (D) = 15.501 F/S/S
RATE (D) = 10.5689 M/H/S

DISTANCE = 54.53 FT

K ENERGY = 103611.7

VELOCITY = 41.1162 F/S
SPEED = 28.0338 M/H

CRITICAL VEHICLE ~ AUDI

KE-TOTAL = 601505.4
WEIGHT = 3947

VELOCITY = 99.067 F/S
SPEED = 67.5457 M/H

KINETIC ENERGY ~ FORD

EVENT 1 OF 2 ~ POST IMPACT WITH AUDI ~ DECEL: 1.00 ~ MU: .83 & .5

WEIGHT = 4451 LB
f (DRAG) = .665

RATE (D) = 21.413 F/S/S
RATE (D) = 14.5997 M/H/S

DISTANCE = 78.31 FT

K ENERGY = 231790.9

VELOCITY = 57.9111 F/S
SPEED = 39.4849 M/H

EVENT 2 OF 2 ~ POST IMPACT WITH AUDI ~ DECEL: 1.00

WEIGHT = 4451 LB
f (DRAG) = .83

RATE (D) = 26.726 F/S/S
RATE (D) = 18.2222 M/H/S

DISTANCE = 68.51 FT

K ENERGY = 253098.5

VELOCITY = 60.5144 F/S
SPEED = 41.2598 M/H

CRITICAL VEHICLE ~ FORD

KE-TOTAL = 484889.5
WEIGHT = 4451

VELOCITY = 83.7597 F/S
SPEED = 57.1089 M/H

LINEAR MOMENTUM – 40 MPH

AUDI 3

WEIGHT = 3947

ANGLE 1 = 0 DEG
ANGLE 3 = 0 DEG

POST-IMPACT DATA

K-ENERGY = 600691.7

MOMENTUM = 390753 #F/S
MOMENTUM = 266422.5 #M/H

VELOCITY = 99 F/S
SPEED = 67.5 M/H

PRINCIPAL DIRECTION OF FORCE
PDOF(A1) = 0 DEGREES

CHANGE OF K-ENERGY
DELTA KE = 49024.97

CHANGE OF MOMENTUM (IMPULSE)
MOMENTUM = 111631.1 #F/S
MOMENTUM = 76112.11 #M/H

CHANGE OF SPEED
VELOCITY = 28.2825 F/S
SPEED = 19.2835 M/H

IMPACT: AUDI 1

K-ENERGY = 992930.3

MOMENTUM = 502384.1 #F/S
MOMENTUM = 342534.6 #M/H

VELOCITY = 127.2825 F/S
SPEED = 86.7835 M/H

INTERCEPT (PRE-IMPACT)

MOMENTUM = 763509.4 #F/S
MOMENTUM = 520574.6 #M/H

FORD 4

WEIGHT = 4451

ANGLE 2 = 0 DEG
ANGLE 4 = 0 DEG

POST-IMPACT DATA

K-ENERGY = 484737.7

MOMENTUM = 372756.4 #F/S
MOMENTUM = 254152.1 #M/H

VELOCITY = 83.7466 F/S
SPEED = 57.1 M/H

PRINCIPAL DIRECTION OF FORCE
PDOF(A2) = 180 DEGREES

CHANGE OF K-ENERGY
DELTA KE = 43473.71

CHANGE OF MOMENTUM (IMPULSE)
MOMENTUM = 111631.1 #F/S
MOMENTUM = 76112.09 #M/H

CHANGE OF SPEED
VELOCITY = 25.08 F/S
SPEED = 17.1 M/H

IMPACT: FORD 2

K-ENERGY = 237878.2

MOMENTUM = 261125.3 #F/S
MOMENTUM = 178040 #M/H

VELOCITY = 58.6666 F/S
SPEED = 40 M/H

SEPARATION (POST IMPACT)

MOMENTUM = 763509.4 #F/S
MOMENTUM = 520574.6 #M/H

KINETIC ENERGY (MOTION)
ENERGY(M)= 1.47697E+07 IN*LB
ENERGY(M)= 1.302515E+07 IN*LB
ENERGY(M)= 1230808 FT*LB

ACTUAL SHARED ENERGY (DAMAGE)
ENERGY(A)= 1744548 IN*LB
ENERGY(A)= 145379 FT*LB

INTERCEPT (CLOSURE)
ANGLE (I)= 0 DEGREES

VELOCITY = 68.6158 F/S
SPEED = 46.7835 M/H

COEFFICIENT OF RESTITUTION
CoR _(Emr/Emd) = .2223

KINETIC ENERGY (MOTION)

ENERGY(M)= 1085429 FT*LB

MAXIMUM ENERGY (DAMAGE)
ENERGY(M)= 1835241 IN*LB
ENERGY(M)= 152936.7 FT*LB

SEPARATION
ANGLE (S)= 0 DEGREES

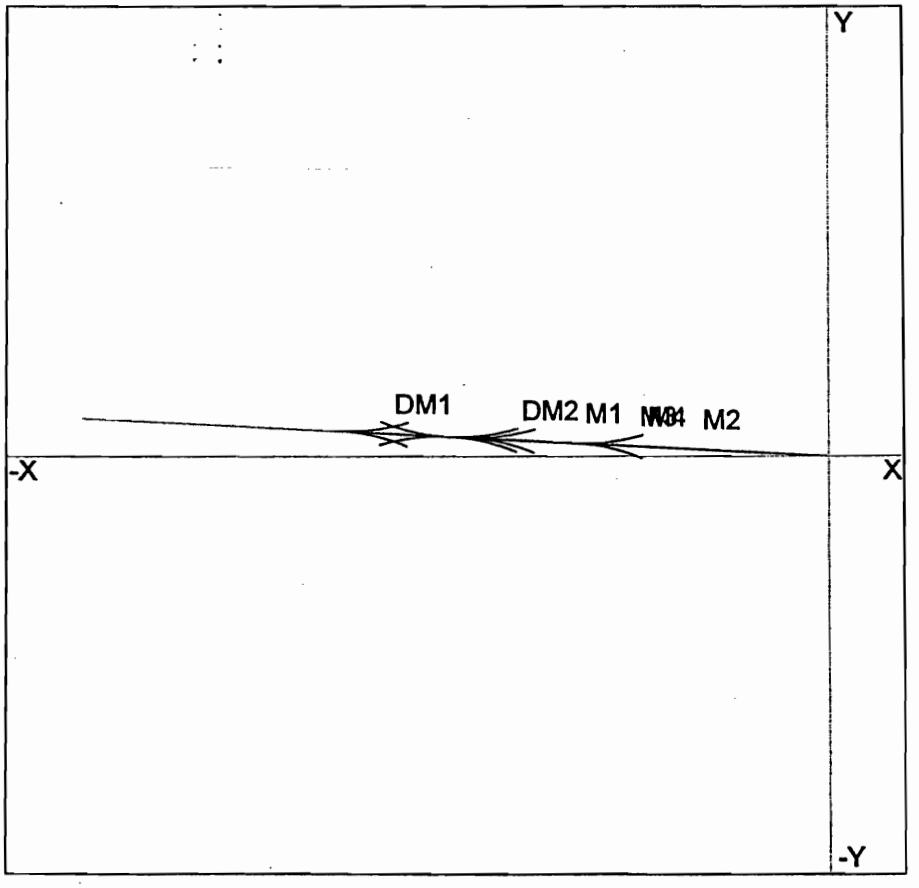
VELOCITY = 15.2533 F/S
SPEED = 10.4 M/H

COEFFICIENT OF RESTITUTION
CoR (Ss/Sc) = .2223

Linear Momentum

File Name :	03-865.ALM	Date :	7/7/2003
Project Name :		File Number :	
Desc :			

DATA			
Vehicle	Audi	Ford	
Weight	3947	4451	lb
Entry Angle	177.0	177.0	deg
Departure Angle	177.0	177.0	deg
Departure Speed	67.5	57.1	mph
RESULTS			
Entry Speed	86.8	40.0	mph
Speed Change	19.3	17.1	mph
Global Force Angle	357.0	177.0	deg
PDOF	0.0	-180.0	deg



Licensed to :	[redacted]
Organization :	Barnstable Reconstruction
Serial Number :	LM101-148-144-119081

LINEAR MOMENTUM – 45 MPH

AUDI 3

WEIGHT = 3947

ANGLE 1 = 0 DEG
ANGLE 3 = 0 DEG

POST-IMPACT DATA

K-ENERGY = 600691.7

MOMENTUM = 390753 #F/S
MOMENTUM = 266422.5 #M/H

VELOCITY = 99 F/S
SPEED = 67.5 M/H

PRINCIPAL DIRECTION OF FORCE
PDOF(A1) = 0 DEGREES

CHANGE OF K-ENERGY
DELTA KE = 24546.87

CHANGE OF MOMENTUM (IMPULSE)
MOMENTUM = 78990.44 #F/S
MOMENTUM = 53857.12 #M/H

CHANGE OF SPEED
VELOCITY = 20.0127 F/S
SPEED = 13.645 M/H

IMPACT: AUDI 1

K-ENERGY = 868097.4

MOMENTUM = 469743.4 #F/S
MOMENTUM = 320279.6 #M/H

VELOCITY = 119.0127 F/S
SPEED = 81.145 M/H

INTERCEPT (PRE-IMPACT)

MOMENTUM = 763509.4 #F/S
MOMENTUM = 520574.6 #M/H

FORD 4

WEIGHT = 4451

ANGLE 2 = 0 DEG
ANGLE 4 = 0 DEG

POST-IMPACT DATA

K-ENERGY = 484737.7

MOMENTUM = 372756.4 #F/S
MOMENTUM = 254152.1 #M/H

VELOCITY = 83.7466 F/S
SPEED = 57.1 M/H

PRINCIPAL DIRECTION OF FORCE
PDOF(A2) = 180 DEGREES

CHANGE OF K-ENERGY
DELTA KE = 21767.34

CHANGE OF MOMENTUM (IMPULSE)
MOMENTUM = 78990.41 #F/S
MOMENTUM = 53857.1 #M/H

CHANGE OF SPEED
VELOCITY = 17.7466 F/S
SPEED = 12.1 M/H

IMPACT: FORD 2

K-ENERGY = 301064.5

MOMENTUM = 293766 #F/S
MOMENTUM = 200295 #M/H

VELOCITY = 66 F/S
SPEED = 45 M/H

SEPARATION (POST IMPACT)

MOMENTUM = 763509.4 #F/S
MOMENTUM = 520574.6 #M/H

KINETIC ENERGY (MOTION)
ENERGY(M)= 1.402994E+07 IN*LB
ENERGY(M)= 1.302515E+07 IN*LB
ENERGY(M)= 1169162 FT*LB

ACTUAL SHARED ENERGY (DAMAGE)
ENERGY(A)= 1004790 IN*LB
ENERGY(A)= 83732.5 FT*LB

INTERCEPT (CLOSURE)
ANGLE (I)= 0 DEGREES

VELOCITY = 53.0127 F/S
SPEED = 36.145 M/H

COEFFICIENT OF RESTITUTION
CoR _(Emr/Emd) = .2877

KINETIC ENERGY (MOTION)

ENERGY(M)= 1085429 FT*LB

MAXIMUM ENERGY (DAMAGE)
ENERGY(M)= 1095482 IN*LB
ENERGY(M)= 91290.2 FT*LB

SEPARATION
ANGLE (S)= 0 DEGREES

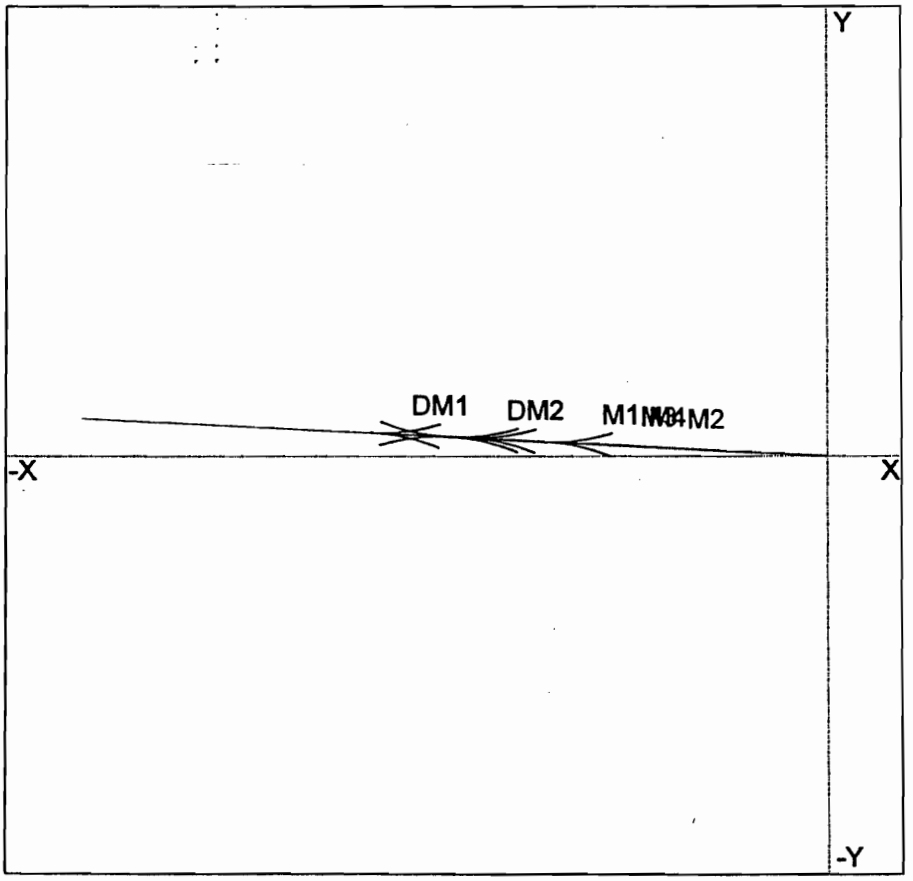
VELOCITY = 15.2533 F/S
SPEED = 10.4 M/H

COEFFICIENT OF RESTITUTION
CoR (Ss/Sc) = .2877

Linear Momentum

File Name :	03-865.ALM	Date :	7/7/2003
Project Name :		File Number :	
Desc :			

DATA			
Vehicle	Audi	Ford	
Weight	3947	4451	lb
Entry Angle	177.0	177.0	deg
Departure Angle	177.0	177.0	deg
Departure Speed	67.5	57.1	mph
RESULTS			
Entry Speed	81.1	45.0	mph
Speed Change	13.6	12.1	mph
Global Force Angle	357.0	177.0	deg
PDOF	0.0	-180.0	deg



Licensed to :	[redacted]
Organization :	Barnstable Reconstruction
Serial Number :	LM101-148-144-119081

Equation Worksheet

File Name :	03-865-A AEO	Date :	7/9/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	TWO VEHICLE COLLISION		

Equation # 90 - Total D from P/R Time, Speeds & Drag f

$$Dt = 1.467 So\ tr + \frac{Sf^2 - So^2}{30\ f}$$

$$(458.6)_{ft} = 1.467(50.0)_{mph}(3.00)_{sec} + \frac{(0.0)^2_{mph} - (50.0)^2_{mph}}{30\ (-0.35)_{g's}}$$

Dt = Total Distance in ft
So = Initial speed in mph
tr = P/R Time in sec
Sf = Final speed in mph
f = Accel factor (inc slope & braking eff)

Table of Equation 90 - Total D from P/R Time, Speeds & Drag f

P/R Time, tr sec

Acc Factor, f g's	2.00	2.50	3.00	3.50
-0.20	564.2	600.9	637.5	674.2
-0.22	526.2	562.9	599.6	636.2
-0.24	494.6	531.3	567.9	604.6
-0.26	467.8	504.5	541.2	577.8
-0.28	444.9	481.6	518.2	554.9
-0.30	425.0	461.7	498.4	535.0
-0.32	407.6	444.3	481.0	517.6
-0.34	392.3	428.9	465.6	502.3
-0.36	378.6	415.3	452.0	488.6
-0.38	366.4	403.1	439.8	476.4
-0.40	355.4	392.1	428.8	465.4

Fixed Variables : Initial Speed, So = 50 mph Final Speed, Sf = 0.0 mph

Licensed to :	Daniel James Parkka
Organization :	Barnstable Reconstruction
Serial Number :	EQ200-157-144-115434

Equation Worksheet

File Name :	03-865-A AEQ	Date :	7/9/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	TWO VEHICLE COLLISION		

Equation # 90 - Total D from P/R Time, Speeds & Drag f

$$Dt = 1.467 So\ tr + \frac{Sf^2 - So^2}{30\ f}$$

$$(458.6)_{ft} = 1.467(50.0)_{mph}(3.00)_{sec} + \frac{(0.0)^2_{mph} - (50.0)^2_{mph}}{30\ (-0.35)_{g's}}$$

Dt = Total Distance in ft
So = Initial speed in mph
tr = P/R Time in sec
Sf = Final speed in mph
f = Accel factor (inc slope & braking eff)

Table of Equation 90 - Total D from P/R Time, Speeds & Drag f

P/R Time, tr sec

Acc Factor, f g's	2.00	2.50	3.00	3.50
-0.20	470.2	503.2	536.2	569.2
-0.22	439.5	472.5	505.5	538.5
-0.24	413.8	446.8	479.8	512.8
-0.26	392.2	425.2	458.2	491.2
-0.28	373.6	406.6	439.6	472.6
-0.30	357.5	390.5	423.5	456.5
-0.32	343.4	376.4	409.4	442.4
-0.34	330.9	363.9	396.9	429.9
-0.36	319.9	352.9	385.9	418.9
-0.38	310.0	343.0	376.0	409.0
-0.40	301.1	334.1	367.1	400.1

Fixed Variables : Initial Speed, So = 45 mph Final Speed, Sf = 0.0 mph

Equation Worksheet

File Name :	UNTITLED.AEQ	Date :	7/9/2003
Project Name :	[redacted]	File Number :	03-865-AC
Desc :	TWO VEHICLE COLLISION		

Equation # 95 - Start Speed from Total D, Final Speed, P/R T & f

$$So = 21.95ftr + \sqrt{(21.95ftr)^2 + Sf^2 - 30\,fDt}$$

$$(79.3) = 21.95(-0.35)(3.00) + \sqrt{(21.95(-0.35)(3.00))^2 + 1.467(0.0)^2 - 30\,(-0.35)(950.0)}$$

mph g's sec mph ft

So = Initial speed in mph
f = Accel factor (inc slope & braking eff)
tr = P/R Time in sec
Sf = Final speed in mph
Dt = Total Distance in ft

Table of Equation 95 - Start Speed from Total D, Final Speed, P/R T & f

P/R Time, tr sec

Acc Factor, f g's	2.00	2.50	3.00	3.50
-0.20	67.1	65.2	63.4	61.6
-0.22	70.0	67.9	65.9	64.0
-0.24	72.8	70.5	68.3	66.2
-0.26	75.3	72.9	70.6	68.3
-0.28	77.8	75.2	72.7	70.3
-0.30	80.1	77.4	74.7	72.2
-0.32	82.4	79.4	76.6	73.9
-0.34	84.5	81.4	78.5	75.6
-0.36	86.6	83.3	80.2	77.2
-0.38	88.6	85.2	81.9	78.8

Fixed Variables : Final Speed, Sf = 0.0 mph Total Distance, Dt = 950.0 ft

VINassist(R)
(C) by NICB 1991
VIN - WAUVC68E43A[redacted]

DIGIT	DESCRIPTION	MEANING
W	Country of Origin	GERMANY
AU	Manufacturer	AUDI AUDI GERMANY PASSENGER CA
V	Series	A6 AVANT QUAT./A4 AVANT QUAT.-4D
C	Engine	1.8L 4 CYL 180HP(TT) 170HP(A4)
6	Restraint System	DR/PASS FRONT+SD+SD CRTN AIR BAG
8E	Model	A4
4	Check Digit	CHECK DIGIT VALID
3	Year	2003
A	Assembly Plant	INGOLSTADT, GERMANY
144145	Sequence Number	IN RANGE

VIN indicates a 2003 AUDI GERMANY PASSENGER CAR A4

VIN Passed Test

EXPERT AUTOSTATS
Ver. 4.3w

DANIEL J. PARKKA
PARKKA COLLISION CONSULTANTS

WEST BARNSTABLE MA 02668

07-02-2003

2003 AUDI A4 AVANT QUATTRO (L4) 4DR WAGON

CURB WEIGHT:	3406 lbs.	1545 kg.
Curb Weight Distribution -	Front: 58 %	Rear: 42 %
Gross Vehicle Weight Rating:	4927 lbs.	2235 kg.
Number of Tires on Vehicle:	4	
Drive Wheels:	All Wheel Drive	

HORIZONTAL DIMENSIONS

	Inches	Feet	Meters
Total Length	179	14.92	4.55
Wheelbase:	104	8.67	2.64
Front Bumper to Front Axle	36	3.00	0.91
Front Bumper to Front of Front Well	21	1.75	0.53
Front Bumper to Front of Hood	6	0.50	0.15
Front Bumper to Base of Windshield	46	3.83	1.17
Front Bumper to Top of Windshield	75	6.25	1.90
Rear Bumper to Rear Axle	39	3.25	0.99
Rear Bumper to Rear of Rear Well	24	2.00	0.61
Rear Bumper to Rear of Trunk	4	0.33	0.10
Rear Bumper to Base of Rear Window	8	0.67	0.20

WIDTH DIMENSIONS

Maximum Width	70	5.83	1.78
Front Track	59	4.92	1.50
Rear Track	58	4.83	1.47

VERTICAL DIMENSIONS

	Inches	Feet	Meters
Height	56	4.67	1.42
Ground to:			
Front Bumper (Top)	20	1.67	0.51
Headlight - center	24	2.00	0.61
Hood - top front	28	2.33	0.71
Base of windshield	36	3.00	0.91
Rear Bumper - top	22	1.83	0.56
Trunk - top rear	38	3.17	0.97
Base of rear window	39	3.25	0.99

Reg. To: PARKKA COLLISION CONSULTANTS S/N:03R-930714AA03302

2003 AUDI A4 AVANT QUATTRO (L4) 4DR WAGON

INTERIOR DIMENSIONS

	Inches	Feet	Meters
Front Seat Shoulder Width	55	4.58	1.40
Front Seat to Headliner	38	3.17	0.97
Front Leg - seatback to floor (max)	41	3.42	1.04
Rear Seat Shoulder Width	53	4.42	1.35
Rear Seat to Headliner	37	3.08	0.94
Rear Leg - seatback to floor (min)	33	2.75	0.84

Seatbelts: 3pt - front and rear
Airbags: FRONT SEAT AIRBAGS + SIDE AIRBAGS

STEERING DATA

Turning Circle (Diameter)	432	36.00	10.97
Steering Ratio:	__.__:1		
Wheel Radius:	12	1.00	0.30
Tire Size (OEM):	P205/65R15		

ACCELERATION & BRAKING INFORMATION

Brake Type: ALL DISC
ABS System: ALL WHEEL ABS

Braking, 60 mph -> 0 (Hard pedal, no skid, dry pavement):
d = 116 ft t = 2.6 sec. a =-33.3 ft/sec/sec G-force = -1.03

ACCELERATION:

0->30 mph	t = 2.2 sec.	a = 20.0 ft/sec/sec	G-force =	0.62
0->60 mph	t = 7.0 sec.	a = 12.6 ft/sec/sec	G-force =	0.39
45->65 mph	t = 3.8 sec.	a = 7.7 ft/sec/sec	G-force =	0.24

Transmission Type: 5spd MANUAL

NOTES:

Federal Bumper Standard Requirements = 2.5 MPH
This vehicles Rated Bumper Strength: 2.5 mph

N.S.D.C. = 2003 - 2003

Reg. To: PARKKA COLLISION CONSULTANTS S/N:03R-930714AA03302

2003 AUDI A4 AVANT QUATTRO (L4) 4DR WAGON

OTHER INFORMATION

TIP-OVER STABILITY RATIO = 1.33 STABLE
NHTSA Star Rating (calculated) ****

CENTER OF GRAVITY (No Load):

Inches behind front axle	=	43.68
Inches in front of rear axle	=	60.32
Inches from side of vehicle	=	35.00
Inches from ground	=	22.09
Inches from front corner	=	87.03
Inches from rear corner	=	105.31
Inches from front bumper	=	79.68
Inches from rear bumper	=	99.32

MOMENTS OF INERTIA APPROXIMATIONS (No Load):

YAW MOMENT OF INERTIA	=	2302.18	lb-ft-sec^2
PITCH MOMENT OF INERTIA	=	2222.94	lb-ft-sec^2
ROLL MOMENT OF INERTIA	=	463.08	lb-ft-sec^2

FRONT PROFILE INFORMATION

ANGLE FRONT BUMPER TO HOOD FRONT	=	53.1	deg
ANGLE FRONT OF HOOD TO WINDSHIELD BASE	=	11.3	deg
ANGLE FRONT OF HOOD TO WINDSHIELD TOP	=	20.6	deg
ANGLE OF WINDSHIELD	=	31.8	deg
ANGLE OF STEERING TIRES AT MAX TURN	=	27.6	deg

FIRST APPROXIMATION CRUSH FACTORS:

Speed Equivalent (mph) of Kinetic Energy (KE) used in causing crush or indentation may be evaluated using the following formula, the appropriate Crush Factor (CF), and Maximum Indentation Depth (MID), in feet:

V(mph) = Sqr root of (30 * CF * MID)

KE Equivalent Speed (Front/Rear/Side) = 21 CF

Bullet vehicle IMPACT SPEED estimation based on TARGET VEHICLE damage ONLY = 27 CF
(Tested for Rear/Side Impact only)

These CF values are based upon analysis of NHTSA Barrier Crash data, and from over 1000 vehicle accidents where independant evaluation of speed was possible. (These are NOT 'A', 'B', 'C', or 'G' values)

The Rear Impact data with more than 2-3 inches of crush damage should be looked at carefully, since some vehicles have very weak trunk & fender strength. Therefore, on some cars, esp. GM, your estimate from the rear crush data may be high by as much as 4-5 mph (on a crush of 18 inches).

Reg. To: PARKKA COLLISION CONSULTANTS S/N:03R-930714AA03302

VINassist(R)
(C) by NICB 1991
VIN - 1FMZU34E3WZ[redacted]

DIGIT	DESCRIPTION	MEANING
1	Country of Origin	UNITED STATES
F	Manufacturer	FORD FORD
M	Vehicle Type	MULTI PURPOSE VEHICLE
Z	Gross Vehicle Weight	5,001-6,000(2GN AB)/55,001 & OV
U34	Series	EXPLORER XL 4X4 4-DOOR
E	Engine	4.0L EFI-SOHC V-6/8.3L CB.3 CUMM
3	Check Digit	CHECK DIGIT VALID
W	Year	1998
Z	Assembly Plant	ST. LOUIS: HAZELWOOD, MO
B07157	Sequence Number	IN RANGE

VIN indicates a 1998 FORD EXPLORER XL 4X4 4-DOOR

VIN Passed Test

EXPERT AUTOSTATS
Ver. 4.3w

DANIEL J. PARKKA
PARKKA COLLISION CONSULTANTS

WEST BARNSTABLE MA 02668

07-03-2003

1998 FORD EXPLORER 4DR 4X4 UTILITY

CURB WEIGHT:	4146 lbs.	1881 kg.
Curb Weight Distribution -	Front: 54 %	Rear: 46 %
Gross Vehicle Weight Rating:	4700 lbs.	2132 kg.
Number of Tires on Vehicle:	4	
Drive Wheels:	4 Wheel Drive	

HORIZONTAL DIMENSIONS

	Inches	Feet	Meters
Total Length	189	15.75	4.80
Wheelbase:	112	9.33	2.84
Front Bumper to Front Axle	35	2.92	0.89
Front Bumper to Front of Front Well	17	1.42	0.43
Front Bumper to Front of Hood	7	0.58	0.18
Front Bumper to Base of Windshield	53	4.42	1.35
Front Bumper to Top of Windshield	74	6.17	1.88
Rear Bumper to Rear Axle	42	3.50	1.07
Rear Bumper to Rear of Rear Well	26	2.17	0.66
Rear Bumper to Rear of Trunk	5	0.42	0.13
Rear Bumper to Base of Rear Window	6	0.50	0.15

WIDTH DIMENSIONS

Maximum Width	70	5.83	1.78
Front Track	59	4.92	1.50
Rear Track	59	4.92	1.50

VERTICAL DIMENSIONS

	Inches	Feet	Meters
Height	67	5.58	1.70
Ground to:			
Front Bumper (Top)	27	2.25	0.69
Headlight - center	34	2.83	0.86
Hood - top front	40	3.33	1.02
Base of windshield	48	4.00	1.22
Rear Bumper - top	24	2.00	0.61
Trunk - top rear	39	3.25	0.99
Base of rear window	45	3.75	1.14

Reg. To: PARKKA COLLISION CONSULTANTS S/N:03R-930714AA03302

1998 FORD EXPLORER 4DR 4X4 UTILITY

INTERIOR DIMENSIONS

	Inches	Feet	Meters
Front Seat Shoulder Width	56	4.67	1.42
Front Seat to Headliner	40	3.33	1.02
Front Leg - seatback to floor (max)	42	3.50	1.07
Rear Seat Shoulder Width	58	4.83	1.47
Rear Seat to Headliner	39	3.25	0.99
Rear Leg - seatback to floor (min)	37	3.08	0.94

Seatbelts: 3pt - front and rear
Airbags: FRONT SEAT AIRBAGS

STEERING DATA

Turning Circle (Diameter)	420	35.00	10.67
Steering Ratio:	17.00:1		
Wheel Radius:	13	1.08	0.33
Tire Size (OEM):	P225/70R15		

ACCELERATION & BRAKING INFORMATION

Brake Type: ALL DISC
ABS System: ABS

Braking, 60 mph -> 0 (Hard pedal, no skid, dry pavement):
d = 129 ft t = 2.9 sec. a =-30.0 ft/sec/sec G-force = -0.93

ACCELERATION:

0->30 mph	t = 3.0 sec.	a = 14.7 ft/sec/sec	G-force =	0.46
0->60 mph	t = 8.2 sec.	a = 10.7 ft/sec/sec	G-force =	0.33
45->65 mph	t = 6.4 sec.	a = 4.6 ft/sec/sec	G-force =	0.14

Transmission Type: 5spd MANUAL

NOTES:

Federal Bumper Standard Requirements = NO REQUIREMENT

N.S.D.C. = 1998 - 2001

Reg. To: PARKKA COLLISION CONSULTANTS S/N:03R-930714AA03302

1998 FORD EXPLORER 4DR 4X4 UTILITY

OTHER INFORMATION

TIP-OVER STABILITY RATIO = 1.10 REASONABLY STABLE
NHTSA Star Rating (calculated) **

CENTER OF GRAVITY (No Load):

Inches behind front axle	= 51.52
Inches in front of rear axle	= 60.48
Inches from side of vehicle	= 35.00
Inches from ground	= 26.73
Inches from front corner	= 93.33
Inches from rear corner	= 108.29
Inches from front bumper	= 86.52
Inches from rear bumper	= 102.48

MOMENTS OF INERTIA APPROXIMATIONS (No Load):

YAW MOMENT OF INERTIA	= 2927.38	lb-ft-sec^2
PITCH MOMENT OF INERTIA	= 2986.52	lb-ft-sec^2
ROLL MOMENT OF INERTIA	= 677.12	lb-ft-sec^2

FRONT PROFILE INFORMATION

ANGLE FRONT BUMPER TO HOOD FRONT	= 61.7	deg
ANGLE FRONT OF HOOD TO WINDSHIELD BASE	= 9.9	deg
ANGLE FRONT OF HOOD TO WINDSHIELD TOP	= 20.5	deg
ANGLE OF WINDSHIELD	= 39.0	deg
ANGLE OF STEERING TIRES AT MAX TURN	= 30.6	deg

FIRST APPROXIMATION CRUSH FACTORS:

Speed Equivalent (mph) of Kinetic Energy (KE) used in causing crush or indentation may be evaluated using the following formula, the appropriate Crush Factor (CF), and Maximum Indentation Depth (MID), in feet:

V(mph) = Sqr root of (30 * CF * MID)

KE Equivalent Speed (Front/Rear/Side) = 21 CF

Bullet vehicle IMPACT SPEED estimation based on TARGET VEHICLE damage ONLY = 27 CF
(Tested for Rear/Side Impact only)

These CF values are based upon analysis of NHTSA Barrier Crash data, and from over 1000 vehicle accidents where independant evaluation of speed was possible. (These are NOT 'A', 'B', 'C', or 'G' values)

The Rear Impact data with more than 2-3 inches of crush damage should be looked at carefully, since some vehicles have very weak trunk & fender strength. Therefore, on some cars, esp. GM, your estimate from the rear crush data may be high by as much as 4-5 mph (on a crush of 18 inches).

Reg. To: PARKKA COLLISION CONSULTANTS S/N:03R-930714AA03302

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **00T005000** FMVSS #:

Involves: **14400000** units manufactured FROM: TO:

Component: **TIRES:TREAD/BELT**

TIRE DESCRIPTION: FIRESTONE WILDERNESS AT, SIZE P235/75R15, PRODUCED AT THE DECATUR, ILLINOIS TIRE PLANT AND ALL FIRESTONE RADIAL ATX AND RADIAL ATX II TIRES, SIZE P235/75R15. OPERATION OF THESE TIRES AT LOW INFLATION PRESSURES, HIGH SPEED, AND IN HOT WEATHER, CAN CONTRIBUTE TO SEPARATION OF THE TIRE TREAD. IF THE TREAD SEPARATES FROM THE TIRE, THE DRIVER CAN LOSE CONTROL OF THE VEHICLE, POSSIBLY RESULTING IN A CRASH CAUSING INJURY OR DEATH. THE REPLACEMENT/REIMBURSEMENT PROGRAM FOR THIS CAMPAIGN EXPIRED ON AUGUST 29, 2001. HOWEVER, CUSTOMERS SHOULD CONTACT FIRESTONE CUSTOMER SERVICE AT 1-800-465-1904 FOR POSSIBLE ASSISTANCE.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **00V168000** FMVSS #: **108**

Involves: **20637** units manufactured FROM: TO:

Component: **EXTERIOR LIGHTING**

VEHICLE DESCRIPTION: MINI VANS, LIGHT PICKUP TRUCKS, AND SPORT UTILITY VEHICLES. OFF LEASE CANADIAN VEHICLES EQUIPPED WITH DAYTIME RUNNING LIGHTS WHICH MEET CANADIAN REQUIREMENTS AND NOT THE PHOTOMETRIC REQUIREMENTS OF FMVSS 108, "LAMPS, REFLECTIVE DEVICES, AND ASSOCIATED EQUIPMENT." ACCORDING TO FORD, THE VEHICLES WERE IMPORTED INTO THE U.S. ERRONEOUSLY. THE LIGHT GIVEN OFF FROM THE DAYTIME RUNNING LIGHTS IS BRIGHTER THAN ALLOWED BY U.S. STANDARDS. DEALERS WILL BE ADVISED TO DEACTIVATE THE RUNNING LIGHT FUNCTION AND TO COMPLETE ANY OUTSTANDING SAFETY RECALLS ON THESE VEHICLES.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **00V422000** FMVSS #:

Involves: **220000** units manufactured FROM: **19960529** TO: **19981020**

Component: **VEHICLE SPEED CONTROL**

VEHICLE DESCRIPTION: SPORT UTILITY VEHICLES EQUIPPED WITH 4.0L SOHC ENGINES AND STILL RETAIN THE ORIGINAL THROTTLE BODY (PART NUMBERS 97JF-9E926AB OR 97JF-9E926-AC). SOME OF THE ORIGINAL THROTTLE BODIES INSTALLED ALLOWED A GAP BETWEEN THE PLATE AND BORE TO BE BUILT TOO NARROW. THIS REDUCED CLEARANCE ALLOWED THE ENGINE DEPOSITS NORMALLY PRESENT IN THE THROTTLE BODY TO CONTACT OR BRIDGE THE GAP. IF THE ENGINE DEPOSITS BRIDGED THE GAP BETWEEN THE THROTTLE PLATE AND BORE AND THEN HARDENED, ON THE INITIAL APPLICATION OF THE ACCELERATOR PEDAL AFTER THE ENGINE HAS COOLED, THE OPERATOR WOULD NEED TO APPLY ADDITIONAL FORCE TO THE ACCELERATOR PEDAL TO BREAK THE BRIDGE. THIS COULD RESULT IN ENGINE SURGE WHEN THE ACCELERATOR PEDAL BREAKS FREE. DEALERS WILL REPLACE THE ORIGINAL THROTTLE BODIES.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **01X001000** FMVSS #:

Involves: **13000000** units manufactured FROM: TO:

Component: **TIRES:TREAD/BELT**

THIS IS NOT A SAFETY RECALL IN ACCORDANCE WITH THE SAFETY ACT. HOWEVER, IT IS DEEMED A SAFETY IMPROVEMENT CAMPAIGN BY THE AGENCY. EQUIPMENT DESCRIPTION:

FORD IS REPLACING ALL FIRESTONE WILDERNESS AT 15, 16, AND 17 INCH TIRES MOUNTED ON FORD TRUCKS AND SUVS. FORD REPORTS TREAD SEPARATION CAN OCCUR DUE TO A COMBINATION OF THE SENSITIVITY OF THE TIRE DESIGN TO STRESS, AGING, AND MANUFACTURING DIFFERENCES BETWEEN PLANTS. FORD IS REPLACING THESE TIRES TO PREVENT POSSIBLE PREMATURE TIRE FAILURE. VEHICLE DESCRIPTION: THE VEHICLES LISTED BELOW MAY HAVE BEEN ORIGINALLY EQUIPPED WITH FIRESTONE WILDERNESS AT TIRES OR MAY HAVE HAD WILDERNESS AT TIRES INSTALLED DURING THE FIRESTONE RECALL LAUNCHED IN AUGUST 2000. CERTAIN 1991 THROUGHT 2002 FORD EXPLORER CERTAIN 2001 THROUGHT 2002 EXPLORER SPORT, AND SPORT TRAC CERTAIN 1997 THROUGH 2002 MERCURY MOUNTAINEER CERTAIN 1991 THROUGH 2001 RANGER CERTAIN 1999 THROUGH 2001 EXPEDITION CERTAIN 1991 THROUGH 1994, AND 1997 MODEL YEAR F-SERIES CERTAIN 1991 THROUGH 1994 BRONCO NOTE: BOTH ORIGINAL EQUIPMENT AND REPLACEMENT TIRES ARE AFFECTED. SHOULD THE TREAD SEPARATE AT HIGHWAY SPEEDS, A VEHICLE CRASH COULD OCCUR, POSSIBLY RESULTING IN PERSONAL INJURY OR DEATH. THE REPLACEMENT/REIMBURSEMENT PROGRAM FOR THIS CAMPAIGN EXPIRED ON MARCH 31, 2002. HOWEVER, CUSTOMERS CAN CONTACT FORD AT 800-462-8782 FOR POSSIBLE ASSISTANCE.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **97V215000** FMVSS #: **114**

Involves: **1100** units manufactured FROM: **19970805** TO: **19970827**

Component: **ELECTRICAL SYSTEM:IGNITION:ANTI-THEFT CONTROLLER**

VEHICLE DESCRIPTION: MULTI-PURPOSE PASSENGER VEHICLES, EDDIE BAUER AND LIMITED EDITIONS. THE KEY-IN-IGNITION/DOOR OPEN WARNING CHIME MAY NOT FUNCTION WHEN THE DOOR IS OPENED. THIS DOES NOT FULLY COMPLY WITH FMVSS NO. 114, "THEFT PROTECTION." THE STANDARD SPECIFIED THAT A WARNING TO THE DRIVER SHALL BE ACTUATED WHENEVER THE KEY HAS BEEN LEFT IN THE LOCKING SYSTEM AND THE DRIVER'S DOOR IS OPENED. DEALERS WILL INSTALL A JUMPER WIRE TO PROVIDE THE NECESSARY GROUND CIRCUIT IN THESE VEHICLES.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **98V060000** FMVSS #:

Involves: **320000** units manufactured FROM: **19960801** TO: **19980201**

Component: **FUEL SYSTEM, GASOLINE:DELIVERY:HOSES, LINES/PIPING, AND FITTINGS**

VEHICLE DESCRIPTION: MULTI-PURPOSE PASSENGER VEHICLES EQUIPPED WITH 4.0L SINGLE OVERHEAD CAM ENGINES. THE ENGINE FUEL LINES CAN BE DAMAGED IF THE VEHICLE IS JUMP STARTED AND THE GROUND CABLE IS ATTACHED TO THE FUEL LINE BRACKET THAT IS LOCATED NEAR THE BATTERY. SINCE THE BRACKET IS NOT GROUNDED, THE STAINLESS STEEL FUEL LINE BRAID COULD ACT AS A GROUND POTENTIALLY OVERHEATING THE PTFE INNER LINER OF THE FUEL LINE RESULTING IN DAMAGE TO THE FUEL LINE. THE FUEL LINES CAN LEAK, AND IN THE PRESENCE OF AN IGNITION SOURCE, A FIRE COULD POTENTIALLY RESULT. DEALERS WILL INSTALL A WARNING LABEL ON THE FUEL LINE BRACKET ADVISING OWNERS NOT TO USE IT FOR A JUMP START GROUND. ALSO A REVISED BOLT WILL BE INSTALLED IN THE ALTERNATOR BRACKET TO PROVIDE A CONVENIENT JUMP START GROUND LOCATION.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **99V062001** FMVSS #:

Involves: **898739** units manufactured FROM: **19960529** TO: **19990304**

Component: **VEHICLE SPEED CONTROL**

VEHICLE DESCRIPTION: CERTAIN 1997-1999 RHD EXPLORER EQUIPPED WITH 4.0L OHV/SOHC ENGINES AND CRUISE CONTROL BUILT FROM MAY 29, 1996 THROUGH MARCH 4, 1999; 1998-1999 EXPLORER/MOUNTAINEERS EQUIPPED WITH 4.0L OHV/SOHC OR 5.0L ENGINES OR 1998-1999 RANGERS EQUIPPED WITH 2.5L, 3.0L FFV/EFI OR 4.0L ENGINES AND CRUISE CONTROL BUILT FROM JANUARY 5, 1998 THROUGH MARCH 4, 1999; 1998-1999 MUSTANGS EQUIPPED WITH 3.8L, 4.6L 2-VALVE OR 4-VALVE ENGINES AND CRUISE CONTROL BUILT FROM MARCH 2, 1998 THROUGH MARCH 4, 1999; 1999 F250/F350/F450/F550 (OVER 8,500 LBS.) TRUCKS EQUIPPED WITH 5.4L OR 6.8L ENGINES AND CRUISE CONTROL BUILT FROM MARCH 2, 1998 THROUGH MARCH 4, 1999; AND 1999 F-53 STRIPPED CHASSIS EQUIPPED WITH 5.4L OR 6.8L ENGINES AND CRUISE CONTROL BUILT FROM MARCH 2, 1998 THROUGH MARCH 4, 1999. A CRUISE CONTROL CABLE CAN INTERFERE WITH THE SPEED CONTROL SERVO PULLEY AND NOT ALLOW THE THROTTLE TO RETURN TO IDLE WHEN DISENGAGING THE CRUISE CONTROL. IF THE CRUISE CONTROL IS USED AND THIS CONDITION IS PRESENT, A STUCK THROTTLE COULD RESULT, WHICH COULD POTENTIALLY RESULT IN A CRASH. DEALERS WILL REPLACE THE CRUISE CONTROL CABLES. AT THE PRESENT TIME, THE REPLACEMENT CABLES ARE NOT AVAILABLE. CUSTOMERS ARE BEING ADVISED NOT TO USE THE CRUISE CONTROL SYSTEM UNTIL A REPLACEMENT CAN BE MADE.

Year: **1998** Make: **FORD** Model: **EXPLORER**

NHSTA Campaign #: **99V164000** FMVSS #:

Involves: **854288** units manufactured FROM: **19970425** TO: **19990517**

Component: **LATCHES/LOCKS/LINKAGES:HOOD:LATCH**

VEHICLE DESCRIPTION: SPORT UTILITY VEHICLES. THE SECONDARY HOOD LATCH MAY CORRODE AT THE LATCH PIVOT AND STICK IN THE OPEN POSITION. IF THIS OCCURS AND THE PRIMARY HOOD LATCH IS EITHER NOT ENGAGED OR IS RELEASED, A HOOD FLY-UP COULD OCCUR. DEALERS WILL INSTALL A SECONDARY HOOD LATCH WITH COMPONENTS THAT ARE COATED PRIOR TO ASSEMBLY FOR IMPROVED LATCH PIVOT CORROSION PROTECTION.

********** END OF REPORT **********

Daniel James Parkka
Parkka Collision Consultants

Daniel James Parkka

SUNBEAR III Report

Report generated
July 8, 2003

Case Number : 03-865-AC

Set Date — Event Date : Sunday - June 29, 2003 - Day #180 of the year

In 2003, Daylight Saving Time starts April 6 - ends October 26

Set Time — Event Time : 3:09:00 A.M. Eastern Daylight Time (7:09 A.M. June 29, 2003 U.T.C.)

Set Location — Event Longitude : -70.443467
Event Latitude : +41.640567

Cotuit, MA
02635

Magnetic Declination = -15.72°

	SUN POSITION	MOON POSITION
Angle from Vertical :	107.1°	101.9°
Angle from Horizontal :	-17.1°	-11.9°
Bearing from True North :	+34.4°	+37.7°
Bearing from Magnetic North :	+50.1°	+53.5°

Sun rises at : 05:09 Sets at : 20:20
Civil twilight starts at : 04:37 Ends at : 20:52
Nautical twilight starts at : 03:53 Ends at : 21:36
Astronomical twilight starts at : 03:01 Ends at : 22:28

Moon rises at : 3:12 A.M.
Sets at : 6:54 P.M.
Portion Moon Illuminated : 0 %

Daniel James Parkka

SUNBEAR III
Interval Report

Report generated on
July 8, 2003

Interval Start Time : 3:00:00 A.M.
Interval Start Date : June 29, 2003

for Longitude: -70.443467
Latitude : +41.640567

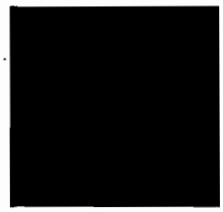
Number of Intervals : 15
Size of each Interval : 1 minute

		SUN		MOON		
Date	Time	Vertical Angle	Bearing	Vertical Angle	Bearing	% Illumination
6/29/2003	3:00	108.0	48.2	102.8	51.7	0%
	3:01	107.9	48.4	102.7	51.9	0%
	3:02	107.8	48.6	102.6	52.1	0%
	3:03	107.7	48.8	102.5	52.3	0%
	3:04	107.6	49.0	102.4	52.5	0%
6/29/2003	3:05	107.5	49.2	102.3	52.7	0%
	3:06	107.4	49.5	102.2	52.9	0%
	3:07	107.3	49.7	102.1	53.1	0%
	3:08	107.2	49.9	102.0	53.3	0%
	3:09	107.1	50.1	101.9	53.5	0%
6/29/2003	3:10	107.0	50.3	101.7	53.7	0%
	3:11	106.9	50.5	101.6	53.8	0%
	3:12	106.7	50.7	101.5	54.0	0%
	3:13	106.6	50.9	101.4	54.2	0%
	3:14	106.5	51.2	101.3	54.4	0%
6/29/2003	3:15	106.4	51.4	101.2	54.6	0%

Content-type: text/html

Virtual Reality Phase of the Moon

2003 June 29, 0 hrs ET



Current Weather Conditions:
Hyannis, Barnstable Municipal-Boardman Airport, MA, United States

(KHYA) 41-40-19N 070-16-11W 22M

Conditions at	Jun 29, 2003 - 07:56 AM EDT 2003.06.29 1156 UTC
Wind	Calm
Visibility	10 mile(s)
Sky conditions	clear
Temperature	68.0 F (20.0 C)
Dew Point	64.0 F (17.8 C)
Relative Humidity	87%
Pressure (altimeter)	30.18 in. Hg (1022 hPa)
Pressure tendency	0.02 inches (0.8 hPa) higher than three hours ago
ob	KHYA 291156Z 00000KT 10SM CLR 20/18 A3018 RMK AO2 SLP221 T02000178 10200 20172 53008

Maximum and Minimum Temperatures

Maximum Temperature F (C)	Minimum Temperature F (C)	
68.0 (20.0)	63.0 (17.2)	In the **6 hours** preceding Jun 29, 2003 - 07:56 AM EDT / 2003.06.29 1156 UTC
77.0 (25.0)	61.0 (16.1)	In the **24 hours** preceding Jun 29, 2003 - 12:56 AM EDT / 2003.06.29 0456 UTC

24 Hour Summary

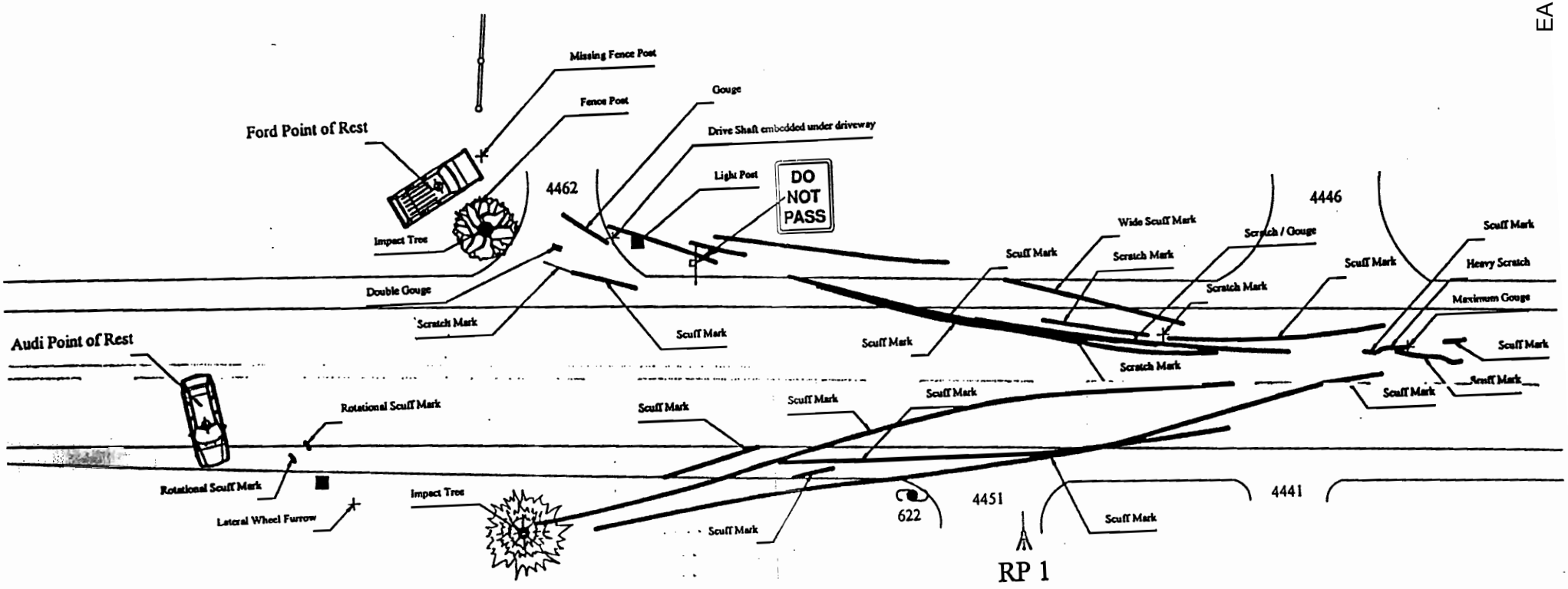
	Time EDT (UTC)	Temperature F (C)	Dew Point F (C)	Pressure Inches (hPa)	Wind MPH	Weather
Latest	8 AM (12) Jun 29	68.0 (20.0)	64.0 (17.8)	30.18 (1022)	Calm	
	7 AM (11) Jun 29	66.0 (18.9)	63.0 (17.2)	30.16 (1021)	Calm	
	6 AM (10) Jun 29	64.9 (18.3)	62.1 (16.7)	30.16 (1021)	WSW 5	
	5 AM (9) Jun 29	64.9 (18.3)	63.0 (17.2)	30.16 (1021)	SW 8	
	4 AM (8) Jun 29	64.0 (17.8)	61.0 (16.1)	30.15 (1020)	WSW 6	
	3 AM (7) Jun 29	64.0 (17.8)	61.0 (16.1)	30.15 (1020)	WSW 7	
	2 AM (6) Jun 29	63.0 (17.2)	60.1 (15.6)	30.14 (1020)	WSW 5	
	1 AM (5) Jun 29	63.0 (17.2)	60.1 (15.6)	30.14 (1020)	WSW 5	
	Midnight (4) Jun 29	63.0 (17.2)	60.1 (15.6)	30.14 (1020)	WSW 7	
	11 PM (3) Jun 28	64.9 (18.3)	61.0 (16.1)	30.13 (1020)	WSW 7	
	10 PM (2) Jun 28	66.9 (19.4)	63.0 (17.2)	30.12 (1019)	WSW 8	
	9 PM (1) Jun 28	69.1 (20.6)	63.0 (17.2)	30.12 (1019)	WSW 8	
	8 PM (0) Jun 28	71.1 (21.7)	61.0 (16.1)	30.1 (1019)	WSW 7	
	7 PM (23) Jun 28	72.0 (22.2)	61.0 (16.1)	30.09 (1018)	SSW 6	
	6 PM (22) Jun 28	75.0 (23.9)	62.1 (16.7)	30.07 (1018)	S 6	
	5 PM (21) Jun 28	75.9 (24.4)	60.1 (15.6)	30.06 (1017)	Calm	

4 PM (20) Jun 28	75.0 (23.9)	60.1 (15.6)	30.06 (1017)	Calm	
3 PM (19) Jun 28	75.0 (23.9)	59.0 (15.0)	30.05 (1017)	NNE 9	
2 PM (18) Jun 28	77.0 (25.0)	61.0 (16.1)	30.03 (1016)	NNE 12	
1 PM (17) Jun 28	72.0 (22.2)	61.0 (16.1)	30.02 (1016)	N 10	
Noon (16) Jun 28	72.0 (22.2)	61.0 (16.1)	30.01 (1016)	N 12	
11 AM (15) Jun 28	71.1 (21.7)	61.0 (16.1)	30 (1015)	N 12	
10 AM (14) Jun 28	69.1 (20.6)	61.0 (16.1)	29.99 (1015)	N 13	
Oldest 9 AM (13) Jun 28	69.1 (20.6)	60.1 (15.6)	29.98 (1015)	N 14	
Time EDT (UTC)	**Temperature F(C)**	**Dew Point F(C)**	**Pressure Inches(hPa)**	**Wind (MPH)**	**Weather**

The information presented here is taken from products produced by the U.S. National Weather Service and other national and international agencies

US Dept of Commerce
National Oceanic and Atmospheric Adminstration
National Weather Service
1325 East West Highway
Silver Spring, MD 20910
Page Author: Internet Services Group

EA12-005 000293LC


Missing Fence Post
Fence Post
Gouge
Drive Shaft embedded under driveway
Ford Point of Rest
Light Post
DO NOT PASS
4462
4446
Impact Tree
Wide Scuff Mark
Scratch / Gouge
Scuff Mark
Scuff Mark
Heavy Scratch
Scratch Mark
Scratch Mark
Maximum Gouge
Double Gouge
Scratch Mark
Scuff Mark
Scuff Mark
Scuff Mark
Audi Point of Rest
Scratch Mark
Scuff Mark
Rotational Scuff Mark
Scuff Mark
Scuff Mark
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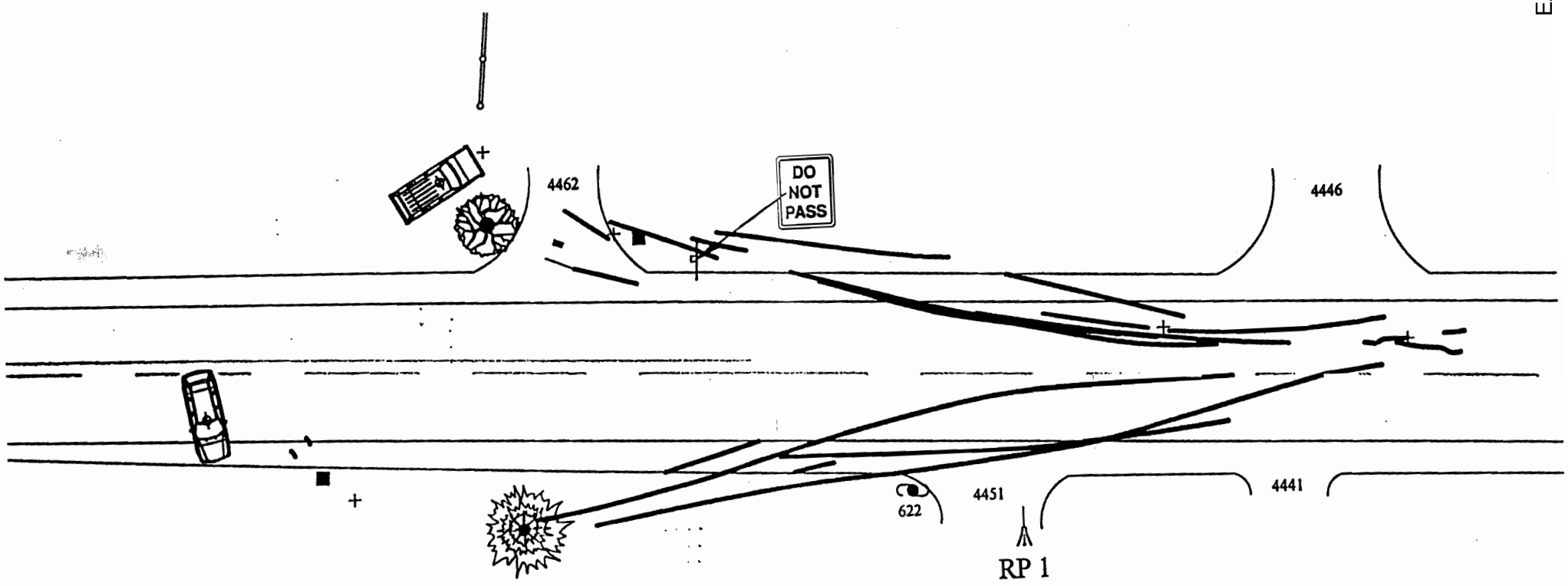
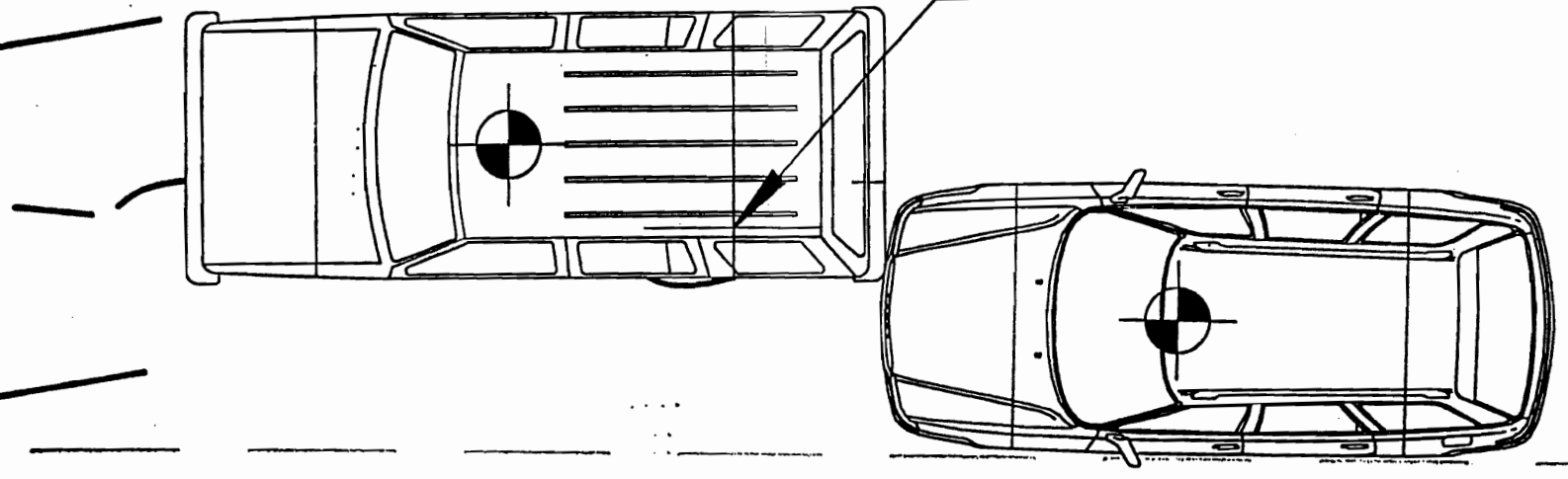
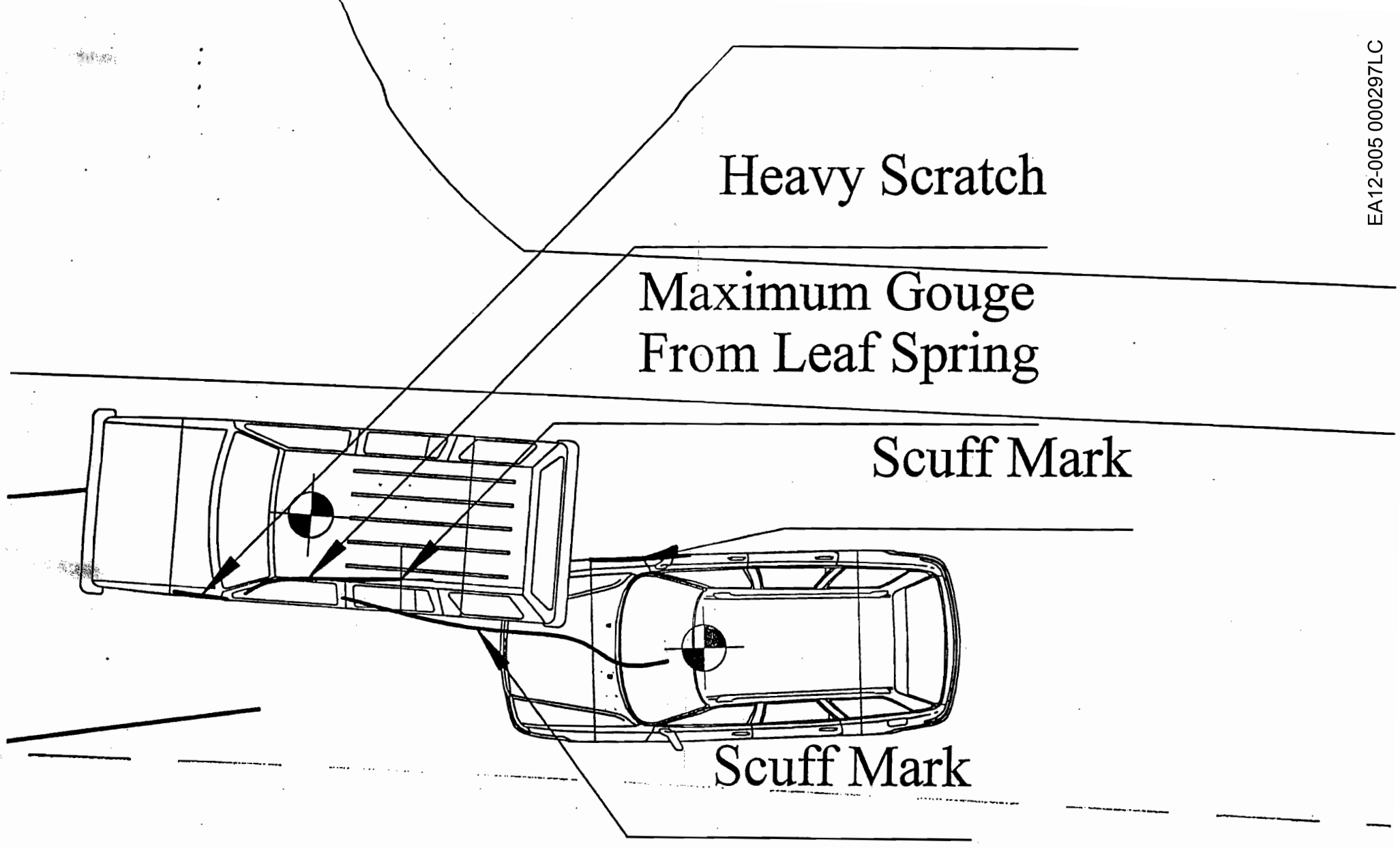
Rotational Scuff Mark
Impact Tree
Lateral Wheel Furrow
622
4451
4441
Scuff Mark
Scuff Mark
RP 1


4462
DO
NOT
PASS
4446
622
4451
4441
RP 1

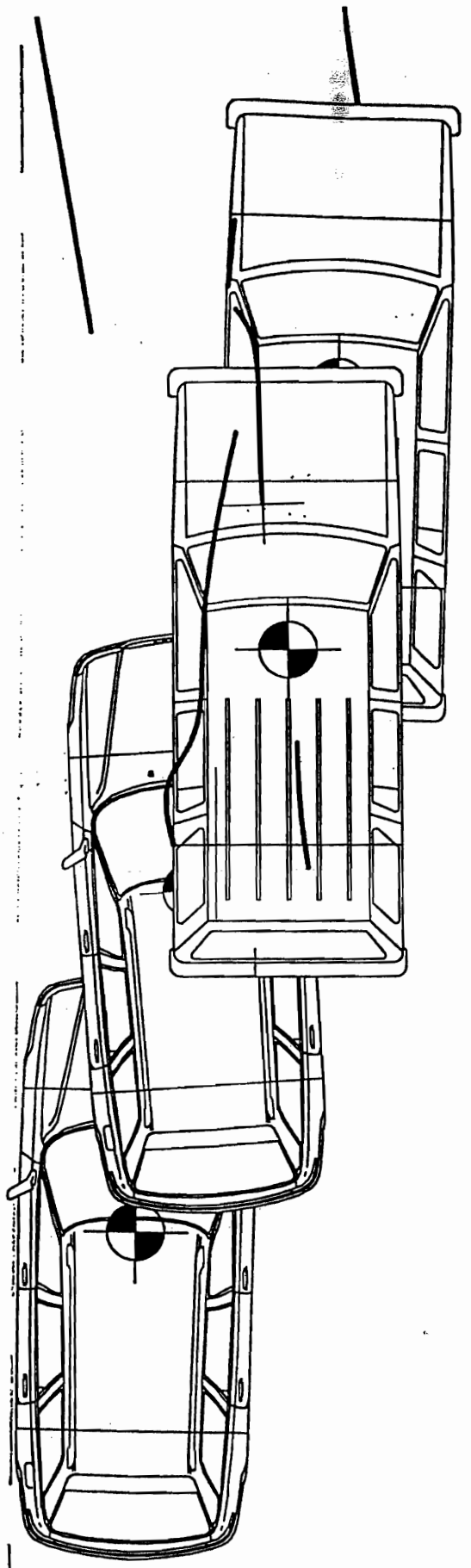
EA12-005 000296LC

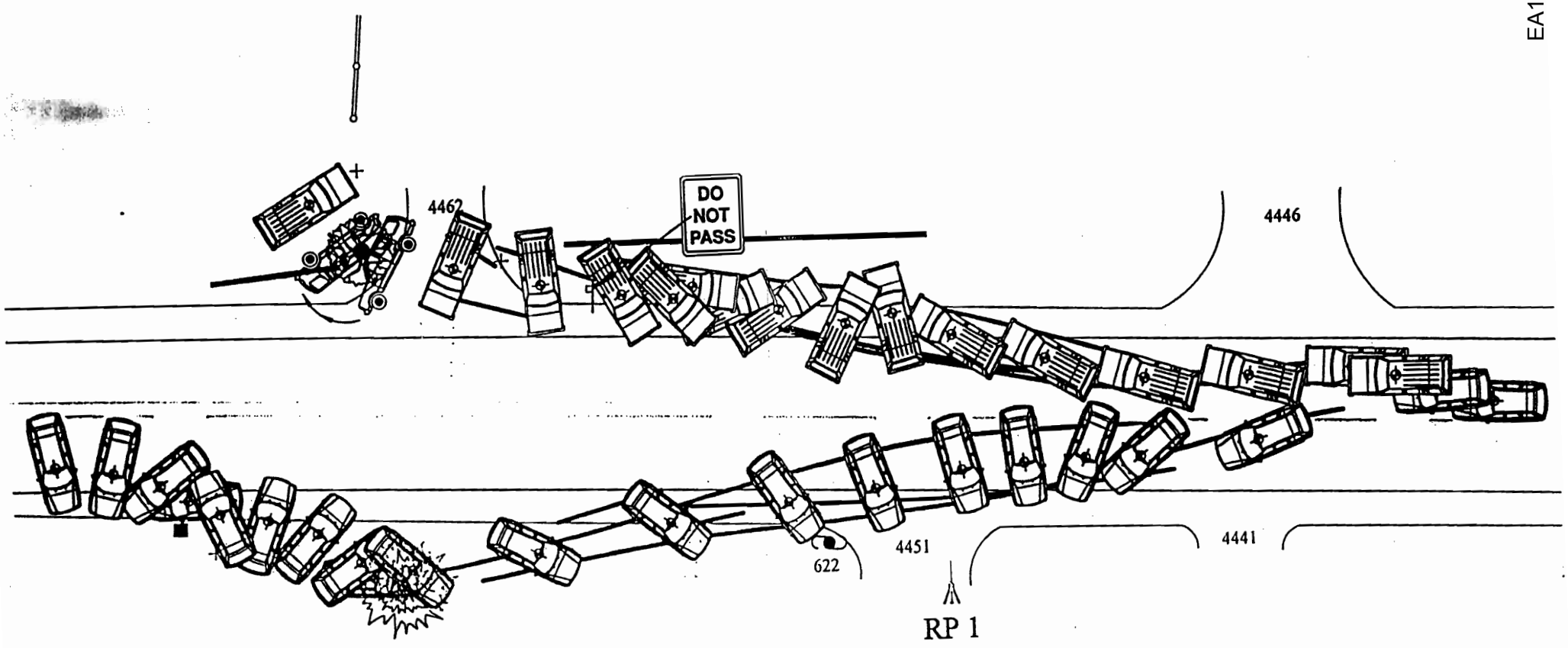
Leaf Spring Position

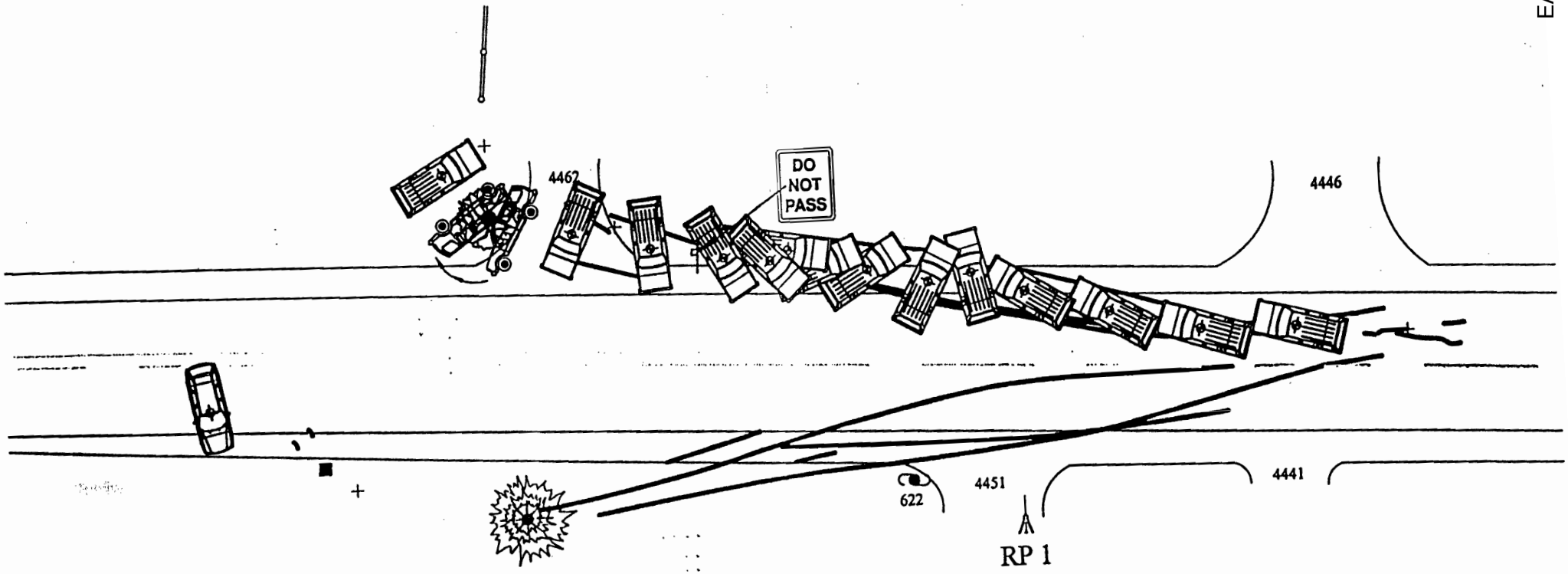


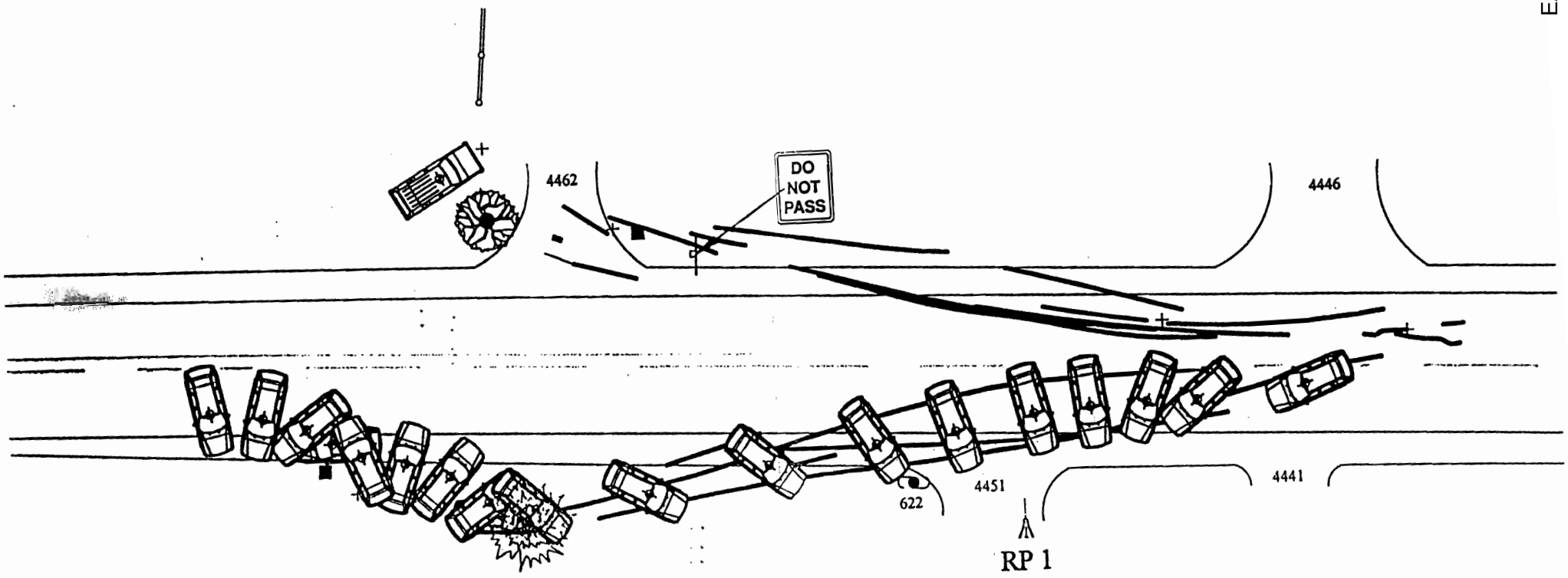


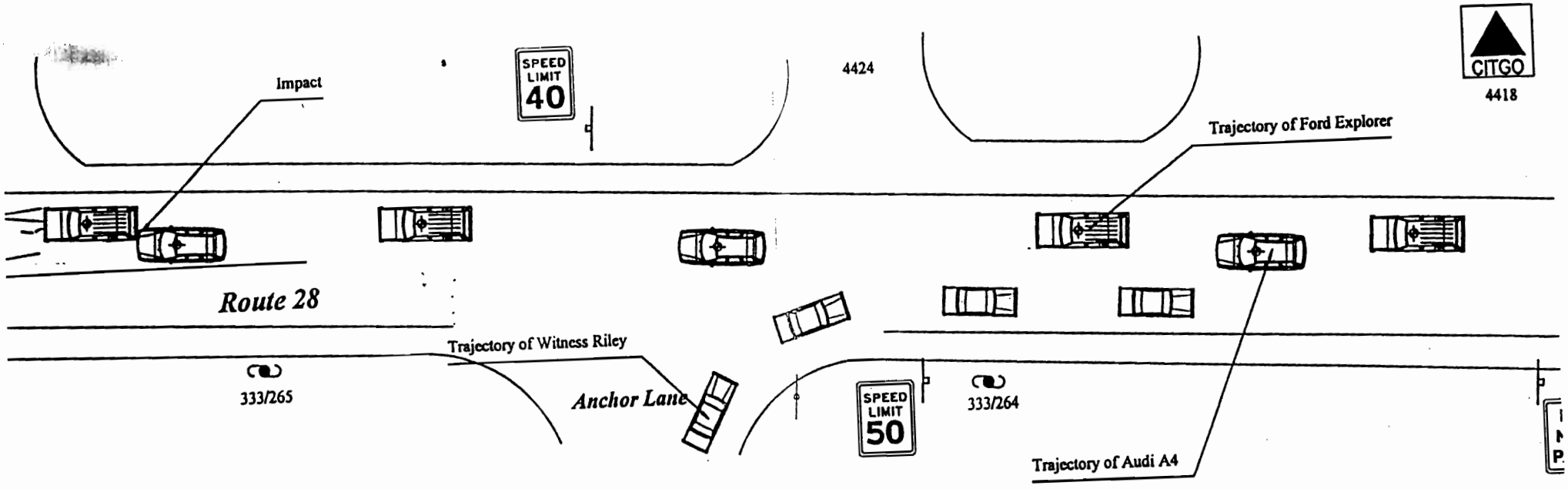
EA12-005 000297LC








4462
DO
NOT
PASS
4446
4451
4441
622
RP 1


Impact
SPEED LIMIT 40
4424
CITGO
4418
Trajectory of Ford Explorer
Route 28
Trajectory of Witness Riley
333/265
Anchor Lane
SPEED LIMIT 50
333/264
Trajectory of Audi A4

Commonwealth of Massachusetts
Motor Vehicle Crash Police Report

Date of Crash	Time of Crash	City/Town	Number Vehicles	Number Injured	Speed Limit	State Police	Local Police	MBTA Police	Other
06/ 29/2003	0309 24HR	COTUIT	2	3	40 Lat. Lon.	☐	☒	☐	

AT INTERSECTION: | **< LOCATION >** | **NOT AT INTERSECTION:**

Route# Direction Name of Roadway/Street
At
Route# Direction Name of Intersecting Roadway/Street
Also at Intersection with
Route# Direction Name of Intersecting Roadway/Street

Route# Direction 4418 Address # FALMOUTH RD RTE 28 Name of Roadway/Street
Feet [N S E W] of Mile Marker — — — • — or Exit Number
40 Feet [N S ☒ W] of 28 Route# ANCHOR LN Intersecting Roadway/Street
100 Feet [N ☒ E W] of SANTUIT GAS STATION Landmark

Please Select One of the Following: ☒ Vehicle 1 2 #Occupants ☐ Hit/Run ☐ Moped — 03-865-AC

License # [redacted] St MA DOB/Age 09/17/1960
Sex M Lic. Class D Lic. Restrictions 1 CDL Endorsement
Oper [redacted] Middle
Addr [redacted]
City MASHPEE State MA Zip [redacted]
Insurance Company HANOVER INS
Vehicle Travel Direction: [N ☒ S E W] Responding to Emergency? 2
Citation # (If Issued)
Viol. 1: Ch/Sec/Sub / Viol. 2: Ch/Sec/Sub /
Viol. 3: Ch/Sec/Sub / Viol. 4: Ch/Sec/Sub /

Reg [redacted] Reg Type PC Reg State MA
Veh Year 1998 Veh Make FORD Veh Config. 2
Owner [redacted] Middle
Addres [redacted]
City MASHPEE State MA Zip [redacted]
Vehicle Action Prior to Crash 1
Event Sequence 1 23 40 45
Most Harmful Event 45
Driver Contributing Code 1
Underride/Override 3 Towed 1

Damaged Area Code: (Circle Up to Three)
0 None
10 Undercarriage
11 Totaled
97 Other
99 Unknown

Please fill out for operator and all occupants involved

Name (Last First Middle)	Address	DOB/Age	Sex	26 Seat Pos.	27 Safety System	28 Airbag Status	29 Airbag Switch	30 Eject Code	31 Trap Code	32 Injury Status	33 Transp. Code	Medical Facility
Operator	See Above	---------	---	---	1	99	99	2	2	2	2	MASS GENERAL
NOREEN MARSTERS	177 OLD BARNSTABLE RD MASHPEE, MA 02649	08/25/1971	F	3	0	99	99	1	0	2	2	

Please Select One of the Following: ☒ Vehicle 2 1 #Occupants ☐ Non-Motorist A Type 14 Action 15 Location 16 Condition 17 ☐ Hit/Run ☐ Moped

License [redacted] St MA DOB/Age 08/31/1977
Sex M Lic. Class D Lic. Restrictions 1 CDL Endorsement
Opera [redacted] Middle
Addres [redacted]
City COTUIT State MA Zip [redacted]
Insurance Company SAFETY
Vehicle Travel Direction: [N ☒ S E W] Responding to Emergency? 2
Citation # (If Issued) K3027835, K302783
Viol. 1: Ch/Sec/Sub [redacted] Viol. 2: Ch/Sec/Sub [redacted]
Viol. 3: Ch/Sec/Sub [redacted] Viol. 4: Ch/Sec/Sub [redacted]

Reg [redacted] Reg Type PC Reg State MA
Veh Year 2003 Veh Make AUDI Veh Config. 1
Owner [redacted] Middle
Addr [redacted]
City COTUIT State MA Zip [redacted]
Vehicle Action Prior to Crash 1
Event Sequence 1 45
Most Harmful Event 45
Driver Contributing Code 10 2
Underride/Override 3 Towed 1

Damaged Area Code: (Circle Up to Three)
0 None
10 Undercarriage
11 Totaled
97 Other
99 Unknown

Please fill out for operator/non-motorist and all occupants involved

Name (Last First Middle)	Address	DOB/Age	Sex	26 Seat Pos.	27 Safety System	28 Airbag Status	29 Airbag Switch	30 Eject Code	31 Trap Code	32 Injury Status	33 Transp. Code	Medical Facility
Operator/Non-Motorist	See Above	---------	---	---	1	99	99	0	0	3	2	FALMOUTH HOSPITAL

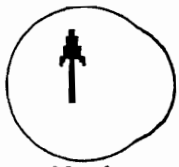
→ = Direction [1] = Vehicle 1 [1] = Vehicle 2 = Pedestrian

Crash Diagram: ie: → [1] → [1] →

SEE RECONSTRUCTION REPORT

If Crash Did Not Occur on a Public Way:

- ☐ Off-Street Parking Lot
- ☐ Garage
- ☐ Mall/Shopping Center
- ☐ Other Private Way



North

Crash Narrative:

SEE SUPPLEMENTAL NARRATIVE FOR REPORT #03-865-AC

Witnesses:

Name (Last,First,Middle)	Address	Phone #	Statement
[redacted]	[redacted]		

Property Damage:

Owner (Last,First,Middle)	Address	Phone #	34-Type	Description of Damaged Property

Truck and Bus Information: Registration # _____ (From Vehicle Section)

Carrier Name _____ Carrier Issuing Authority Code [35]

Address _____ City _____ St _____ Zip _____

US DOT #: _____ State Number _____ Issuing State _____ ICC #: _____ Interstate [36]

Cargo Body Type Code [37] Gross Vehicle Weight [38]

Trailer Reg #: _____ Reg Type _____ Reg State _____ Reg Year _____ Trailer Length [39]

Hazmat Information:

Placard [40] Material 1 digit # [41] Material Name _____ Material 4 digit # _____ Release code [42]

PTL. BRIAN D MORRISON — 205 — Barnstable Police Department — 06/29/2003

Police Officer Name (Please Print) | Signature | ID/Badge # | Department | Precinct/Barrack | Date

then the other car passed, I looked up and saw a huge fireball. We quickly turned around and my friend James was on the cell phone calling 911."

PHOTOS: Photos were taken by B.C. I. Officer WIlliam "Bill" Jacques

WRECKERS: Both MVs were severely damaged and towed by Davis Towing.

[redacted]

GIST: MV #1 traveling north on Falmouth Road towards Mashpee, was struck in the rear end by MV #2. The impact of both MVs caused them both to explode on impact, causing both to burst into flames as well. The collision forced MV #1 to spin out of control onto the northbound shoulder of Falmouth Road into some bushes and a tree. The female was ejected from the MV into the middle of Route 28. The male party of MV #1 (the SUV,) was trapped on the driver side. MV #2 was forced into a spin as well and came to rest on the center line of Falmouth Road across both lanes. OP #2, Mr. [redacted] was able to get out of his burning vehicle and apparently went for help, before returning to the scene. I arrived to find some bystanders who had helped both the female and male parties away from the burning MVs. Fire, Rescue, and back up Officers arrived quickly thereafter to assist at the scene.

[redacted]

STATEMENTS:

OPERATOR #1: N/A (Due to medical condition, and subject being air lifted to Mass General Hospital in Boston.)

OPERATOR #2, Mr. [redacted] "I was traveling north on Falmouth Road / Route 28 in Marstons Mills. I had just left my friend [redacted] house, and was heading home to [redacted] in Marstons Mills. Upon coming over a hill on Route 28, and just after Anchor Lane I noticed an SUV type MV in the roadway. The MV seemed to be stopped, sitting still in the same travel lane as I was traveling in. I was traveling at a speed of about 45 mph to 50 mph, and I attempted to stop by applying my brakes. But I quickly realized that there was no time to stop, so I then tried to swerve around the stopped MV. I unfortunately did not make it and slammed into the rear end of the SUV. The contact sent my car into a spin and the other off the roadway. Both cars immediatly burst into flames, and I was able to get my seatbelt off, and get myself out of my car. I then went over to see if the operator of the other MV was alright. At this time I noticed a white female lying in the middle of the roadway, I then dragged her to the other side of the road to get her away from the burning MV. I then ran to a couple of buildings and houses looking for help and to have someone call 911. When I could not raise anyone I then ran just through the woods to my residence at [redacted] where I called 911 and was advised that Rescue and Police were already on scene. I then had my parents who had woken up apparently from the noise give me a ride back to the accident where I was then evaluated by Rescue and questioned by the Police. "One thing I remember about the accident is that just before the accident, while the other car was sitting still it looked like the driver side door was open as if the driver and operator were going to switch."

On Sunday 06/29/2003 at 0309 hrs., this Officer was dispatched to Falmouth Road/Route 28, just before the intersection with Newtown Road for an MVA with injuries. Upon approaching the MVA scene I could see two huge fires on either side of the roadway. As I came closer to the scene I could see that there were two MVs on fire on either side of the roadway. One MV was off of the northbound shoulder into a small wooded area fully engulfed in flames. The second MV also fully engulfed with flames was across both travel lanes of Route 28. I immediately notified Dispatch to have the Fire and Rescue Teams expedite their arrival. I also radioed for assistance with traffic. Once I was on scene I noticed a female party on the southbound shoulder of the roadway. She was being attended to by a bystander who had come upon the accident. I was then informed that there was a male party across the street in a parking lot being attended to by a male and female party who had jumped out of a limousine to assist. After checking on the female I went over to check on the male party. Both parties were severely injured. At this time I was informed that both male and female were in the same MV, and that another male subject had run from the other MV. At this time I started moving all the bystanders behind my cruiser to a safe area with the exception of the three people who were helping with the injured parties. At this time both MVs began to explode and debris was being thrown through the air in all directions.

Shortly after my arrival a Fire and Rescue Team arrived on scene and began to administer aid to the injured parties, as well as extinguish the fires. Also on scene at this time was Sgt. Twomey, Ptl. D. Palmer, Ptl. Scott Wright, and off duty Ptl. Kevin Donovan who all work together to help render aid, and direct traffic around this accident. Also arriving on scene a short time after was C.O.M.M. Fire. They began to extinguish the other car fire and render aid to the female party. The Cotuit Fire Team, and the C.O.M.M Fire Team both extinguished the cars quickly and were able to stabilize both victims. At this time the male victim identified as a Mr. [redacted] was taken via Cotuit Rescue to Fire Headquarters, Mashpee where upon he was medically air lifted to Mass General Hospital in Boston. [redacted] The female victim identified as a Ms. [redacted] was taken by C.O.M.M. Fire to Cape Cod Hospital where she was later air lifted to Mass General Hospital. After the victims were taken to the hospital this Officer called for the Accident Reconstruction Team and for photos. Ptl. Parkka, and Sgt. McGuire arrived shortly after being called as we as had B.C.I Officer Bill Jacques who took photos of the accident scene.

The operator of the second MV by this time had made his way back to the accident scene. I noticed that he too had suffered some injuries and directed him to a Cotuit Rescue personnel. I also asked if he was the only person in his MV, he stated many times that yes he was the only person in the car. [redacted] The operator later identified as a Mr. Daniel Valente was then taken to Falmouth Hospital by Mashpee Fire and Rescue. By this time Ptl. Wright and Sgt. Twomey had begun taking

I then went to Falmouth Hospital to check on the well being of Mr. [redacted] He was in stable condition at Falmouth Hospital [redacted] I explained to Mr. [redacted] about what the witnesses had stated, and updated him on the condition of the other two parties of which I knew at the time. I then asked Mr. [redacted] how the accident occurred. Mr. [redacted] again stated he was traveling north on Falmouth Road towards [redacted], coming from his friend [redacted] house in Osterville. "I was doing about 40 mph to 45 mph when I came over the hill before you reach Anchor Lane. As I came over the hill I noticed that there was an SUV type MV stopped in the road in my travel lane north. I attempted to apply the brakes but by this time it was too late, I then tried to swerve but was not able to in time and struck the rear end of the other car. It all happened so fast, but I remember seeing that the driver's side door may have been ajar, like they were

Printed on	Barnstable Police Department	Page Number
09/08/2005	**Operator Information Sheet** 03-865-AC	1 of 1

General

Accident Date	Time	Reporting Officer		
06/29/2003	0309	PTL. BRIAN D MORRISON		
Location		**City**	**State**	**ZIP**
SANTUIT CITGO		COTUIT	MA	02635

Operator

OPERATOR	Last Name	First	Middle	Suffix	Veh/Unit	
	[redacted]		M	JR	1	☒ Injured ☐ Fatality
		Apt	City	State	ZIP	
			MASHPEE	MA	[redacted]	
	DOB	Home Phone	Work Phone	License State/Number		
	[redacted]	[redacted]		MA [redacted]		
	Insurance Company		Policy Number			
	HANOVER INS					

OWNER	Last Name	First	Middle	Suffix	Home Phone	Work Phone
	[redacted]		M	JR	[redacted]	
		Apt	City	State	ZIP	
			MASHPEE	MA	[redacted]	

VEH	Year	Make	Model	VIN	
	1998	FORD	FORD EXPLORER		
	Registration State/Number		Towed By	Towed To	
	MA [redacted]		AAA DAVIS TOWING	AAA DAVIS TOWING	

Operator

OPERATOR	Last Name	First	Middle	Suffix	Veh/Unit	
	[redacted]		B		2	☒ Injured ☐ Fatality
		Apt	City	State	ZIP	
			COTUIT	MA	[redacted]	
	DOB	Home Phone	Work Phone	License State/Number		
	[redacted]	[redacted]		MA [redacted]		
	Insurance Company		Policy Number			
	SAFETY					

OWNER	Last Name	First	Middle	Suffix	Home Phone	Work Phone
	[redacted]		B		[redacted]	
		Apt	City	State	ZIP	
			COTUIT	MA	[redacted]	

VEH	Year	Make	Model	VIN	
	2003	AUDI			
	Registration State/Number		Towed By	Towed To	
	MA [redacted]		AAA DAVIS TOWING	AAA DAVIS TOWING	

Ref: 03-865-AC NARRATIVE FOR PTL. DANIEL J PARKKA
Entered: 11/17/2003 @ 1349 Entry ID: 157
Modified: 11/17/2003 @ 1542 Modified ID: 771

On 11/11/03 at approximately 12:30 p.m., this Officer arrived at Mr. [redacted] residence to obtain a statement from him regarding the collision. While at the residence, Mr. [redacted] attorney, Mr. Stephen Lyons, was present.

STATEMENT OF MR [redacted] Indicated he was traveling west on Route 28 at a speed of approximately 40-45 m.p.h. As he was traveling along, his vehicle was struck from behind by the 2003 Audi. Mr. [redacted] remembers looking over his right shoulder at the onset of the collision and observing the entire rear end of the vehicle crumpling forward. The sense of fire was immediately felt at the time of the collision.

The vehicle then violently moved about until it came to rest. At that point, he remembers having to pull himself from the vehicle as a result of the fire. He moved over towards the passenger door and crawled out at that porthole. Several persons arrived to where he was located on the ground and pulled him to a safe haven from the burning vehicle. He remembers a Limousine traveling on the roadway at the time of the collision.

This Officer left his residence shortly thereafter.

771

COMMONWEALTH OF MASSACHUSETTS

SUFFOLK, SS.

SUPERIOR COURT DEPARTMENT
OF THE TRIAL COURT

ALLEN E. BAGG and
STEPHANIE BAGG,

Plaintiffs

v.

FORD MOTOR COMPANY,
a Delaware Corporation, and
LEAR CORPORATION,
a Delaware Corporation,
DANIEL VALENTE,
THE HANOVER INSURANCE GROUP,
INC, a Delaware Corporation, and
ADESA, INC., a Delaware Corporation

Defendants

CIVIL ACTION NO. 05-2344-F

NOREEN MARSTERS
Plaintiff

v.

LEAR CORPORATION
Defendant
AND

FORD MOTOR COMPANY
Defendant and
Third Party Plaintiff

v.

DANIEL VALENTE
Third Party Defendants

CIVIL ACTION NO. 06-2687

THIRD AMENDED COMPLAINT

Preliminary Statement

1. In this action, the Plaintiffs, Allen E. Bagg and Stephanie Bagg, seek damages and other relief for injuries sustained by them as a direct and proximate result of negligence, breach of warranties, and other wrongful actions of the Defendants, Ford Motor Company, Lear Corporation, Daniel Valente, The Hanover Insurance Group, Inc. (d/b/a The Hanover Insurance Company), and Adesa, Inc. (d/b/a ADESA Impact) arising from the fiery explosion of a Ford sport utility vehicle when it was struck in the rear end by another vehicle.

Parties

2. Plaintiff, Allen E. Bagg ("Allen Bagg"), is a Massachusetts resident living in Mashpee, Barnstable County.

3. Plaintiff, Stephanie Bagg ("Stephanie Bagg"), is a Massachusetts resident living in Mashpee, Barnstable County and is the spouse of Allen Bagg.

4. Defendant, Ford Motor Company ("Ford"), is a corporation organized under the laws of the State of Delaware with its principal place of business on The American Road, Dearborn, Michigan 48121. At all times relevant, Ford was doing business in the Commonwealth of Massachusetts. Ford has designated its Resident Agent in the Commonwealth of Massachusetts as CT Corporation, 101 Federal Street, Boston, Suffolk County, Massachusetts 02110.

5. Defendant, Lear Corporation ("Lear"), is a corporation organized under the laws of the State of Delaware with its principal place of business at 21557 Telegraph Road, Southfield, Michigan 48033. At all times relevant, Lear was doing business in the Commonwealth of Massachusetts.

6 Defendant, Daniel Valente ("Valente"), is a Massachusetts resident living at 131 Winchester Street, Brookline, Norfolk County, Massachusetts. At all times relevant to this Complaint, Valente was a resident of Norfolk County.

7. Defendant, The Hanover Insurance Group, Inc. ("Hanover"), d/b/a The Hanover Insurance Company, is a corporation organized under the laws of the State of Delaware with its principal place of business at 440 Lincoln Street, Worcester, Worcester County, Massachusetts. At all times relevant, Hanover was doing business in the Commonwealth of Massachusetts.

8. Defendant, Adesa, Inc. ("Adesa"), d/b/a ADESA Impact, is a corporation organized under the laws of the State of Delaware with its principal place of business at 13085 Hamilton Crossing Boulevard, Carmel, Indiana. At all times relevant, Adesa was doing business in the Commonwealth of Massachusetts.

Jurisdiction And Venue

9. Pursuant to Massachusetts General Laws Chapter 212, §4 and 223A, §§ 1, 2 and 3, this Court has original jurisdiction over this civil action and personal jurisdiction over all parties to this action, in that all parties are domiciled in or maintain a principal place of business in the Commonwealth of Massachusetts.

10. This Court has personal jurisdiction over all Defendants pursuant to M.G.L. c. 223A §3 because each of them has undertaken acts or conduct within the Commonwealth of Massachusetts that directly relate to the causes of action herein.

11. This Court has personal jurisdiction over Defendant, Ford Motor Company, pursuant to M.G.L. 223A §3(a)-(d), which provides this Court with jurisdiction over actions against foreign corporations. Defendant, Ford Motor Company, is a foreign corporation transacting business in Massachusetts which also contracts to supply

services or things in Massachusetts and which has caused tortious injury in Massachusetts by an act or omission outside the Commonwealth while regularly doing or soliciting business; engaging in a persistent course of conduct; and, deriving substantial revenues from goods used or consumed or services rendered in Massachusetts.

12. This Court has personal jurisdiction over Defendant, Lear Corporation, pursuant to M.G.L. 223A §3(a)-(d), which provides this Court with jurisdiction over actions against foreign corporations. Defendant, Lear Corporation, is a foreign corporation transacting business in Massachusetts which also contracts to supply services or things in Massachusetts and which has caused tortious injury in Massachusetts by an act or omission outside the Commonwealth while regularly doing or soliciting business; engaging in a persistent course of conduct; and, deriving substantial revenues from goods used or consumed or services rendered in Massachusetts.

13. This Court has personal jurisdiction over Defendant, The Hanover Insurance Group, Inc., pursuant to M.G.L. 223A §3(a)-(d), which provides this Court with jurisdiction over actions against foreign corporations. Defendant, The Hanover Insurance Group, Inc., is a foreign corporation transacting business in Massachusetts which also contracts to supply services or things in Massachusetts and which has caused tortious injury in Massachusetts by an act or omission outside the Commonwealth while regularly doing or soliciting business; engaging in a persistent course of conduct; and, deriving substantial revenues from goods used or consumed or services rendered in Massachusetts.

14. This Court has personal jurisdiction over Defendant, Adesa, Inc., pursuant to M.G.L. 223A §3(a)-(d), which provides this Court with jurisdiction over actions against foreign corporations. Defendant, Adesa, Inc., is a foreign corporation transacting business in Massachusetts which also contracts to supply services or things in Massachusetts and which has caused tortious injury in Massachusetts by an act or omission outside the Commonwealth while regularly doing or soliciting business; engaging in a persistent course of conduct; and, deriving substantial revenues from goods used or consumed or services rendered in Massachusetts.

15. Venue in this Court is appropriate pursuant to Massachusetts General Laws, Chapter 223, §1, which permits a transitory action to be brought in the county where one of the parties lives or has a usual place of business.

16. The Defendant, Ford Motor Company, does business within the Commonwealth of Massachusetts and within Suffolk County and has designated as its resident agent, pursuant to M.G.L. c. 227 §5, CT Corporation with a principal place of business also located in Suffolk County.

17. The Defendant, Lear Corporation, does business within the Commonwealth of Massachusetts and within Suffolk County.

18. The Defendant, The Hanover Insurance Group, Inc., does business within the Commonwealth of Massachusetts and within Suffolk County and has designated as its resident agent, pursuant to M.G.L. c. 227 §5, CT Corporation System, with a principal place of business located at 155 Federal Street, Suite 700, Boston, Suffolk County, Massachusetts.

19. The Defendant, Adesa, Inc., does business within the Commonwealth of Massachusetts and within Suffolk County and has designated as its resident agent,

pursuant to M.G.L. c. 227 §5, Corporation Service Company, with a principal place of business located at 84 State Street, Boston, Suffolk County, Massachusetts.

Allegations

The 1998 Ford Explorer Sport Utility Vehicle – Fuel Tank

20. At all times relevant, Ford was in the business of designing, testing, manufacturing, inspecting, distributing, maintaining, warning and instructing users on safe use and maintenance of Ford vehicles, and in the business of selling vehicles to members of the general public.

21. Ford manufactured and distributed for sale a model 1998 Ford Explorer Sport Utility Vehicle ("the 1998 Model").

22. The 1998 Model included a metal shield covering the bottom of the fuel tank but no shield covering the rear of the fuel tank.

23. The 1998 Model rear edge of the fuel tank is approximately 3.5 inches from the forward section of the left rear axle housing.

24. Ford performed rear impact crash testing with speeds up to 55 miles per hour on prototype 1997 Ford pickups, and knew as a result of those tests that the rear suspension components contacted the rear of the fuel tank and compromised the fuel tank.

25. As a result of the testing described in the preceding paragraph, Ford installed a polymer shield to cover the rear of the fuel tank on 1997 Ford F150 pickups to protect the fuel tank from being compromised by the rear axle assembly in a rear end collision.

26. Ford's installation of a shield covering the rear of the fuel tank in the 1998 Model would have prevented suspension components from contacting and compromising the fuel tank.

27. Despite Ford's knowledge that the absence of a safety shield protecting the rear of the fuel tank created a great risk of causing catastrophic damage in the event of a rear end collision, Ford never installed a shield to cover the rear of the fuel tank in the 1998 Model.

The 1998 Ford Explorer Sport Utility Vehicle – Front Seat Assembly and Seat Back

28. The 1998 Model included a front seat assembly for the driver and front seat passenger.

29. Ford designed, manufactured, distributed, sold and/or supplied the front seat assembly included in the 1998 Model.

30. Ford knew or should have known that the seat back portion and related parts of the front seat assembly had a tendency to fail and created a great risk of catastrophic damage in the event of a collision.

31. Despite Ford's knowledge that the seat back portion and related parts of the front seat assembly had a tendency to fail and created a great risk of catastrophic damage in the event of a collision, Ford never corrected the deficiency.

32. At all times relevant, Lear was in the business of designing, testing, manufacturing, inspecting, distributing, maintaining, warning and instructing uses on safe use and maintenance of the front seat assembly included in the 1998 Model.

33. Lear designed, manufactured, distributed, sold, supplied and/or conveyed the front seat assembly included in the 1998 Model.

34. Lear knew or should have known that the seat back portion and related parts of the front seat assembly had a tendency to fail and created a great risk of causing catastrophic damage in the event of a collision.

35. Despite Lear's knowledge that the seat back portion and related parts of the front seat assembly had a tendency to fail and created a great risk of causing catastrophic damage in the event of a collision, Lear never corrected the deficiency.

The 1998 Ford Explorer Sport Utility Vehicle Placed in the Stream of Commerce

36. Prior to June 29, 2003, in the ordinary course of its business, Ford designed, engineered, manufactured, distributed, and sold the 1998 Model, including a 1998 Ford Explorer Sport Utility Vehicle ("the Ford SUV"), which is the subject matter of this action, by placing the 1998 Model and the Ford SUV in the stream of commerce for sale to the general public as ultimate consumers. The Ford SUV had a vehicle identification number of 1FMZU34E3WZB07157.

Allen Bagg's Purchase of the Ford Sport Utility Vehicle

37. On or about February 19, 2000, Plaintiff Allen Bagg purchased the Ford SUV from an automobile dealer in Lakeville, Massachusetts.

38. As of June 29, 2003, the Ford SUV had passed a yearly safety inspection as indicated by the Registry of Motor Vehicles.

39. The Ford SUV was not substantially modified prior to or on June 29, 2003.

The Ford Sport Utility Vehicle Explosion

40. On June 29, 2003, while Allen Bagg was driving the Ford SUV proceeding west in the westbound lane of Route 28 (also known as Falmouth Road) in Cotuit, Massachusetts, the Ford SUV was struck in the rear end by a 2003 Audi A4 automobile

carelessly operated by Defendant Daniel Valente. The Ford SUV exploded on impact and burst into flames.

41. The Ford SUV explosion occurred when the impact of the Audi caused the Ford SUV rear axle housing to be forced into the rear panel of the Ford SUV fuel tank. As a result of the forward propulsion, the rear axle housing produced a geometrical impression of its outer shell into the tank, which caused several splits to the tank that led to excessive fuel spillage.

42. The severe and sudden metal contact within the Ford SUV caused the fuel spillage to burst into flames. The Ford SUV was completely burned out as a direct result of the rupture to the fuel tank.

43. When the Ford SUV was struck in the rear end by the automobile driven by Daniel Valente, the seat back of the front seat assembly failed, causing the ejection of the front seat passenger and causing Allen Bagg to lose control of the vehicle, which entered into a spin that caused the Ford SUV to impact with a tree, thus causing Allen Bagg severe and permanent orthopedic injuries.

Bagg's Personal Injuries

44. When the Ford SUV exploded, Allen Bagg received serious injuries, including a pelvic fracture and crushed left leg and horrendous burns over more than sixty percent of his body including serious burns to his arms, hands and legs caused by the fire. Bagg was airlifted to Massachusetts General Hospital with severe burns, contusions to his lungs, a complex open fracture of his left lower extremity and pelvic fractures.

45. Bagg's injuries required extensive medical treatment including treatment in the Intensive Care Burn Unit of Massachusetts General Hospital where he was

hospitalized for more than three months. He was tracheotomized and artificially ventilated. His fractures required open reduction and the placement of multiple screws and metallic plates. His hospital course was complicated by severe pneumonia and renal failure with infection of his tibial fracture for which he required numerous surgeries and skin graft procedures.

46. Bagg was discharged from Massachusetts General Hospital to Spaulding Rehabilitation Hospital in October of 2003 with multiple open wounds on his legs and feet and from the donor sites of his skin grafts with surgical drains in place. Over the following months, these multiple open wounds caused great pain and suffering and required multiple treatments including the debridement of desiccated tissue. However, his mutilated and severely burned leg remained swollen and painful.

47. Over the following months, Bagg required numerous out-patient surgical procedures at Massachusetts General Hospital to treat his burns and orthopedic injuries as well as extensive and painful physical therapy at Spaulding Rehabilitation Hospital to regain the partial use of his arm and legs.

48. On March 23, 2004, Bagg underwent a below knee amputation of his left leg as well as multiple skin grafts for the treatment of his burns all of which are directly related to injuries received by Bagg in the motor vehicle accident. Since that time, Bagg has struggled to regain the use of his limbs and has received extensive therapy to help him adjust physically to the loss of his left leg. To date, Allen Bagg's medical expenses alone exceed 2.1 million dollars.

Bagg's Disability and Other Consequential Damages

49. At all times relevant to this Complaint, Bagg was employed by the Massachusetts Steamship Authority in Woods Hole, Massachusetts as a pilot. Prior to the accident, Bagg had been so employed for 8 years.

50. As a direct result of the personal injuries sustained by Bagg, he was and continues to be totally disabled from his employment and has sustained additional incidental and consequential damages.

The Transportation and Storage of Allen Bagg's Vehicle as Evidence

51. On June 29, 2003, when Allen Bagg sustained his injuries in the Ford SUV accident and explosion, Allen Bagg was the insured on an automobile insurance policy purchased from The Hanover Insurance Company ("Hanover").

52. By letter dated July 25, 2003, plaintiffs' counsel notified Gina Tajak (or Gina Pajak) ("Tajak), a Hanover claims representative, that he was authorizing release of Allen Bagg's Ford SUV from Davis Towing (a d/b/a of MRI, Inc.), a facility in Hyannis, Barnstable County, Massachusetts, for the purpose of transport and storage at ADESA Impact ("Adesa") in East Taunton, Bristol County, Massachusetts. The authorization was effective beginning July 28, 2003 and only after Allen Bagg's investigator had completed his initial inspection and photography of the Ford SUV.

53. In the same letter, plaintiffs' counsel specifically stated: "So that there is no misunderstanding, I wish to reiterate the fact that this motor vehicle should be considered evidence in our clients' forthcoming civil action for damages arising out of the motor vehicle accident which occurred on June 20, 2003. As such, the vehicle must be preserved in its present condition and not salvaged or altered in any way until such time as our representatives have had an opportunity to view, photograph and perform

such tests as may be necessary. My agreement to release this motor vehicle for purposes of transportation and storage is expressly conditioned upon this understanding and I assume that you will make this known to the principals of Adesa Impact."

54. In the same letter, plaintiffs' counsel wrote that "in order to guarantee the uninterrupted storage of this vehicle" he had forwarded a check in the amount of $1,518.25 to Davis Towing "as payment for the storage", and requested reimbursement as appropriate in recognition of the fact that "Hanover Insurance Company is ultimately responsible for these charges under the terms of its policy" with Allen Bagg.

55. By letter dated July 30, 2003, plaintiffs' counsel notified Davis Towing that he had authorized Hanover Insurance Company to take possession of the Ford SUV that had been stored at Davis Towing and that "it will continue to be preserved as evidence until such time as our experts have had an opportunity to perform the necessary tests and inspection of the vehicle." In the letter, plaintiffs' counsel restated that his payment of $1,518.25 was made to Davis Towing, as requested by its manager, "in order to assure that the vehicle would not be released for salvage". A copy of the letter was forwarded to Hanover claims representative Tajak.

56. By letter dated July 30, 2003, plaintiffs' counsel notified Adesa of his expectation that the Ford SUV would be safely stored there. He wrote: "So that there is no misunderstanding, I wish to reiterate the fact that this motor vehicle should be considered evidence in our clients' forthcoming civil action for damages arising out of the motor vehicle accident which occurred on June 20, 2003. As such, the vehicle must be preserved in its present condition and not salvaged or altered in any way until such time as our representatives have had an opportunity to view, photograph and perform

such tests as may be necessary." Plaintiffs' counsel also stated that his agreement to release the Ford SUV was "expressly conditioned upon this understanding and I assume that you will make this known to the principles of Adesa Impact." A copy of the letter was forwarded to Hanover claims representative Tajak.

57. At the time of and subsequent to the letters described in the preceding paragraphs, plaintiffs' counsel received verbal promises from Hanover claims representative Tajak and authorized representatives from Adesa that the Ford SUV would be treated as evidence and preserved until an expert retained by plaintiffs' counsel would have the opportunity inspect and perform tests on the vehicle. The representatives of Hanover and Adesa further promised that the Ford SUV would not be moved, nor would access be granted to it, without the express authorization of plaintiffs' counsel, and that ultimate disposition of the vehicle would require prior approval of plaintiffs' counsel.

Hanover's and Adesa's Destruction of Allen Bagg's Vehicle as Evidence

58. Without the knowledge or authorization of plaintiffs' counsel, on or about September 18, 2003, Hanover employee Lilani Cooper ("Cooper") sent written authorization to Adesa to permit the removal and destruction of the Ford SUV.

59. Plaintiffs' counsel remained unaware of Cooper's authorization until October 15, 2003, when his office contacted Adesa for the purpose of arranging an appointment for Allen Bagg's expert to conduct an inspection of the Ford SUV on November 13, 2003. During this communication, plaintiffs' counsel was informed by Adesa for the first time that the Ford SUV had been removed from storage and sold for salvage pursuant to Cooper's written authorization and without authorization from plaintiffs' counsel. During this communication, Adesa acknowledged that plaintiffs'

counsel had notified Adesa by letters dated July 25, 2003 to Hanover and July 30, 2003 to Adesa of the requirement to store the Ford SUV until plaintiffs' expert had conducted an inspection of the vehicle.

60. By letter dated October 17, 2003, plaintiffs' counsel notified Hanover that its actions leading to the destruction of the Ford SUV irreparably damaged the plaintiffs by substantially interfering with their opportunity to prove their claims. In addition, Hanover was put on notice that its actions constituted violations of M.G.L. Chapter 176D and Chapter 93A, which would subject Hanover to double or treble damages including attorneys' fees in addition to any liability for negligence or bad faith.

61. By letter dated November 19, 2003, Hanover responded to plaintiffs' counsel's October 17, 2003 letter, denied all liability for its actions and the destruction of the Ford SUV, and further asserted that Adesa had incorrectly informed Hanover that plaintiffs' counsel and his "agents had seen the salvage vehicle."

62. By letter dated November 26, 2003, plaintiffs' counsel wrote to Hanover and restated his assertion that Hanover, "through its actions and inactions, knowingly and intentionally caused the destruction of important physical evidence in a pending civil action which it had agreed to preserve and maintain and that this was in direct breach of Hanover's duty to its insureds". Plaintiffs' counsel further stated that he specifically had told Tajak that the plaintiffs' expert (nationally recognized in the fields of forensic engineering and automotive safety design and development) would not be able to inspect and perform tests on the Ford SUV until November of 2003 and that Tajak had agreed to continue to store and preserve the Ford SUV as evidence until the expert's visit. In the letter, plaintiffs' counsel restated the plaintiffs' claims that Hanover's actions constituted violations of M.G.C. Chapter 176D and Chapter 93A.

63. By letter dated November 26, 2003, plaintiffs' counsel notified Adesa that its actions leading to the destruction of the Ford SUV irreparably damaged the plaintiffs by substantially interfering with their opportunity to prove their claims. In addition, Adesa was put on notice that its actions constituted violations of M.G.L. Chapter 176D and Chapter 93A, which would subject Adesa to double or treble damages including attorneys' fees in addition to any liability for negligence, breach of contract, or bad faith.

65. By letter dated December 11, 2003, Adesa responded to plaintiff's counsel's November 26, 2003 letter and denied all liability for its actions and the destruction of the Ford SUV.

66. By letter dated December 22, 2003, Hanover again denied all liability for its actions and the destruction of the Ford SUV.

67. Noreen Marsters ("Marsters"), was a passenger in Allen Bagg's Ford SUV at the time of the collision who sustained catastrophic injuries rendering her paraplegic. As part of her civil action for damages, Marsters' counsel served a keeper of records deposition subpoena on Hanover in January 2006. In response, on February 26, 2006, Hanover produced a document titled "CSS Claim Notepad Report" ("the Claim Report") with significant redactions. Only subsequent to Marsters' counsel's April 23, 2009 service of a "Motion for Issuance of a Court Order to Compel Production of Documents by Hanover Insurance Company", which included a request that the Court order production of an unredacted copy of the Claim Report did Hanover voluntarily produce the unreduced Claim Report on or about May 5, 2009.

68. The Hanover Claim Report contains documented corroboration of the communications from plaintiffs' counsel described in the preceding paragraphs and of Hanover's and Adesa's promises and agreements to store the Ford SUV until plaintiffs'

expert had an opportunity to inspect and test the vehicle, and of Hanover's and Adesa's joint and several liability for destruction of the Ford SUV before the plaintiffs' expert viewed it.

COUNT I
Negligence
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

69. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 68 of this Third Amended Complaint.

70. Ford, in its careless and negligent acts and/or omissions, breached its duty of care to Plaintiffs.

71. Ford carelessly and negligently designed, manufactured, distributed, and sold the 1998 Model and the Ford SUV in that there was inadequate protection for the fuel tank in a reasonably foreseeable accident.

72. Ford carelessly and negligently failed to give adequate warnings to purchasers and users of the 1998 Model and the Ford SUV, including Allen Bagg, about the unreasonably dangerous and defective condition of the 1998 Model and the Ford SUV and the dangerous propensity of the vehicle to catch fire as a result of fuel tank rupture during a reasonably foreseeable collision resulting in unnecessary and severe injury to persons using the 1998 Model.

73. Ford carelessly and negligently put into the stream of commerce the unreasonably dangerous and defective 1998 Model and the Ford SUV.

74. Ford was careless and negligent in designing the 1998 Model so that the structure of the rear axle housing presented a threatening surface to the fuel tank; in inadequately packaging the fuel tank to prevent contact with surrounding components in the event of a reasonably foreseeable collision; and/or in failing to provide adequate

shielding for the fuel tank to prevent contact with surrounding components during a reasonably foreseeable collision creating an unreasonably dangerous propensity for puncture of the fuel tank.

75. As a direct and proximate result of the negligence of Ford, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT II
Strict Liability
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

76. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 75 of this Third Amended Complaint.

77. At the time that the Ford SUV left the control of Ford, and at the time that Allen Bagg suffered extensive burns and other damage on June 29, 2003, the Ford SUV was in a defective condition and unreasonably dangerous when put to a reasonably anticipated use. The 1998 Model (of which the Ford SUV was one) was unreasonably dangerous to Allen Bagg and other consumers or users by reason of the defects and design, manufacture, and assembly of the 1998 Model, including, but not limited to, its propensity to catch fire during a reasonably foreseeable collision due to lack of adequate protection for the fuel tank, and the failure to warn or give adequate warnings to Allen Bagg and other consumers or users of the defective nature of the 1998 Model.

78. The 1998 Model, and the Ford SUV owned by Allen Bagg, was in a defective condition unreasonably dangerous in that the structure of the rear axle housing presented a threatening surface to the fuel tank; the fuel tank was not adequately packaged to prevent contact with surrounding components in the event of a reasonably foreseeable collision; and/or the fuel tank was not adequately shielded to prevent contact with surrounding components during a reasonably foreseeable collision creating an unreasonably dangerous propensity for puncture of the fuel tank.

79. The Ford SUV was expected to reach and did reach the hands of its owner, Allen Bagg, without substantial change in the condition in which it was designed, manufactured, distributed and sold and was being used in a manner intended by Ford and was in substantially the same condition on June 29, 2003 as when it left Ford's control.

80. Ford knew that the 1998 Model, and the Ford SUV owned by Allen Bagg, would be used without inspection for defects and represented that it could be safely used and would be fit for the ordinary purposes for which it was purchased.

81. Allen Bagg was not aware of any defect in the Ford SUV at any time prior to the vehicle's explosion on June 29, 2003. The defects in the Ford SUV that resulted in the vehicle's explosion would not have been detectable by Allen Bagg.

82. The acts and/or omissions of Ford showed a complete indifference to or conscious disregard for Allen Bagg and other users of the 1998 Model.

83. As a direct and proximate result of the defective Ford SUV, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been

unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT III
Breach Of Warranty
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

84. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 83 of this Third Amended Complaint.

85. At all times relevant, Ford expressly and impliedly warranted and advertised to the general public that the 1998 Model was safe and stable in handling, crashworthiness, and fireworthiness, and further warranted that the 1998 Model would reasonably protect occupants during an accident.

86. Allen Bagg justifiably and reasonably relied upon Ford's warranties and advertising and had reason to believe that the vehicle was safe when operated as advertised and warranted.

87. Ford's warranties were breached because the 1998 Model, and the Ford SUV owned by Allen Bagg, was not fit for the use for which it was intended due to insufficient warnings, lack of instructions and misleading advertising to the customer regarding controllability, stability, crashworthiness, and fireworthiness.

88. As a direct and proximate result of Ford's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT IV
Breach Of Warranty Of Merchantability
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

89. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 88 of this Third Amended Complaint.

90. Ford had a legal duty pursuant to Massachusetts General Laws, Chapter 106, Section 2-314 to warrant that the 1998 Model and the Ford SUV were merchantable and that the vehicles were fit for the ordinary purposes for which such vehicles were used. The 1998 Model and the Ford SUV were defective and not reasonably suitable for the ordinary uses for which goods of that kind and description were sold. Furthermore, the defects existed at the time the vehicles were manufactured and sold.

91. Ford's failure to provide a shield to cover the rear of the fuel tanks in the 1998 Model and the Ford SUV to protect the fuel tank from being compromised by the rear axle assembly in a rear-end collision, which was both foreseeable and preventable, constitutes a violation of M.G.L. c. 106 §2-314.

92. As a direct and proximate result of Ford's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered

COUNT V

Failure To Warn
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

93. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 92 of this Third Amended Complaint.

94. At all times relevant, Ford had an ongoing duty to provide information, instructions and warnings regarding the handling and control characteristics and problems of the 1998 Model to ensure that users would use the vehicle safely – or not use it at all – and would understand the operating characteristics of the 1998 Model.

95. Allen Bagg was not made aware of any such instruction, warning, or recommendation at any time prior to June 29, 2003 by Ford.

96. As a direct result of Ford's failure to warn, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT VI
Loss Of Consortium
(Stephanie Bagg v. Ford Motor Company – Fuel Tank)

97. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 96 of this Third Amended Complaint.

98. As a direct and proximate result of Ford's wrongful conduct, Plaintiff Stephanie Bagg has suffered and will continue to suffer in the future the loss of care, comfort, services, support, companionship, society, and consortium of Plaintiff Allen

Bagg as a kind and loving spouse; and has suffered great pain of body, anguish of mind and severe emotional distress and other incidental and consequential damages.

COUNT VII
Negligent Infliction Of Emotional Distress
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

99. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 98 of this Third Amended Complaint.

100. As a direct and proximate result of Ford's wrongful conduct, Plaintiff, Allen Bagg, has suffered extreme emotional distress.

101. In so acting with respect to Plaintiff, Allen Bagg, Ford knew or should have known that severe emotional distress was the likely result of such conduct.

102. The emotional distress suffered by Plaintiff, Allen Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT VIII
Negligent Infliction Of Emotional Distress
(Stephanie Bagg v. Ford Motor Company – Fuel Tank)

103. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 102 of this Third Amended Complaint.

104. As a direct and proximate result of Ford's wrongful conduct, Plaintiff, Stephanie Bagg, has suffered extreme emotional distress.

105. In so acting with respect to Plaintiff, Stephanie Bagg, Ford knew or should have known that severe emotional distress was the likely result of such conduct.

106. The emotional distress suffered by Plaintiff, Stephanie Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT IX
Violation Of Massachusetts General Law Chapter 93A
(Allen E. Bagg v. Ford Motor Company – Fuel Tank)

107. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 106 of this Third Amended Complaint.

108. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

109. Ford is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

110. The acts of Ford were performed willfully and knowingly.

111. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Allen E. Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and he is also entitled to an award of attorney's fees and costs.

COUNT X
Violation Of Massachusetts General Law Chapter 93A
(Stephanie Bagg v. Ford Motor Company – Fuel Tank)

112. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 111 of this Third Amended Complaint.

113. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

114. Ford is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

115. The acts of Ford were performed willfully and knowingly.

116. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Stephanie Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and she is also entitled to an award of attorney's fees and costs.

COUNT XI
Negligence
(Allen E. Bagg v. Daniel Valente)

117. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 116 of this Third Amended Complaint.

118. Defendant Daniel Valente owed a duty of care to Plaintiff Allen Bragg.

119. Defendant Daniel Valente negligently breached his duty of care to Plaintiff Allen Bragg.

120. As a direct and proximate result of the negligence of Valente, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XII
Loss Of Consortium
(Stephanie Bagg v. Daniel Valente)

121. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 120 of this Third Amended Complaint.

122. As a direct and proximate result of the actions of Defendant Daniel Valente, Plaintiff Stephanie Bagg has suffered and will continue to suffer in the future the loss of care, comfort, services, support, companionship, society, and consortium of Plaintiff Allen Bagg as a kind and loving spouse; and has suffered great pain of body, anguish of mind and severe emotional distress and other incidental and consequential damages.

COUNT XIII
Negligent Infliction Of Emotional Distress
(Allen E. Bagg v. Daniel Valente)

123. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 122 of this Third Amended Complaint.

124. As a direct and proximate result of the actions of Defendant Daniel Valente, Plaintiff, Allen Bagg, has suffered extreme emotional distress.

125. In so acting with respect to Plaintiff, Allen Bagg, Valente knew or should have known that severe emotional distress was the likely result of such conduct.

126. The emotional distress suffered by Plaintiff, Allen Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XIV
Negligent Infliction Of Emotional Distress
(Stephanie Bagg v. Daniel Valente)

127. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 126 of this Third Amended Complaint.

128. As a direct and proximate result of the Defendant, Daniel Valente's, wrongful conduct, Plaintiff, Stephanie Bagg, has suffered extreme emotional distress.

129. In so acting with respect to Plaintiff, Stephanie Bagg, Defendant, Daniel Valente, knew or should have known that severe emotional distress was the likely result of such conduct.

130. The emotional distress suffered by Plaintiff, Stephanie Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XV
Negligence
(Allen E. Bagg v. Ford Motor Company – Seat Back)

131. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 130 of this Third Amended Complaint.

132. Ford, in its careless and negligent acts and/or omissions, breached its duty of care to Plaintiffs.

133. Ford carelessly and negligently designed, manufactured, distributed, and sold the 1998 Model and the Ford SUV in that there was inadequate functioning of the seat back portion and related parts of the front seat assembly in a reasonably foreseeable accident.

134. Ford carelessly and negligently failed to give adequate warnings to purchasers and users of the 1998 Model and the Ford SUV, including Allen Bagg, about the unreasonably dangerous and defective condition of the 1998 Model and the Ford SUV and the dangerous propensity of the seat back portion and related parts of the front seat assembly to fail during a reasonably foreseeable collision resulting in unnecessary and severe injury to persons using the 1998 Model.

135. Ford carelessly and negligently put into the stream of commerce the unreasonably dangerous and defective 1998 Model and the Ford SUV.

136. Ford was careless and negligent in designing the 1998 Model so that the seat back portion and related parts of the front seat assembly were likely to fail in the event of a reasonably foreseeable collision.

137. As a direct and proximate result of the negligence of Ford, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XVI
Strict Liability
(Allen E. Bagg v. Ford Motor Company – Seat Back)

138. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 137 of this Third Amended Complaint.

139. At the time that the Ford SUV left the control of Ford, and at the time that Allen Bagg suffered extensive burns and other damage on June 29, 2003, the Ford SUV was in a defective condition and unreasonably dangerous when put to a reasonably anticipated use. The 1998 Model (of which the Ford SUV was one) was unreasonably dangerous to Allen Bagg and other consumers or users by reason of the defects and design, manufacture, and assembly of the 1998 Model, including, but not limited to, the propensity of the seat back portion and related parts of the front seat assembly to fail during a reasonably foreseeable collision, and the failure to warn or

give adequate warnings to Allen Bagg and other consumers or users of the defective nature of the 1998 Model.

140. The 1998 Model, and the Ford SUV owned by Allen Bagg, was in a defective condition unreasonably dangerous in that the seat back portion and related parts of the front seat assembly were likely to fail in the event of a reasonably foreseeable collision.

141. The Ford SUV was expected to reach and did reach the hands of its owner, Allen Bagg, without substantial change in the condition in which it was designed, manufactured, distributed and sold and was being used in a manner intended by Ford and was in substantially the same condition on June 29, 2003 as when it left Ford's control.

142. Ford knew that the 1998 Model, and the Ford SUV owned by Allen Bagg, would be used without inspection for defects and represented that it could be safely used and would be fit for the ordinary purposes for which it was purchased.

143. Allen Bagg was not aware of any defect in the Ford SUV at any time prior to the collision on June 29, 2003. The defects in the Ford SUV that resulted in the vehicle's failure to protect the occupants in a foreseeable rear-end collision would not have been detectable by Allen Bagg.

144. The acts and/or omissions of Ford showed a complete indifference to or conscious disregard for Allen Bagg and other users of the 1998 Model.

145. As a direct and proximate result of the defective Ford SUV, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been

unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XVII
Breach Of Warranty
(Allen E. Bagg v. Ford Motor Company – Seat Back)

146. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 145 of this Third Amended Complaint.

147. At all times relevant, Ford expressly and impliedly warranted and advertised to the general public that the 1998 Model was safe and stable in handling and crashworthiness, and further warranted that the 1998 Model would reasonably protect the occupants during a foreseeable rear-end collision.

148. Allen Bagg justifiably and reasonably relied upon Ford's warranties and advertising and had reason to believe that the vehicle was safe when operated as advertised and warranted.

149. Ford's warranties were breached because the 1998 Model, and the Ford SUV owned by Allen Bagg, was not fit for the use for which it was intended due to insufficient warnings, lack of instructions and misleading advertising to the customer regarding controllability, stability, and crashworthiness.

150. As a direct and proximate result of Ford's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XVIII
Breach Of Warranty Of Merchantability
(Allen E. Bagg v. Ford Motor Company – Seat Back)

151. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 150 of this Third Amended Complaint.

152. Ford had a legal duty pursuant to Massachusetts General Laws, Chapter 106, Section 2-314 to warrant that the 1998 Model and the Ford SUV were merchantable and that the vehicles were fit for the ordinary purposes for which such vehicles were used. The 1998 Model and the Ford SUV were defective and not reasonably suitable for the ordinary uses for which goods of that kind and description were sold. Furthermore, the defects existed at the time the vehicles were manufactured and sold.

153. Ford's failure to provide a seat back portion and related parts of the front seat assembly in the 1998 Model and the Ford SUV that would not be compromised in a rear-end collision, which was both foreseeable and preventable, constitutes a violation of M.G.L. c. 106 §2-314.

154. As a direct and proximate result of Ford's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XIX
Failure To Warn
(Allen E. Bagg v. Ford Motor Company – Seat Back)

155. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 154 of this Third Amended Complaint.

156. At all times relevant, Ford had an ongoing duty to provide information, instructions and warnings regarding the handling and control characteristics and problems of the 1998 Model to ensure that users would use the vehicle safely – or not use it at all – and would understand the operating characteristics of the 1998 Model.

157. Allen Bagg was not made aware of any such instruction, warning, or recommendation at any time prior to June 29, 2003 by Ford.

158. As a direct result of Ford's failure to warn, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XX
Loss Of Consortium
(Stephanie Bagg v. Ford Motor Company – Seat Back)

159. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 158 of this Third Amended Complaint.

160. As a direct and proximate result of Ford's wrongful conduct, Plaintiff Stephanie Bagg has suffered and will continue to suffer in the future the loss of care, comfort, services, support, companionship, society, and consortium of Plaintiff Allen

Bagg as a kind and loving spouse; and has suffered great pain of body, anguish of mind and severe emotional distress and other incidental and consequential damages.

COUNT XXI
Negligent Infliction Of Emotional Distress
(Allen E. Bagg v. Ford Motor Company – Seat Back)

161. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 160 of this Third Amended Complaint.

162. As a direct and proximate result of Ford's wrongful conduct, Plaintiff, Allen Bagg, has suffered extreme emotional distress.

163. In so acting with respect to Plaintiff, Allen Bagg, Ford knew or should have known that severe emotional distress was the likely result of such conduct.

164. The emotional distress suffered by Plaintiff, Allen Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XXII
Negligent Infliction Of Emotional Distress
(Stephanie Bagg v. Ford Motor Company – Seat Back)

165. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 164 of this Third Amended Complaint.

166. As a direct and proximate result of Ford's wrongful conduct, Plaintiff, Stephanie Bagg, has suffered extreme emotional distress.

167. In so acting with respect to Plaintiff, Stephanie Bagg, Ford knew or should have known that severe emotional distress was the likely result of such conduct.

168. The emotional distress suffered by Plaintiff, Stephanie Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XXIII
Violation Of Massachusetts General Law Chapter 93A
(Allen E. Bagg v. Ford Motor Company – Seat Back)

169. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 168 of this Third Amended Complaint.

170. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

171. Ford is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

172. The acts of Ford were performed willfully and knowingly.

173. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Allen E. Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and he is also entitled to an award of attorney's fees and costs.

COUNT XXIV
Violation Of Massachusetts General Law Chapter 93A
(Stephanie Bagg v. Ford Motor Company – Seat Back)

174. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 173 of this Third Amended Complaint.

175. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

176. Ford is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

177. The acts of Ford were performed willfully and knowingly.

178. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Stephanie Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and she is also entitled to an award of attorney's fees and costs.

COUNT XXV
Negligence
(Allen E. Bagg v. Lear Corporation – Seat Back)

179. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 178 of this Third Amended Complaint.

180. Lear, in its careless and negligent acts and/or omissions, breached its duty of care to Plaintiffs.

181. Lear carelessly and negligently designed, manufactured, distributed, and sold the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model and the Ford SUV in that the seat back portion and related parts of the front seat assembly were likely to fail in a reasonably foreseeable accident.

182. Lear carelessly and negligently failed to give adequate warnings to purchasers and users of the front seat assembly (including the seat back and related portions) contained in the 1998 Model and the Ford SUV, including Allen Bagg, about the unreasonably dangerous and defective condition of the seat back portion and related parts of the front seat assembly and the dangerous propensity of the seat back portion and related parts of the front seat assembly to fail during a reasonably

foreseeable collision resulting in unnecessary and severe injury to persons using the 1998 Model.

183. Lear carelessly and negligently put into the stream of commerce the unreasonably dangerous and defective front seat assembly (including the seat back portion and related parts) contained in the 1998 Model and the Ford SUV.

184. Lear was careless and negligent in designing the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model so that the seat back portion and related parts of the front seat assembly were likely to fail in the event of a reasonably foreseeable collision.

185. As a direct and proximate result of the negligence of Lear, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XXVI
Strict Liability
(Allen E. Bagg v. Lear Corporation – Seat Back)

186. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 185 of this Third Amended Complaint.

187. At the time that the front seat assembly (including the seat back portion and related parts) left the control of Lear, and at the time that Allen Bagg suffered extensive burns and other damage on June 29, 2003, the front seat assembly (including the seat back portion and related parts) contained in the Ford SUV was in a defective condition and unreasonably dangerous when put to a reasonably anticipated use. The

1998 Model (of which the Ford SUV was one) was unreasonably dangerous to Allen Bagg and other consumers or users by reason of the defects and design, manufacture, and assembly of the 1998 Model, including, but not limited to, the propensity of the seat back portion and related parts of the front seat assembly to fail during a reasonably foreseeable collision, and the failure to warn or give adequate warnings to Allen Bagg and other consumers or users of the defective nature of the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model.

188. The 1998 Model, and the Ford SUV owned by Allen Bagg, was in a defective condition unreasonably dangerous in that the seat back portion and related parts of the front seat assembly were likely to fail in the event of a reasonably foreseeable collision.

189. The front seat assembly (including the seat back portion and related parts) was expected to reach and did reach the hands of its owner, Allen Bagg, without substantial change in the condition in which it was designed, manufactured, distributed and sold and was being used in a manner intended by Lear and was in substantially the same condition on June 29, 2003 as when it left Lear's control.

190. Lear knew that the 1998 Model, and the Ford SUV owned by Allen Bagg, would be used without inspection for defects and represented that front seat assembly (including the seat back portion and related parts) contained in the 1998 Model could be safely used and would be fit for the ordinary purposes for which it was purchased.

191. Allen Bagg was not aware of any defect in the Ford SUV at any time prior to the collision on June 29, 2003. The defects in the Ford SUV that resulted in the vehicle's failure to protect the occupants in a foreseeable rear-end collision would not have been detectable by Allen Bagg.

192. The acts and/or omissions of Lear showed a complete indifference to or conscious disregard for Allen Bagg and other users of the 1998 Model.

193. As a direct and proximate result of the defective Ford SUV and the front seat assembly (including the seat back portion and related parts) contained therein, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XXVII
Breach Of Warranty
(Allen E. Bagg v. Lear Corporation – Seat Back)

194. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 193 of this Third Amended Complaint.

195. At all times relevant, Lear expressly and impliedly warranted and advertised to the general public that the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model was safe and stable in handling and crashworthiness, and further warranted that the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model would reasonably protect occupants during an accident.

196. Allen Bagg justifiably and reasonably relied upon Lear's warranties and advertising and had reason to believe that the vehicle was safe when operated as advertised and warranted.

197. Lear's warranties were breached because the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model, and the

Ford SUV owned by Allen Bagg, was not fit for the use for which it was intended due to insufficient warnings, lack of instructions and misleading advertising to the customer regarding controllability, stability, and crashworthiness.

198. As a direct and proximate result of Lear's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XXVIII
Breach Of Warranty Of Merchantability
(Allen E. Bagg v. Lear Corporation – Seat Back)

199. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 198 of this Third Amended Complaint.

200. Lear had a legal duty pursuant to Massachusetts General Laws, Chapter 106, Section 2-314 to warrant that the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model and the Ford SUV was merchantable and that the front seat assembly (including the seat back portion and related parts) was fit for the ordinary purposes for which such front seat assemblies were used. The front seat assembly (including the seat back portion and related parts) contained in the 1998 Model and the Ford SUV was defective and not reasonably suitable for the ordinary uses for which goods of that kind and description were sold. Furthermore, the defects existed at the time the front seat assembly was manufactured and sold.

201. Lear's failure to provide a front seat assembly (including the seat back portion and related parts) in the 1998 Model and the Ford SUV that would not be compromised in a rear-end collision, which was both foreseeable and preventable, constitutes a violation of M.G.L. c. 106 §2-314.

202. As a direct and proximate result of Lear's breaches of warranties, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XXIX
Failure To Warn
(Allen E. Bagg v. Lear Corporation – Seat Back)

203. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 202 of this Third Amended Complaint.

204. At all times relevant, Lear had an ongoing duty to provide information, instructions and warnings regarding the handling and control characteristics and problems of the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model to ensure that users would use the vehicle safely – or not use it at all – and would understand the operating characteristics of the front seat assembly (including the seat back portion and related parts) contained in the 1998 Model.

205. Allen Bagg was not made aware of any such instruction, warning, or recommendation at any time prior to June 29, 2003 by Lear.

206. As a direct result of Lear's failure to warn, Allen Bagg has sustained severe and permanent personal injuries and disfigurement, suffered great pain of body and anguish of mind and other emotional distress, was caused to undergo numerous painful and disfiguring surgical procedures which would have been unnecessary, suffered a significant reduction in his life expectancy and the diminution of his earning capacity and has suffered other incidental and consequential damages.

COUNT XXX
Loss Of Consortium
(Stephanie Bagg v. Lear Corporation – Seat Back)

207. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 206 of this Third Amended Complaint.

208. As a direct and proximate result of Lear's wrongful conduct, Plaintiff Stephanie Bagg has suffered and will continue to suffer in the future the loss of care, comfort, services, support, companionship, society, and consortium of Plaintiff Allen Bagg as a kind and loving spouse; and has suffered great pain of body, anguish of mind and severe emotional distress and other incidental and consequential damages.

COUNT XXXI
Negligent Infliction Of Emotional Distress
(Allen E. Bagg v. Lear Corporation – Seat Back)

209. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 208 of this Third Amended Complaint.

210. As a direct and proximate result of Lear's wrongful conduct, Plaintiff, Allen Bagg, has suffered extreme emotional distress.

211. In so acting with respect to Plaintiff, Allen Bagg, Lear knew or should have known that severe emotional distress was the likely result of such conduct.

212. The emotional distress suffered by Plaintiff, Allen Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XXXII
Negligent Infliction Of Emotional Distress
(Stephanie Bagg v. Lear Corporation – Seat Back)

213. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 212 of this Third Amended Complaint.

214. As a direct and proximate result of Lear's wrongful conduct, Plaintiff, Stephanie Bagg, has suffered extreme emotional distress.

215. In so acting with respect to Plaintiff, Stephanie Bagg, Lear knew or should have known that severe emotional distress was the likely result of such conduct.

216. The emotional distress suffered by Plaintiff, Stephanie Bagg, was severe and of such a nature that no reasonable person could be expected to endure it.

COUNT XXXIII
Violation Of Massachusetts General Law Chapter 93A
(Allen E. Bagg v. Lear Corporation – Seat Back)

217. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 216 of this Third Amended Complaint.

218. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

219. Lear is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

220. The acts of Lear were performed willfully and knowingly.

221. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Allen E. Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and he is also entitled to an award of attorney's fees and costs.

COUNT XXXIV
Violation Of Massachusetts General Law Chapter 93A
(Stephanie Bagg v. Lear Corporation – Seat Back)

222. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 221 of this Third Amended Complaint.

223. Pursuant to Massachusetts law, a breach of implied warranty of merchantability constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

224. Lear is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

225. The acts of Lear were performed willfully and knowingly.

226. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Stephanie Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and she is also entitled to an award of attorney's fees and costs.

COUNT XXXV
Breach of Contract
(Allen E. Bagg v. The Hanover Insurance Group, Inc.)

227. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 226 of this Third Amended Complaint.

228. Defendant, The Hanover Insurance Group, Inc., orally contracted with Plaintiff, Allen E. Bagg, to store and preserve the Ford SUV and not salvage it or alter it in any way until such time as Allen Bagg's expert representatives had an opportunity to view, inspect, and perform such tests as may be necessary.

229. The oral contract between The Hanover Insurance Group, Inc. and Allen Bagg was made for a valid consideration.

230. The Hanover Insurance Group, Inc., breached the contract.

231. Allen Bagg satisfied or performed all conditions precedent in relation to the contract.

232. As a proximate and direct result of The Hanover Insurance Group, Inc.'s breach of contract, Plaintiff, Allen E. Bagg, has suffered substantial costs and loss, serious economic harm, and incurred additional incidental and consequential damages.

COUNT XXXVI
Promissory Estoppel
(Allen E. Bagg v. The Hanover Insurance Group, Inc.)

233. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 232 of this Third Amended Complaint.

234. Defendant, The Hanover Insurance Group, Inc., made representations to Plaintiff, Allen Bagg, that were intended to induce reliance by Allen Bagg.

235. Allen Bagg acted in reasonable reliance on the representations of The Hanover Insurance Group, Inc.

236. As a direct result of The Hanover Insurance Group, Inc.'s representations and actions, Allen Bagg was harmed to his detriment.

237. As a proximate and direct result of The Hanover Insurance Group, Inc.'s actions, Plaintiff, Allen E. Bagg, has suffered substantial costs and loss, serious economic harm, and incurred additional incidental and consequential damages.

COUNT XXXVII
Violation Of Massachusetts General Law Chapter 93A
(Allen E. Bagg v. The Hanover Insurance Group, Inc.)

238. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 237 of this Third Amended Complaint.

239. Pursuant to Massachusetts law, a violation of Massachusetts General Laws, Chapter 176D constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

240. Defendant, The Hanover Insurance Group, Inc., is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

241. The acts of The Hanover Insurance Group, Inc. were performed willfully and knowingly.

242. The refusal of The Hanover Insurance Group, Inc. to grant relief upon demand of plaintiff, Allen Bagg, was made in bad faith with knowledge or reason to know that the act violated M.G.L. c. 93A, Section 2.

243. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Allen E. Bagg, has suffered and continues to suffer substantial injury and loss and incurred additional incidental and consequential damages. Accordingly, Plaintiff's

damages should be trebled with interest awarded, and he is also entitled to an award of attorney's fees and costs.

COUNT XXXVIII
Breach of Contract
(Allen E. Bagg v. Adesa, Inc.)

244. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 243 of this Third Amended Complaint.

245. Defendant, Adesa, Inc., orally contracted with Plaintiff, Allen E. Bagg, to store and preserve the Ford SUV and not salvage it or alter it in any way until such time as Allen Bagg's expert representatives had an opportunity to view, inspect, and perform such tests as may be necessary.

246. The oral contract between Adesa, Inc. and Allen Bagg was made for a valid consideration.

247. Adesa, Inc. breached the contract.

248. Allen Bagg satisfied or performed all conditions precedent in relation to the contract.

249. As a proximate and direct result of Adesa, Inc.'s breach of contract, Plaintiff, Allen E. Bagg, has suffered substantial costs and loss, serious economic harm, and incurred additional incidental and consequential damages.

COUNT XXXIX
Promissory Estoppel
(Allen E. Bagg v. Adesa, Inc.)

250. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 249 of this Third Amended Complaint.

251. Defendant, Adesa, Inc., made representations to Plaintiff, Allen Bagg, that were intended to induce reliance by Allen Bagg.

252. Allen Bagg acted in reasonable reliance on the representations of Adesa, Inc.

253. As a direct result of Adesa, Inc.'s representations and actions, Allen Bagg was harmed to his detriment.

254. As a proximate and direct result of Adesa, Inc.'s actions, Plaintiff, Allen E. Bagg, has suffered substantial costs and loss, serious economic harm, and incurred additional incidental and consequential damages.

COUNT XL
Violation Of Massachusetts General Law Chapter 93A
(Allen E. Bagg v. Adesa, Inc.)

255. Plaintiffs repeat and incorporate by reference herein the allegations set forth in Paragraphs 1 through 254 of this Third Amended Complaint.

256. Pursuant to Massachusetts law, a violation of Massachusetts General Laws, Chapter 176D constitutes an unfair and deceptive act as set forth in Massachusetts General Laws, Chapter 93A, Section 2 ("the Massachusetts Consumer Protection Statute").

257. Defendant, Adesa, Inc., is a business entity defined by M.G.L. c. 93A and at all times relevant has been engaged in trade or commerce within the Commonwealth of Massachusetts.

258. The acts of Adesa, Inc. were performed willfully and knowingly.

259. The refusal of Adesa, Inc. to grant relief upon demand of plaintiff, Allen Bagg, was made in bad faith with knowledge or reason to know that the act violated M.G.L. c. 93A, Section 2.

260. As a result of the herein described unfair or deceptive acts or practices, Plaintiff, Allen E. Bagg, has suffered and continues to suffer substantial injury and loss

and incurred additional incidental and consequential damages. Accordingly, Plaintiff's damages should be trebled with interest awarded, and he is also entitled to an award of attorney's fees and costs.

Relief Sought

WHEREFORE, the Plaintiffs pray as follows:

1. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the negligence of Defendant Ford Motor Company and enter judgment against it as to Count I of the Complaint, together with interest and costs;

2. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the strict liability of Defendant Ford Motor Company and enter judgment against it as to Count II of the Complaint, together with interest and costs;

3. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of Defendant Ford Motor Company and enter judgment against it as to Count III of the Complaint, together with interest and costs;

4. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of merchantability of Defendant Ford Motor Company and enter judgment against it as to Count IV of the Complaint, together with interest and costs;

5. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the failure to warn by Defendant Ford Motor

Company and enter judgment against it as to Count V of the Complaint, together with interest and costs;

6. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, for loss of consortium as a result of the actions of Defendant Ford Motor Company and enter judgment against it as to Count VI of the Complaint, together with interest and costs;

7. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the infliction of emotional distress by Defendant Ford Motor Company and enter judgment against it as to Count VII of the Complaint, together with interest and costs;

8. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the infliction of emotional distress by Defendant Ford Motor Company and enter judgment against it as to Count VIII of the Complaint, together with interest and costs;

9. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Ford Motor Company and enter judgment against it as to Count IX of the Complaint, together with interest and costs;

10. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Ford Motor Company and enter judgment against it as to Count X of the Complaint, together with interest and costs;

11. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the negligence of Defendant Daniel Valente and

enter judgment against him as to Count XI of the Complaint, together with interest and costs;

12. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, for loss of consortium as a result of the actions of Defendant Daniel Valente and enter judgment against him as to Count XII of the Complaint, together with interest and costs;

13. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the infliction of emotional distress by Defendant Daniel Valente and enter judgment against him as to Count XIII of the Complaint, together with interest and costs;

14. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the infliction of emotional distress by Defendant Daniel Valente and enter judgment against him as to Count XIV of the Complaint, together with interest and costs;

15. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the negligence of Defendant Ford Motor Company and enter judgment against it as to Count XV of the Complaint, together with interest and costs;

16. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the strict liability of Defendant Ford Motor Company and enter judgment against it as to Count XVI of the Complaint, together with interest and costs;

17. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of Defendant Ford Motor

Company and enter judgment against it as to Count XVII of the Complaint, together with interest and costs;

18. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of merchantability of Defendant Ford Motor Company and enter judgment against it as to Count XVIII of the Complaint, together with interest and costs;

19. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the failure to warn by Defendant Ford Motor Company and enter judgment against it as to Count XIX of the Complaint, together with interest and costs;

20. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, for loss of consortium as a result of the actions of Defendant Ford Motor Company and enter judgment against it as to Count XX of the Complaint, together with interest and costs;

21. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the infliction of emotional distress by Defendant Ford Motor Company and enter judgment against it as to Count XXI of the Complaint, together with interest and costs;

22. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the infliction of emotional distress by Defendant Ford Motor Company and enter judgment against it as to Count XXII of the Complaint, together with interest and costs;

23. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the violation of Massachusetts General Law Chapter

93A by Defendant Ford Motor Company and enter judgment against it as to Count XXIII of the Complaint, together with interest and costs;

24. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Ford Motor Company and enter judgment against it as to Count XXIV of the Complaint, together with interest and costs;

25. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the negligence of Defendant Lear Corporation and enter judgment against it as to Count XXV of the Complaint, together with interest and costs;

26. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the strict liability of Defendant Lear Corporation and enter judgment against it as to Count XXVI of the Complaint, together with interest and costs;

27. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of Defendant Lear Corporation and enter judgment against it as to Count XXVII of the Complaint, together with interest and costs;

28. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of warranty of merchantability of Defendant Lear Corporation and enter judgment against it as to Count XXVIII of the Complaint, together with interest and costs;

29. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the failure to warn by Defendant Lear Corporation

and enter judgment against it as to Count XXIX of the Complaint, together with interest and costs;

30. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, for loss of consortium as a result of the actions of Defendant Lear Corporation and enter judgment against it as to Count XXX of the Complaint, together with interest and costs;

31. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the infliction of emotional distress by Defendant Lear Corporation and enter judgment against it as to Count XXXI of the Complaint, together with interest and costs;

32. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the infliction of emotional distress by Defendant Lear Corporation and enter judgment against it as to Count XXXI of the Complaint, together with interest and costs;

33. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Lear Corporation and enter judgment against it as to Count XXXIII of the Complaint, together with interest and costs;

34. That the Court determine the amount of actual damages sustained by the Plaintiff, Stephanie Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant Lear Corporation and enter judgment against it as to Count XXXIV of the Complaint, together with interest and costs;

35. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of contract by Defendant, The Hanover

Insurance Group, Inc., and enter judgment against it as to Count XXXV of the Complaint, together with interest and costs;

36. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the actions of Defendant, The Hanover Insurance Group, Inc., and enter judgment against it as to Count XXXVI of the Complaint, together with interest and costs;

37. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant, The Hanover Insurance Group, Inc., and enter judgment against it as to Count XXXVII of the Complaint, together with interest and costs;

38. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the breach of contract by Defendant, Adesa, Inc., and enter judgment against it as to Count XXXVIII of the Complaint, together with interest and costs;

39. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the actions of Defendant, Adesa, Inc., and enter judgment against it as to Count XXXIX of the Complaint, together with interest and costs;

40. That the Court determine the amount of actual damages sustained by the Plaintiff, Allen Bagg, as a result of the violation of Massachusetts General Law Chapter 93A by Defendant, Adesa, Inc., and enter judgment against it as to Count XL of the Complaint, together with interest and costs;

41. That the amount of the Plaintiffs' actual damages be trebled;

42. That the Court award attorneys fees to the Plaintiffs;

43. That the Court award Plaintiffs punitive damages; and

44. That the Court grant such other relief as it deems reasonable and proper.

Jury Demand

Plaintiffs demand a trial by jury on all issues so triable.

Respectfully submitted,

THE PLAINTIFFS

By their attorneys,

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Dated: June 26, 2009

VERIFACT
CORPORATION

ACCIDENT AND FAILURE ANALYSIS

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March 4, 2004

Mr. Stephen J. Lyons
Klieman, Lyons, Schindler & Gross
21 Custom House Street
Boston, Massachusetts 02110

Re [redacted] et al

Dear Mr. Lyons:

Pursuant to your request, we have performed a review and preliminary analysis for your office concerning an accident that occurred on June 29, 2003 involving a 1998 Ford Explorer and a 2003 Audi. The accident occurred on Falmouth Road in Cotuit, Massachusetts. The purpose of this letter is to inform you of our preliminary findings to date.

The following items were supplied by your office:

- A copy of a Commonwealth of Massachusetts Motor Vehicle Crash Police Report as completed by Patrolman Brian Morrison, Badge Number 205, of the Barnstable Police Department dated June 29, 2003.
- Two hundred and six (206) color laser copies of photographs of the accident scene, accident site and subject vehicles.
- A VHS videotape of the accident scene.

- A copy of an Collision Reconstruction Report prepared by Officer Daniel Parkka of the Barnstable Police Department.
- Miscellaneous vehicle information and data pertaining to the subject 1998 Ford 4 X 4 Explorer.
- Nine (9) 8" by 12" color photographs of the subject 1998 Ford Explorer.

The following were supplied by Daniel Parkka of Parkka Collision Consultants:

- A 3.5 inch disk containing six (6) color photographs of the subject 1998 Ford Explorer
- A CD containing one hundred seventeen (117) digital color photographs of the subject 1998 Ford Explorer, subject 2003 Audi and accident scene.
- A CD containing a copy of the accident reconstruction report of officer Daniel Parkka of the Barnstable Police Department, a copy of scaled accident scenario diagram in Turbo Cad and AutoCAD format.
- A CD containing the Turbo CAD Program
- A CD containing twenty five (25) digital color photographs of the subject 1998 Ford Explorer, subject 2003 Audi, and an aerial photograph of the accident site.
- Six (6) each 8" by 12" color copies of D. Parkka's digital photographs of the subject 1998 Ford Explorer.
- Seven (7) each 6" by 8" color laser copies of photographs of the subject 1998 Ford Explorer.
- Six (6) each 36" by 44" copies of scaled accident scenario diagrams

- One (1) each 32 ½" by 34" color laser copy of the aerial photograph of the accident site
- A letter from Daniel Parkka dated January 27, 2004, concerning damage to the fuel tank on the subject 1998 Ford Explorer.
- One (1) 8" by 10" digital color photograph labeled MVC-005t and two (2) 8" by 12" digital color photographs labeled MVC-005s and MVC-006s, and one 4" by 6" color photograph labeled MVC-005u of the fuel tank on the subject 1998 Ford Explorer.

On November 11, 2003 Verifact Corporation personnel inspected and documented the subject 2003 Audi A4 Station Wagon. The vehicle license was Massachusetts's [redacted] The vehicle was equipped with a 1.8 liter 4 cylinder engine, power steering, power brakes, manual transmission and all wheel drive power train. The vehicle had sustained frontal impact damage and damage to the right front door. The vehicle has also sustained fire damage. Photographs were taken to record the condition of the vehicle. Also on November 11, 2003 Verifact Corporation personnel interviewed [redacted] and officer Daniel Parkka.

On January 7, 2004 Verifact Corporation personnel inspected and documented an exemplar 1998 Ford 4X4 Explorer. The vehicle was equipped with a 4.0-liter V-6 fuel injected engine, automatic transmission, power steering, power brakes, and air conditioning. The vehicle was identified by VIN 1FMZU34E2WU[redacted] Photographs and measurements were taken to document the condition of the vehicle.

Based on our review and analysis of the above material our preliminary findings are as follows:

1) The subject 2003 Audi A4 impacted the left rear of the subject 1998 Ford Explorer.

2) Daniel Parkka states in a letter dated January 27, 2004 the rear axle housing on the subject 1998 Ford Explorer was free to move forward toward the fuel tank because of the damage to the left leaf spring. Analysis of his photographs show the left side of the rear axle is not attached to the subject Ford Explorer.

3) In the Collision Reconstruction Report #03-865-AC, dated July 10, 2003, Daniel Parkka states the rear axle housing was pushed forward into the rear of the fuel tank of the subject 1998 Ford Explorer and that an impression of the rear axle housing was made in the fuel tank. He states in his January 27, 2003 letter that he found two impressions in the rear of the fuel tank above the tank seam. Within each of these impressions he found tears in the fuel tank. Based on photographic analysis it is most probable that the rear axle and/or rear suspension of the 1998 Ford Explorer impacted the rear of the fuel tank. There is deformation to the rear of the fuel tank that is consistent with the shape of the rear axle.

4) Daniel Parkka noted fuel coming from the perforations in the rear of the fuel tank of the subject 1998 Ford Explorer as the vehicle was being lifted in the front by a tow truck. Parkka indicates the location of these perforations in his photographs.

5) It appears that there is a metal shield on the bottom of the fuel tank on the subject 1998 Ford Explorer. Inspection of the exemplar 1998 Ford Explorer revealed that there is a metal shield covering the bottom of the fuel tank. No shield was found covering the rear of the fuel tank on the exemplar Explorer.

6) Inspection of the exemplar 1998 Ford Explorer 4 x 4 revealed that the distance from the forward section of the left rear axle housing to the rear of the fuel tank is approximately 3.5 inches.

7) Distances between various suspension components and the fuel tank on the exemplar 1998 Ford Explorer varied from 1.1 inches to 14.6 inches.

8) Ford has performed rear impact crash testing with speeds up to 55 mph on prototype 1997 Ford pickups for the PN96 program. During these tests rear suspension components contacted the rear of the fuel tank and compromised the fuel tank.

9) Ford uses a polymer shield to cover the rear of the fuel tank on 1997 Ford F150 pickups to protect the fuel tank from being compromised by the rear axle assembly in a rear end collision.

10) Ford installs shields over sections of the rear axle assembly on 2003 Ford Crown Victoria Police Interceptors (CVPI) to protect the fuel tank from being compromised by the rear axle assembly in a rear end collision.

If there are any questions, please do not hesitate to contact me.

Sincerely,

VERIFACT CORPORATION

Jerry G. Wallingford, P.E.

enclosures

03-202-FP