



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

Dear Crash Data Researchers/Users:

Thank you for choosing crash data from the National Highway Traffic Safety Administration (NHTSA) for your research or other use. The information contained in this motor vehicle crash report is collected, maintained and distributed in accordance with Public Law 89-564. In accordance with this Public Law, NHTSA is required not to release any case information until completion of quality control procedures. These procedures include a review of the case material to extract all names, licenses and registration numbers, non-coded interview material, non-research related researcher comments in the margins, non-factual data, and the production number portion of the vehicle identification number (VIN).

If you requested NHTSA to query its database files in order to identify a specific crash, then that query was made using non-personal descriptors you provided for use in our search. This motor vehicle crash may have been identified from a data search and matches the general, non-personal descriptors you provided, but we cannot confirm that this is the specific crash report you requested.

If you have any questions with regard to the above procedures, please contact the Field Operations Branch, Crash Investigation Division, National Center for Statistics and Analysis at 202-366-4820. Again, please be advised that we cannot confirm that this is the case that you have specifically requested nor can we certify the information to be correct.

\*\*\*    \*\*\*    \*\*\*



AUTO SAFETY HOTLINE  
(800) 424-9393  
Wash. D.C. Area 366-0123

**TRANSPORTATION RESEARCH CENTER**

**Indiana University**  
[REDACTED]

**REMOTE AIR BAG REPORT**

**CASE NO. - 92-06**  
**FLEET - PRIVATE VEHICLE**  
**LOCATION - [REDACTED] INDIANA**  
**ACCIDENT DATE - [REDACTED] 1992**

**Submitted By:**

[REDACTED]  
**Associate Scientist**

[REDACTED] **1992**

**Revised Submission:**

[REDACTED] **1993**

**Contract Number: DTNH22-87-C-07169**

**Prepared for:**

**U.S. Department of Transportation**  
**National Highway Traffic Safety Administration**  
**National Center for Statistics and Analysis**  
**Washington, D.C. 20590**

## **DISCLAIMERS**

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The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration.

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

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

Transportation Research Center  
Indiana University

Remote Air Bag Case No. 92-06

Summary

This report concerns a motor vehicle accident involving an air bag equipped 1990 Chevrolet Corvette, a 1978 Ford Fairmont, and a 1986 Chevrolet Cavalier occurring on [REDACTED], 1992 at [REDACTED] p.m. in [REDACTED] Indiana on a City Street.

The Corvette was traveling east in the outside lane of a four-lane divided trafficway when it impacted the Fairmont which was traveling south on a two-lane undivided roadway. The Fairmont then struck the Cavalier, which was northbound on the two-lane undivided roadway and stopped at the intersection. The Corvette rotated clockwise after impact. The final rest position of the Corvette is not known. The Fairmont rotated counterclockwise after impact with the Corvette and struck the Cavalier. The Fairmont came to rest on the southeast corner of the intersection, partially off the roadway. The final rest position of the Cavalier is not known.

The front of the Corvette impacted the right front of the Fairmont. Subsequently, they sideslapped with the right quarter panel of the Fairmont impacting the left side of the Corvette. Next, the front of the Fairmont impacted the front left of the Cavalier. CDCs for the Corvette are estimated as: 10-FDEW-1 and 09-LYEW-1. CDCs are not estimable for the Fairmont and Cavalier. No reconstruction program was used on this collision.

The 1990 Chevrolet Corvette was equipped with a driver supplemental restraint system (air bag) which did not deploy as a result of the frontal impact. The driver of the vehicle (27 year-old female) was also restrained by the active three-point lap and shoulder belt. The driver of the Corvette was listed on the Police Accident Report as not sustaining any injury as a result of this accident. The driver (38 year-old male) of the Fairmont was listed on the Police Accident Report as not sustaining any injury. The driver (43 year-old female) of the Cavalier was also listed on the Police Accident Report as not sustaining any injury.

# TRC/IU REMOTE AIR BAG REPORT

FLEET - PRIVATE VEHICLE  
LOCATION - [REDACTED] INDIANA  
CASE NO. - 92-06

## ACCIDENT DATA

Location/Street: Intersection of two city streets  
City/Township: [REDACTED] Indiana  
Area/Type: Urban/residential  
Accident Date/Time: [REDACTED], 1992 @ [REDACTED] p.m.  
Investigating Police Agency: [REDACTED] Police Department  
Accident Type: Car / Car - right angle  
Occupant Injury Severity (air bag vehicle): No injury (AIS=0)

## AMBIENT CONDITIONS

Light conditions: Daylight  
Weather Condition: Cloudy  
Precipitation: Snow  
Road Surface: Wet

## ROADWAY

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Location:	City street	City street	City street
Number of Travel Lanes:	4-lanes, divided	2-lanes, undivided	2-lanes, undivided
Surface Type:	Concrete	Concrete	Concrete
Vertical alignment:	Unknown	Unknown	Unknown
Horizontal alignment:	Straight	Straight	Straight
Traffic Density:	Unknown	Unknown	Unknown

ROADWAY (CONT'D.)

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Speed Limit:	35 mph (56 kph)	35 mph (56 kph)	35 mph (56 kph)
Traffic Controls:	On-colors, auto-matic traffic signal light	On-color, auto-matic traffic signal light	On-colors, auto-matic traffic signal light

VEHICLES

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Year:	1990	1978	1986
Make:	Chevrolet	Ford	Chevrolet
Model:	Corvette	Fairmont	Cavalier
Body Type:	2-door	4-door	Stationwagon
V.I.N.:	[REDACTED]	Unknown	Unknown
Mileage:	3,800 miles (6,115 kilometers)	Unknown	Unknown
Securiflex windshield:	Unknown	Unknown	Unknown
Windshield damage/ source:	None	Unknown	Unknown
Fleet:	Private vehicle	Private vehicle	Private vehicle
Tow status:	Towed	Towed	Not towed
Reported Defects:	Unknown	Unknown	Unknown

VEHICLE DAMAGE

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
<u>Nondeployment Impact</u>		
Object Struck:	Vehicle #2	Case vehicle
Event number:	1	1
Damage location:	Front	Right front
CDC:	10-FDEW-1	Unknown
Estimated Maximum Crush:	6-8 inches (15-20 centimeters)	Unknown

VEHICLE DAMAGE (CONT'D.)

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Damage components:	Bumper, hood, left & right fenders, right front door	Unknown
Repair Estimate:	Unknown	Unknown
Interior damage:	Unknown	Unknown

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
<u>1st Additional Impact</u>		
Event number:	2	2
Object Struck:	Vehicle #2	Case vehicle
Damage location:	Left	Right
CDC:	09-LYEW-1	Unknown
Estimated Maximum Crush:	Scratches and broken fiberglass only	Unknown
Damage components:	Left front door and quarter panel	Unknown
Interior damage:	Unknown	Unknown

	<u>Vehicle #2</u>	<u>Vehicle #3</u>
<u>2nd Additional Impact</u>		
Event number:	3	3
Object Struck:	Vehicle #3	Vehicle #2
Damage location:	Front	Front
CDC:	Unknown	Unknown
Estimated Maximum Crush:	Unknown	Unknown
Damage components:	Unknown	Unknown
Interior damage:	Unknown	Unknown

VEHICLE DAMAGE (CONT'D.)Vehicle #23rd Additional Impact

Event number:	4
Object Struck:	Curb
Damage location:	Front
CDC:	Unknown
Estimated Maximum Crush:	Unknown
Damage components:	Unknown
Interior damage:	Unknown

COLLISION SEQUENCE

According to the police accident report, the case vehicle (Corvette) was traveling east in the outside lane of a four-lane divided city street and was attempting to continue in its direction of travel. Vehicle #2 was traveling south on a two-lane undivided city street and was attempting to continue in its direction of travel. Vehicle #3 was northbound on a two-lane city street and was stopped at the intersection waiting to initiate a left turn. The accident occurred in the intersection of the two streets.

Based on information in the police accident report, from the investigating officer, and from the photographs contained in the "Petition for Defect Investigation Report", the front of the case vehicle impacted the right side of vehicle #2. The damage on the front of the case vehicle indicates an acute angle impact between the case vehicle and vehicle #2. It appears likely that the case vehicle was steered to the right at the time of impact. Following the initial impact, vehicle #2 rotated counterclockwise and the case vehicle rotated clockwise. The right side of vehicle #2 impacted (i.e., sideslapped) the left side of the case vehicle. Vehicle #2 then continued southeastward and impacted vehicle #3. Subsequently, vehicle #2 impacted a curb and came to rest on the southeast corner of the intersection, partially off the roadway. The final rest positions of the case vehicle and vehicle #3 are not known.

The case vehicle's driver side supplemental restraint system (air bag) did not deploy. The police accident report indicated that the driver of the case vehicle was wearing the available lap/shoulder restraint at the time of the accident. The driver sustained no injury as a result of the collision.



**DRIVER DATA**

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Age:	27	38	43
Sex:	Female	Male	Female
Height:	Unknown	Unknown	Unknown
Weight:	Unknown	Unknown	Unknown
Occupation:	Unknown	Unknown	Unknown
Active Restraint System/Usage:	3-point lap and shoulder/used	3-point lap and shoulder/used	3-point lap and shoulder/used
Usage Source:	Police accident report	Police accident report	Police accident report
Eye glasses/contacts:	Unknown	Unknown	Unknown
Vehicle Familiarity:	Unknown	Unknown	Unknown
Route Familiarity:	Unknown	Unknown	Unknown
Trip Plan:	Unknown	Unknown	Unknown
Manner of Leaving Scene:	Unknown	Unknown	Unknown
Type of Medical Treatment:	No injury	No injury	No injury

**DRIVER INJURIES**

<u>Injury</u>	<u>Severity (AIS)</u>	<u>Source</u>
None	Not applicable	Not applicable

**ATTACHMENTS**

Police Report  
 Petition for Defect Investigation Concerning Alleged Failure of Air Bag  
 Deployment in Certain GM Chevrolet Corvette Vehicles

## OFFICER'S STANDARD ACCIDENT REPORT

State Form 23558R2 Stock 302

Mail to In                      Accident Records Section  
IN                     

## OFFICE USE ONLY

Accident ID No.                     

Date of Accident MON. DAY 1 92	Day of Week <u>                    </u>	Actual Local Time <u>                    </u> AM <input checked="" type="checkbox"/> PM	No Motor Vehicles 3	No Injured 0	No Dead 0	No Trailers 0
County <u>                    </u>	Township <u>                    </u>	City/Town or Nearest City/Town <u>                    </u>				
Inside Corporate Limits? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Property? <input checked="" type="checkbox"/> Private <input type="checkbox"/> Other				
Distance and Direction From Corporate Limits Miles North <u>                    </u> Miles South <u>                    </u> Miles West <u>                    </u>						
Road Accident Occurred On W <u>                    </u> St		Intersecting Road Mile Marker/Interchange N <u>                    </u> Av				
If not at intersection Number of feet from <u>                    </u>		Direction <u>                    </u> Nearest Intersecting Road Mile Marker Interchange <u>                    </u>				

Driver's Name (Last, First, MI) <u>                    </u>			
Address (Street, City, State Zip) <u>                    </u>			
Apparent Phys. Stat. (enter no.) 1	Sex W/F	Date of Birth MONTH DAY YEAR 27	Arrested? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Driver's License No. <u>                    </u>	Lic. Type OP	Lic. St. IN	Restr. <input checked="" type="checkbox"/>

Color white	Veh. Yr. 90	Make Chev	Model Name Corvette / 2-D
Veh. Type (enter no.) 1	Lic. Yr. 91	License No. <u>                    </u>	Lic. State IN
Veh. Use (enter no.) 1	Speed Limit 35	Fuel Tax No. <u>                    </u>	
Direction of Travel E	No Occupants 1	Fire? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	No Axes 2
		Transporting Hazardous Mat. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Towed To <u>                    </u>	Towed By <u>                    </u>
Registered Owner's Name (Last, First, MI) SAME	
Address (Street, City, State Zip) <u>                    </u>	

Registered Owner's Name (Last, First, MI) <u>                    </u>	
Address (Street, City, State Zip) <u>                    </u>	
License No. <u>                    </u>	Make <u>                    </u>
Year <u>                    </u>	Lic. St. <u>                    </u>
Lic. Yr. <u>                    </u>	

Driver's Name (Last, First, MI) <u>                    </u>			
Address (Street, City, State Zip) <u>                    </u>			
Apparent Phys. Stat. (enter no.) 1	Sex W/M	Date of Birth MONTH DAY YEAR 38	Arrested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Driver's License No. <u>                    </u>	Lic. Type CLASS A	Lic. St. IN	Restr. <input checked="" type="checkbox"/>

Color white	Veh. Yr. 78	Make Ford	Model Name <u>                    </u>
Veh. Type (enter no.) 1	Lic. Yr. 91	License No. <u>                    </u>	Lic. State IN
Veh. Use (enter no.) 1	Speed Limit 35	Fuel Tax No. <u>                    </u>	
Direction of Travel S	No Occupants 1	Fire? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No Axes 2
		Transporting Hazardous Mat. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Towed To <u>                    </u>	Towed By <u>                    </u>
Registered Owner's Name (Last, First, MI) SAME	
Address (Street, City, State Zip) <u>                    </u>	

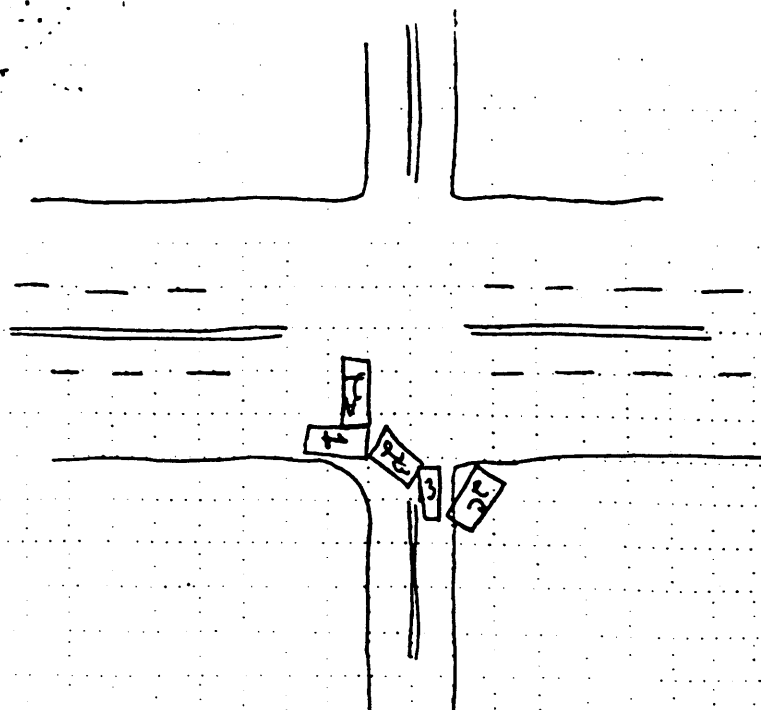
Registered Owner's Name (Last, First, MI) <u>                    </u>	
Address (Street, City, State Zip) <u>                    </u>	
License No. <u>                    </u>	Make <u>                    </u>
Year <u>                    </u>	Lic. St. <u>                    </u>
Lic. Yr. <u>                    </u>	

INITIAL IMPACT V1 1 V2 2	DAMAGE EST V5 5 V7 7	Areas Damaged (Multiples) 10 - Undercarriage 11 - Trailer 12 - None	OTHER PROPERTY (INCLUDE CARGO) Name of Object Curb	OWNER'S NAME AND ADDRESS Dept of Transportation	Damage Est. (use chart) 1
-----------------------------	-------------------------	--	--	--	------------------------------

Direction <u>                    </u>	Street/Highway <u>                    </u>	Arrested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Apparent Phys. Stat. (enter no.) <u>                    </u>
What was pedestrian doing before accident? Enter No.			
1 Not in roadway 2 Standing in roadway 3 Playing in roadway 4 Pushing or working on vehicle 5 Other working in roadway 6 Walking in roadway with traffic 7 Walking in roadway against traffic 8 Getting on or off vehicle 9 Getting on or off school bus 10 Crossing or entering not at intersection 11 Crossing or entering at intersection 12 Other			
Pedestrian Traffic Control? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

16	17	18	19	20	21	22	23	24	25	26	27	28	29
3	1	1		DRIVER OF VEHICLE 1 (as listed above)	0	11							
3	1	1		DRIVER OF VEHICLE 2 (as listed above)	0	11							
Certified to be true copy													

Diagram

Indicate NORTH  
by an arrow

## NARRATIVE (Refer to Vehicle by Number)

Driver #1 said she was E/B in the curb lane of W. [REDACTED] St. At the intersection of W. [REDACTED] St and N. [REDACTED] Av, driver #1 had the green automatic signal and she proceeded thru the intersection when vehicle #2 disregarded the red light and came into the intersection. Driver #1 could not stop, and struck vehicle #2. Vehicle #2 then spun into vehicle #3, waiting in the N/B lane of N. [REDACTED] Av at W. [REDACTED] St. Vehicle #2 then spun over the curb and came to rest on the S/E corner of W. [REDACTED] St & N. [REDACTED] Av.

Driver #2 said he was waiting at the light at W. [REDACTED] St & N. [REDACTED] Av facing S/B. Driver #2 said the light turned green for him and he proceeded S/B on N. [REDACTED] Av. Vehicle #1 came thru the intersection and struck vehicle #2 spinning him into vehicle #3 and then onto the curb.

Driver #3 said she was waiting for the light at W. [REDACTED] St. and N. [REDACTED] Av, N/B. Driver #3

D1 Insured By

D2 Insured By

Other Participant(s) Name, Address (etc.)

Name of Witness No. 1

Address

Location at Time of Accident

Name of Witness No. 2

Address

Location at Time of Accident

Name of Person Arrested

I.C. Code(s)

Name of Person Arrested

I.C. Code(s)

Time Notified

AM

Time Arrived

PM

Other Location of Investigation

Investigation Complete

☒ Yes☐ No

Photos Taken

☐ Yes☒ No

Assisting Officer

I.D. No.

Agency

Date of Report

Assisting Officer

I.D. No.

Agency

Driver Report

Form Furnished

☒ D1☒ D2

## OFFICER'S STANDARD ACCIDENT REPORT

OFFICE USE ONLY

State Form 23558R2 Stock 302

Accident ID No.

Mail to

Police Accident Records Section

IN

Date of Accident MONTH DAY YEAR		Day of Week		Actual Local Time		No Motor Vehicles	No Injured	No Dead	No Trailers
COUNTY		TOWNSHIP		CITY/TOWN OR NEAREST CITY/TOWN		3	0	0	0
Inside Corporate Limits?		Property?		Distance and Direction From Corporate Limits					
Yes No		Private Other		Miles North		Miles South		Miles East Miles West	
Road Accident Occurred On				Intersecting Road Mile Marker Interchange					
W 51				N 1st Av					
If not at Intersection Number of feet from				Direction		Nearest Intersecting Road Mile Marker Interchange			

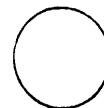
Driver's Name (Last, First, MI)					
Address (Street, City, State, Zip)					
Apparent Phys Stat (enter no.)	Sex	Date of Birth	YEAR	Arrested?	
1	W/F	MONTH DAY		Yes No	
Driver's License No.		Lic Type	Lic St	Restr	
		OP	IN	AB	
Color	Veh Yr	Make	Model Name		
GRY	86	Chev	Cavalier (SW)		
Veh Type (enter no.)	Lic Yr	License No.	Lic State		
1	91		IN		
Veh Use (enter no.)	Speed Limit	Fuel Tax No.			
1	35				
Direction of Travel	No Occupants	Fire?	No Axles	Transporting Hazardous Mat	
N	1	Yes No	2	Yes No	
Towed To	Towed By				
Registered Owner's Name (Last, First, MI)					
SAME					
Address (Street, City, State, Zip)					
Registered Owner's Name (Last, First, MI)					
Address (Street, City, State, Zip)					
License No.	Make	Year	Lic St	Lic Yr	

Driver's Name (Last, First, MI)					
Address (Street, City, State, Zip)					
Apparent Phys Stat (enter no.)	Sex	Date of Birth	YEAR	Arrested?	
		MONTH DAY		Yes No	
Driver's License No.		Lic Type	Lic St	Restr	
Color	Veh Yr	Make	Model Name		
Veh Type (enter no.)	Lic Yr	License No.	Lic State		
Veh Use (enter no.)	Speed Limit	Fuel Tax No.			
Direction of Travel	No Occupants	Fire?	No Axles	Transporting Hazardous Mat	
		Yes No		Yes No	
Towed To	Towed By				
Registered Owner's Name (Last, First, MI)					
Address (Street, City, State, Zip)					
Registered Owner's Name (Last, First, MI)					
Address (Street, City, State, Zip)					
License No.	Make	Year	Lic St	Lic Yr	

INITIAL IMPACT	Areas Damaged (Multiples)	
2	3 4 6	10 - Undercarriage
DAMAGE EST	3 8 8	11 - Trailer
2	1 8 7	12 - None
OTHER PROPERTY (INCLUDE CARGO)		
Name of Object	OWNER'S NAME AND ADDRESS	
		Damage Est (use chart)

Direction	Street/Highway	Arrested?	Apparent Phys Stat (enter no.)
		Yes No	
What was pedestrian doing before accident? Enter No			
1 Not in roadway			
2 Standing in roadway			
3 Playing in roadway			
4 Pushing or working on vehicle			
5 Other working in roadway			
6 Walking in roadway with traffic			
7 Walking in roadway against traffic			
8 Getting on or off vehicle			
9 Getting on or off school bus			
10 Crossing or entering not at intersection			
11 Crossing or entering at intersection			
12 Other			
Pedestrian Traffic Control? Yes No			

16	17	18	19	20	21	22	23	24	25	26	27	28	29
3	1	1		DRIVER OF VEHICLE 3 (as listed above)	0								
				DRIVER OF VEHICLE 2 (as listed above)									
Certified to be true													



Indicate NORTH  
by an arrow

SEE PAGE 41

**NARRATIVE (Refer to Vehicle by Number)**

second light was red for N/S traffic on N. [REDACTED] Av. when vehicle "2" ran the red light starting the chain reaction accident.

D3 Insured By										D2 Insured By																			
Other Participant(s) Name, Address (etc.)																													
Name of Witness No. 1										Address										Location at Time of Accident									
Name of Witness No. 2										Address										Location at Time of Accident									
Name of Person Arrested										I.C. Code(s)					Name of Person Arrested										I.C. Code(s)				
Time Notified		<input type="checkbox"/> AM <input type="checkbox"/> PM		Time Arrived		<input type="checkbox"/> AM <input type="checkbox"/> PM		Other Location of Investigation												Investigation Complete <input type="checkbox"/> Yes <input type="checkbox"/> No					Photos Taken <input type="checkbox"/> Yes <input type="checkbox"/> No				
Assisting Officer										I.D. No.					Agency					Date of Report 92									
Assisting Officer										I.D. No.					Agency					Driver Report Form Furnished <input checked="" type="checkbox"/> D3 <input checked="" type="checkbox"/> D2									

POLICE DEPARTMENT  
CITY OF [REDACTED]

[REDACTED] 1992

To Whom It May Concern,

On [REDACTED] 1992, I received a call in my office of the [REDACTED] for the [REDACTED] Police Department from [REDACTED]. She stated she was involved in an accident on [REDACTED] 1992 at [REDACTED] Street and [REDACTED] Avenue, and would like to change the narrative.

Ms. [REDACTED] is deaf, and somewhere in the translation of her statement, she informed me that the statement of the accident report was not correct and she would like her version be placed on the report for the record.

Ms. [REDACTED] stated to me that she was north bound on [REDACTED] Avenue stopped at [REDACTED] Street. The light changed to green for her, but because she wanted to turn left onto west bound [REDACTED] Street, she waited for the south bound traffic to clear the intersection. Before the south bound vehicle (1978 Ford Fairmont) was able to clear the intersection on the green light, a white Corvette, which was east bound on [REDACTED] Street ran into the right side of the Fairmont knocking it into Ms. [REDACTED] vehicle. [REDACTED] wanted to stress that the light was green for north/south bound [REDACTED] Avenue and red for east/west bound [REDACTED] Street at the time of the accident.

\*\*\*\* This addition will be attached to the original accident report [REDACTED] at the [REDACTED], \*\*\*\*

Respectfully submitted,

[REDACTED]  
Accident Investigation Police Dept  
Deaf Relations Officer  
[REDACTED] Police Department



U.S. Department  
of Transportation

National Highway  
Traffic Safety  
Administration

BEST AVAILABLE COPY

# Memorandum

Subject: **DP92-011: Petition for Defect Investigation**  
Concerning Alleged Failure of Air Bag Deployment in  
Certain GM Chevrolet Corvette Vehicles

Date: [REDACTED] 1992

From: [REDACTED]  
Safety Defects Engineer

Reply to  
Attn. of: [REDACTED]

To: [REDACTED]

## BASIS:

Ms. [REDACTED] petitioned the National Highway Traffic Safety Administration (NHTSA) by letter requesting that a defect investigation be conducted concerning alleged failure of the air bag system to deploy in an accident on 1990 Chevrolet Corvette vehicles.

## ALLEGED PROBLEM AND SAFETY-RELATED CONSEQUENCES:

The petitioner alleged that, while driving at 35 miles per hour (mph), she struck a 1972 Ford Fairmont broadside and the air bag in her Corvette did not deploy. The petitioner described the injuries she received in this crash. Further, she stated that following the accident, turning on the power to the ignition of the Corvette caused an indicator lamp to illuminate indicating that the air bag had failed.

## DESCRIPTION OF COMPONENT OR VEHICLE SYSTEM:

The 1990 Corvette is equipped with a Supplemental Inflatable Restraint (SIR) system. This system supplements the driver's safety belt to provide occupant crash protection by deploying an air bag from the center of the steering wheel during a moderate to severe vehicle impact. The SIR system consists of two front sensors attached to the vehicle which assess the severity of a crash, a diagnostic energy reserve module (DERM) with an arming sensor (a sensor that closes in a significant crash and "arms" the air bag system for deployment), an inflator module including air bag, gas generator and inflator squib, an "INFL REST" indicator lamp in the vehicle's visually-displayed Driver Information Center, a SIR coil assembly, front bumper impact bar/skid bar assembly, and wiring harness.



The SIR system is activated only when the crash is of sufficient severity such that at least one front discriminating sensor and the DERM's arming sensor have closed simultaneously. This is required to prevent unintentional or unnecessary deployment of the air bag, that is, deployment in crashes in which the supplemental restraint of the air bag is not necessary to ensure occupant crash protection. The air bag deploys when the vehicle is involved in a significant frontal collision, up to 30 degrees, both right and left, off the centerline of the vehicle.

The system status indicator lamp in the Driver Information Center is designed to illuminate for 5 seconds after the ignition is turned "ON," with the message "INFL REST." This indicates that the SIR system is operational and functioning properly. A lamp that does not illuminate or does not go out after 5 seconds is indicative that a problem may exist.

#### VEHICLES INVOLVED:

██████████ produced 57,221 1990 through 1992 Corvette vehicles equipped with the SIR system. The production numbers for each model year are: 1990--21,985; 1991--18,367; and 1992--16,869. These vehicles are hereafter referred to as subject vehicles.

#### COMPLAINT REPORTS:

Analysis of the Office of Defects Investigation (ODI) computer records for all 1989 through 1992 model year vehicles equipped with a driver side air bag, revealed that there are two other complaint reports alleging air bag non-deployment and three reports concerning SIR warning lamp activation on the Corvette vehicles. Analysis of ODI's database of owner complaints shows that the complaint rate for air bag non-deployment in the subject vehicles (3.5 per 100,000 vehicles produced) is lower than the complaint rate for air bag non-deployment in all other vehicles equipped with air bags (5.3 per 100,000 vehicles produced). One of the two Corvette complaints alleged delay of air bag deployment rather than non-deployment. This additional information was obtained from the owner by phone.

According to its letter of ██████████ 1992, ██████████ has received 34 owner complaints alleging failure of the air bag to deploy properly and 68 complaint reports concerning SIR warning lamp activation in the subject vehicles.

Analyses of the reports showed that many of the incidents alleging failure of the air bag to deploy apparently involved impacts that were either below the threshold of force necessary for air bag deployment or outside the area of the vehicle where frontal impact is designed to trigger deployment.



In addition, ODI's review of all complaint and accident reports on the subject vehicles concerning alleged air bag deployment failure revealed that no apparent mechanical and electrical component or device failure has been observed or identified which may cause air bag non-deployment. GM reported that it has inspected 24 complaint subject vehicles (70.1 percent of 34 complaint subject vehicles) and was unable to locate component failure which could cause air bag non-deployment.

#### **MANUFACTURER'S EVALUATION:**

In its letter of [REDACTED] 1992, GM reported its evaluation of alleged air bag non-deployment on the subject vehicles. It stated in part that:

"The air bag in the 1990-1992 Corvette is intended to inflate only on moderate to severe frontal and front angle impacts. Examples of impact conditions approximately equivalent to the inflation threshold are: (1) striking a fixed barrier at zero degrees at a speed of 12 miles per hour; (2) striking a fixed barrier at thirty degrees at a speed of 20 miles per hour; or (3) squarely striking, with complete overlap, a stopped vehicle of similar mass at a speed of 24 miles per hour.

"GM intends its air bags to inflate only in moderate to severe frontal crashes for at least the following reasons: (1) air bags are designed principally to reduce the likelihood of serious and life threatening injury, and they are not designed to prevent minor injuries; (2) air bags are expensive to repair and costs associated with repairing air bags are ultimately borne by the consumer; (3) air bags can cause serious or even fatal injury to occupants who are up against or very close to the air bag module at the moment when the air bag inflates; and (4) higher deployment thresholds reduce the risk of an air bag inflating in non-collision situations.

"The SIR system was first introduced in Corvettes in the 1990 model year. Accordingly, many customers were unfamiliar with these design considerations, which explains the volume of questions GM has received relating to the proper performance of air bags."

Additionally, GM conducted an Engineering Assessment on the petitioner's Corvette as shown in Attachment I. Based on a review of the photographs taken of the Corvette, GM concluded that the subject Corvette experienced an impact that was below the intended deployment threshold of the SIR system. Also, based on GM's experience with the 1990 SIR system, and the narrative report submitted by the GM representative who inspected the Corvette, GM concluded that the warning lamp illumination was the result of SIR system disassembly following the crash.

## **ANALYSIS:**

Analysis of the available information revealed the following:

1. GM provided NHTSA with photographs of the subject crash-involved vehicle, as well as a police accident report concerning the crash (Attachment II). The agency's review of the photographs of the petitioner's crash-involved Corvette and the accident report revealed that the impact speed and the direction of the impact experienced by the petitioner's vehicle were not sufficient to cause air bag deployment. This conclusion is based on the following facts. First, a significant portion of the damage occurred to the left door, left quarter panel, and the hood, which shifted sideways due to a lateral impact force (from left to right). The principal direction of crash forces was outside the 30 degrees of frontal range. Second, the photographs indicate the severity of the crash impact was substantially below the deployment threshold of the SIR. In response to NHTSA's request for an engineering assessment of the crash, GM pointed out that the "deployment threshold speed for impacts into objects that absorb or convert energy (such as another vehicle) is higher than for rigid barrier impacts." Thus, the threshold speed for deployment in a vehicle-to-vehicle crash similar to the petitioner's would have been substantially above the 12 mph deployment threshold design speed in a frontal impact with a rigid barrier. Finally, the accident damage to the Corvette is much less than that which occurs in the angle impact SIR threshold validation test conducted by GM. Thus, all available information indicate that the petitioner's crash was of a severity less than that required to deploy the SIR.
2. The continuing illumination of the air bag warning lamp in the petitioner's vehicle after the accident appears to be the result of SIR system disassembly by the GM dealership technician, who inspected the petitioner's vehicle. The SIR system was disassembled to remove the DERM for further evaluation. The petitioner stated that the air bag warning lamp was not illuminating continuously or indicating any system malfunction before the accident.
3. NHTSA's review of GM's 34 owner complaints on Corvette vehicles reported to GM concluded that many of the incidents alleging failure of the air bag to deploy apparently involved impacts that were either below the threshold of force necessary for air bag deployment or the impact angle was more than 30 degrees off the centerline of the vehicle.
4. A review of the 68 owner complaint reports to GM pertaining to continuing illumination of the air bag warning lamp revealed the following: (1) no single failed component was identified causing the problem trend; (2) there is no indication that the air bag warning lamp fails to come on when the SIR system is malfunctioning; and (3) there is no complaint pertaining to intermittent air bag lamp "on" and "off"

problems during normal operation of the subject vehicles. Based on the above, it appears that the type of continuing illumination of the air bag warning lamp in the subject vehicles does not represent unreasonable risk to motor vehicle safety because illumination warns the driver of a potential malfunction of the SIR system as designed. The car can be safely driven (driver using the safety belts) to a GM dealer to identify whether a problem exists and get it corrected.

5. Based on owner information provided to NHTSA, the complaint rate (complaints per 100,000 vehicles produced) on the subject vehicles concerning non-deployment of the air bag is lower than the average for other vehicles equipped with an air bag.

**CONCLUSION:**

Based on the information available, no defect has been observed and identified in the subject vehicles for any component or device which could cause air bag non-deployment in crashes where the air bags should deploy to provide crash protection. Analysis of the available information indicates low complaint rates for the subject vehicles. The reports of illumination of the air bag warning lamp in the subject vehicles does not indicate the presence of an unreasonable risk to motor vehicle safety. Based on all available information, there are insufficient data to indicate a safety-related defect exists. Hence, further expenditure of resources to establish a safety-related defect is not warranted.

**RECOMMENDATION:**

It is recommended that the petition be denied.

Attachments

Concur:

A large, dark, irregularly shaped redacted area covering the signature of the official.

## ENGINEERING ASSESSMENT

1990 CORVETTE 

### Alleged failure to deploy

Review of the photographs taken by the GM representative indicates that the frontal impact speed experienced by the vehicle was not sufficient to cause SIR deployment.

The 1990 Corvette design was validated for SIR threshold with a 12.5 mph 0 degree frontal barrier and a 20.4 mph 30 degree left angle barrier (reference attached photos). SIR deployment threshold speed for impacts into objects that absorb or convert energy (such as another vehicle) is higher than for rigid barrier impacts.

The 1990 Corvette SIR system is designed to deploy in response to impacts within 30 degrees of frontal and is not expected to deploy a result of lateral impacts. While it doesn't increase the chance for SIR deployment, an impact with a lateral as well as longitudinal input to the vehicle does create more damage to the front of the vehicle than a purely longitudinal impact because the hood is shifted sideways.

It appears that a significant portion of the damage on the subject Corvette was the result of lateral impact force (from left to right). This conclusion is reached based on the sideways shift of the hood and the damage to the left door and quarter panel, which likely occurred when the subject Corvette spun to the right and slapped the side of the struck vehicle which was moving from left to right across the front of the Corvette.

The type of impact experienced by the subject Corvette is more closely duplicated by an angle barrier impact rather than a frontal barrier impact. The damage to the subject Corvette is much less than that seen in the angle impact threshold validation test. Based on the photographic information available, it is concluded that the subject Corvette experienced an impact that was below the intended deployment threshold of the SIR system.

### Alleged problem indicated by the air bag warning light

Based on experience with the 1990 SIR system and the narrative report by the GM representative that viewed the subject Corvette, it is concluded that the warning lamp illumination was the result of SIR system disassembly following the crash.

The SIR diagnostic module (DERM) in the 1990 Corvette is not compatible with the "TECH 1" read out tool used in GM dealerships. Having been unsuccessful in employing the "Tech 1" to read the DERM, it appears that the dealership technician gained access to

ATTACHMENT I

the DERM for removal for further evaluation. The Corvette Service Manual instructs the technician to disconnect the base of the steering column to isolate the air bag module prior to working on or around the DERM. If the ignition is turned on with the DERM and/or base of the column disconnected, the air bag warning lamp will turn on to indicate that the SIR system needs service.

The illumination of the warning lamp does not prove that a problem existed at the time of the crash, only that a problem existed at the time the light was observed. The narrative seems to indicate that the disconnection of a SIR system component occurred at the dealership and not as a result of the crash.

1978 FORD ESCORT  
 OTHER VEHICLE SPEED ESTIMATE 35 MPH BY WHOM OWNER  
 NAME OF OWNER [REDACTED]  
 OWNER ADDRESS [REDACTED]  
 NAME OF DRIVER SAME  
 DRIVER ADDRESS PHONE [REDACTED]  
 EXTENT OF DAMAGE DAMAGE, TO RT SIDE OF VEHICLE

\*\*\*\*\* IV BODILY INJURY \*\*\*\*\*

NO BODILY INJURY INFORMATION ENTERED FOR THIS CASE

\*\*\*\*\* V INVESTIGATION \*\*\*\*\*

HOW, WHEN, AND BY WHOM WAS BRANCH NOTIFIED OF INCIDENT?  
 BY LETTER

LOCATION OF INCIDENT (DESIGNATE EXACT LOCATION)  
 INTERSECTION OF [REDACTED]

KIND OF ROAD CONCRETE GRAVEL X ASPHALT CRUSHED ROCK DIRT  
 CONDITION OF ROAD WET X DRY ICY OTHER  
 KIND OF SHOULDER CONCRETE GRAVEL X ASPHALT CRUSHED ROCK DIRT  
 CONDITION OF SHOULDER WET X DRY ICY OTHER  
 NATURE OF WEATHER  
 VISION OBSTRUCTION (IF ANY DESCRIBE)  
 NONE

NAME AND ADDRESS OF DEALER WHO TOWED (INCLUDE TOW DRIVER'S NAME), STORED  
 AND/OR PROVIDED TEMPORARY SERVICE TO DAMAGED VEHICLE  
 [REDACTED] TOWING SERVICE

UNK  
 WHERE CAN VEHICLE BE SEEN? [REDACTED] CHEVROLET, [REDACTED], IN

DID VEHICLE TURN OVER? YES X NO VEHICLE SPEED ESTIMATE MPH  
 SOURCE OF SPEED ESTIMATE

POSTED SPEED LIMIT 35  
 BRAND AND SIZE TIRES P275/40 ZR17 GOODYEAR  
 CONDITION R.F. X GOOD POOR FLAT R.R. X GOOD POOR FLAT  
 OF TIRES: L.F. X GOOD POOR FLAT L.R. X GOOD POOR FLAT  
 OTHER (TRUCK OR SPARE).  
 T155

DID YOUR SEARCH OF THE VEHICLE SERVICE HISTORY PRODUCE SERVICE REPAIR ORDERS?  
 YES X NO  
 IF "YES", ATTACH COPIES OF ALL R.O.'S. (INDICATE HOW MANY)  
 IF "NO" EXPLAIN NO SERVICE RECORDS AT DEALERSHIP

POLICE REPORT ATTACHED? X YES NO IF "NO", WHAT STATION OR OFFICER MADE  
 REPORT

NAMES AND ADDRESSES OF WITNESSES  
 NO WITNESSES

WERE PHOTOS TAKEN? X YES NO IF "YES" HOW MANY 13 BY WHOM-NAME AND ADDRESS

NOTE: FURNISH PHOTOS TO [REDACTED] COMPANIES LOCAL OFFICE WITH THIS  
 FORM. FORWARD NEGATIVES TO CENTRAL (HOME) OFFICE.

AUTOMOTIVE DIVISION COMPLETING REPORT  
CHEVROLET MOTOR DIVISION  
REPORT OF PRELIMINARY INVESTIGATION

CASE REF. #

DESIGNATION CODE

SERIOUS INCIDENTS SHOULD BE IMMEDIATELY REPORTED BY TELEPHONE TO NEAREST OFFICE OF [REDACTED]

DATE OF INCIDENT [REDACTED] 792 HOUR [REDACTED]

## \*\*\*\*\* I OWNER - CLAIMANT \*\*\*\*\*

NAME OF OWNER [REDACTED] AGE [REDACTED]  
ADDRESS [REDACTED]  
CITY [REDACTED] STATE IN [REDACTED] ZIP [REDACTED] PHONE NO. [REDACTED]

NAME OF DRIVER [REDACTED] AGE [REDACTED]  
ADDRESS [REDACTED]  
[REDACTED] LANE [REDACTED] STATE IN [REDACTED] ZIP [REDACTED] PHONE NO. [REDACTED]

NAME OF CLAIMANT SAME [REDACTED] AGE [REDACTED]  
ADDRESS [REDACTED]  
CITY [REDACTED] STATE [REDACTED] ZIP [REDACTED] PHONE NO. [REDACTED]

## \*\*\*\*\* II VEHICLE \*\*\*\*\*

MAKE CHEVROLET VIN 1G1YY3388 [REDACTED] YEAR 90 MODEL CORVETTE  
TRANS AUTO [REDACTED] AXLE [REDACTED] ENGINE 5.7 MILEAGE 03800  
DATE OF DEL. [REDACTED] 90 NEW, USED OR DEMO U LICENSE NO. [REDACTED] STATE I  
DEALER [REDACTED]  
ADDRESS [REDACTED]  
CITY [REDACTED] STATE [REDACTED] ZIP 000000000  
INSPECTION STICKER NO. [REDACTED] INSPECTION STATION NBR. [REDACTED]  
EXPIRATION DATE / /  
PRINCIPLE USES OF VEHICLE  
PLEASURE  
SPECIAL VEHICLE FEATURES OR EQUIPMENT  
NONE

IF VEHICLE IS A TRUCK, STATE GROSS PAY LOAD AND LOCATION AND DESCRIPTION OF LOAD AT TIME OF INCIDENT.

NATURE AND EXTENT OF DAMAGES TO VEHICLE.  
DAMAGED HOOD FRONT BUMPER, RT DOOR, LF DOOR  
& LF QUARTER LF ROCKER

ESTIMATE COST OF REPAIR (ATTACH COPY OF ESTIMATE) 3500  
IS VEHICLE SUBJECT TO ANY PRODUCT CAMPAIGN(S) YES NO  
IF "YES" IDENTIFY CAMPAIGN(S)  
WAS CAMPAIGN PERFORMED? YES NO

## \*\*\*\*\* III PROPERTY DAMAGE \*\*\*\*\*

WAS ANOTHER VEHICLE INVOLVED? Y  
STATE MAKE AND MODEL OF VEHICLE

ATTACHMENT II

NAME OF ROYAL REPRESENTATIVE, IF PRESENT, AT THE INVESTIGATION  
NONE PRESENT

\*\*\*\*\* VI DESCRIPTION OF CLAIM \*\*\*\*\*

DRIVER'S DESCRIPTION AS TO HOW INCIDENT HAPPENED AND HIS STATEMENT OF CAUSE.  
VEHICLE DRIVEN BY [REDACTED]  
RED LIGHT HITTING HER VEHICLE IN LEFT FRONT FENDER AREA. SHE STATED SHE WAS  
NOT ABLE TO AVOID COLLISION.

DID YOU PERSONALLY SPEAK WITH DRIVER? YES X NO  
IF "NO", GIVE SOURCE OF DRIVER'S DESCRIPTION.

ATTORNEY INVOLVED

WAS VEHICLE INSPECTED? X YES NO

IF "YES" IDENTIFY ALL PARTIES [REDACTED]

WHAT VEHICLE COMPONENTS ARE ALLEGEDLY DEFECTIVE?  
S.I.R. SYSTEM

WHO MADE ALLEGATION OF DEFECT? OWNER

IF THE ALLEGED DEFECTIVE PART HAS BEEN REMOVED FROM THE VEHICLE, INDICATE EXAI  
PART(S), PRESENT LOCATION AND WHO IS CUSTODIAN.

INFORMATION FROM FURTHER INVESTIGATION OF INCIDENT, INCLUDING EXAMINATION OF  
VEHICLE AND SCENE OF INCIDENT. VEHICLE WAS HIT ON LEFT FRONT FENDER/HOOD  
AREA, PHYSICAL INSPECTION SHOWS ONLY FIBERGLASS DAMAGE, THERE DOESN'T SEEM  
TO BE ANY NOTICEABLE FRAME DAMAGE.

GENERAL COMMENTS

THIS VEHICLE SUPPOSEDLY RAN RED LIGHT CAUSING ACCIDENT WITH [REDACTED]  
AND [REDACTED] DRIVER OF A 1986 CHEVROLET CAVALIER, (SEE POLICE REPORT).  
REPORT FROM [REDACTED] BODY SHOP WAS THIS DRIVER IS DEAF AND INFO TAKEN AT  
TIME OF ACCIDENT WAS INTERPRETED INCORRECTLY. THE LAWYER INVOLVED  
REQUESTED THAT CHEVROLET REPLACE VEHICLE AS CUSTOMER DIDN'T FEEL SECURE  
IN DRIVING VEHICLE BECAUSE OF THE CONCERN SHE HAD BECAUSE THE AIR BAG DID  
NOT DEPLOY. ON [REDACTED] I MET WITH ATTY, [REDACTED] TO INSPECT VEHICLE  
BELONGING TO [REDACTED] A 1990 CORVETTE. THE VEHICLE HAD BEEN  
INVOLVED IN AN ACCIDENT WITH ANOTHER VEHICLE. THE VEHICLE HAD PHYSICAL DAMAGE  
TO THE FIBERGLASS ON THE LEFT FRONT FENDER, HOOD, LEFT FRONT DOOR (DAMAGED  
BY HOOD BEING PUSHED INTO DOOR). THE VEHICLE HAD BEEN HIT ON LEFT FRONT  
FENDER AREA. THERE WAS NO VISIBLE EVIDENCE OF FRAME DAMAGE TO VEHICLE. WE  
WERE UNABLE TO RAISE THE HOOD, HER BATTERY WAS DRAINED, THERE WAS SOME  
WIRING PROBLEMS AT ECM WHICH HAD BEEN KNOCKED FROM ITS MOUNT. WE WERE  
ABLE TO LIFE LEFT CORNER OF HOOD AND CONNECTED BATTERY CHARGER (CONT'D)  
HOW AND WHEN WAS MATTER LEFT WITH CLAIMANT?  
ATTY WAS INFORMED WE WOULD NOT  
PARTICIPATE IN REPLACEMENT OF THE VEH, WE WOULD INSPECT FOR [REDACTED] CONCERN

\*\*\*\*\*  
DATE OF INVESTIGATION [REDACTED] PRINTED NAME [REDACTED]  
DATE SIGNED \_\_\_\_\_ SIGNED \_\_\_\_\_

DIVISIONAL REPRESENTATIVE COMPLETING INVESTIGATION - [REDACTED]





Comment continued from Screen 9

to recharge battery. We were not able to retrieve data from Derm, as it was a [REDACTED] unit and we are not able to retrieve with Tech 1, technicians were attempting to remove when this was discovered. The ignition was turned on with derm disconnected a code of 35 was picked up from the Dash System for the SIR, a continuing (code) fault, no other codes were evident.

The attorney would not allow the dealer to do an estimate of repair cost. The attorney was informed that we would not participate in replacement of the vehicle, a request he made because he stated his client had lost confidence in the SIR System. The attorney was informed that the vehicle was not involved in the type of accident that would have deployed the air bag.

Account Manager-Service

Please note: As per comments from [REDACTED] Mgr. at [REDACTED] Chevrolet and from conversation with [REDACTED] the police reports attached are incorrect, the information from driver, [REDACTED] is incorrect. [REDACTED] deaf and information she gave was misinterpreted by the officer. [REDACTED] states that they have signed affidavits from Mrs. [REDACTED] stating [REDACTED] ran light causing accident.

**Police Dept**  
Certified to be true by

## MINNESOTA OFFICIAL STANDARD ACCIDENT REPORT

OFFICE USE ONLY

State Form 608 (Rev. 10-80)

Mail to: [REDACTED] Accident Records Section

Accident ID No. [REDACTED]

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Date of Accident Month Year Day	Day of Week	Actual Local Time	No Motor Vehicles	No Injured	No Dead	No Trailer
1 19 92		11 AM	3	0	0	0
County	Township	City/Town or Nearest City/Town				
Distance and Direction From Corporate Limits						
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Private <input type="checkbox"/> Other						
Miles North Miles South Miles East Miles West						
Road Accident Occurred On			Intersecting Road/Mile Marker/Interchange			
If not at intersection, number of feet from			Nearest Intersecting Road/Mile Marker/Interchange			

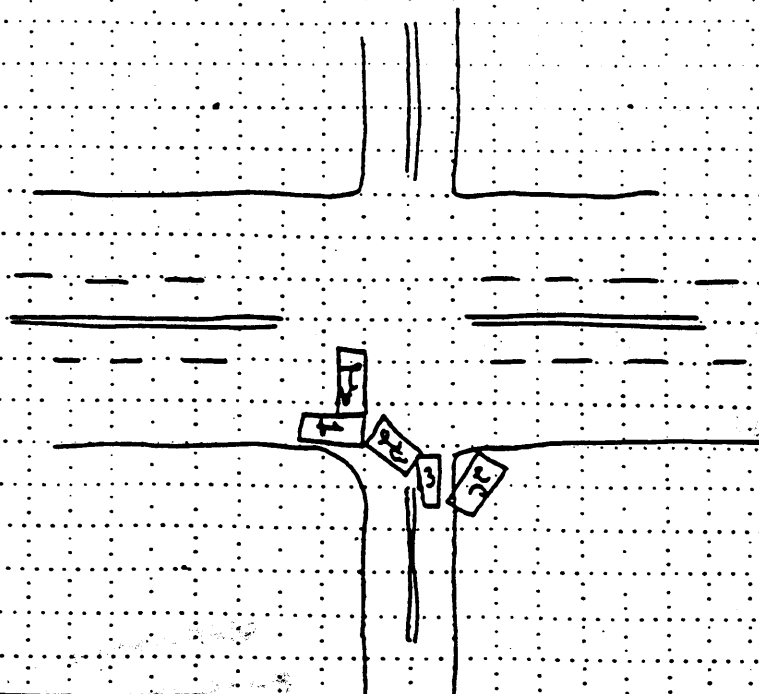
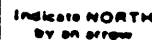
Driver's Name (Last, First, MI)		Driver's License No.		Lic Type	Lic St	Restr
[REDACTED]		[REDACTED]		OP	IN	AD
Color	Ven Yr	Make	Model Name	Lic Yr	License No.	Lic State
GRY	86	Chev	Cavalier/S-D	91	[REDACTED]	IN
Ven Type (enter no.)	Speed Limit	Fuel Tax No.				
1	35					
Ven Use (enter no.)	No Occupants	Fat?	No Asles	Transporting Hazardous Mat.		
1	1	No	2	Yes	No	
Direction of Travel	Towed To	Towed By				
N	RELEASED TO					
Registered Owner's Name (Last, First, MI)						
SAME						
Address (Street, City, State, Zip)						
Registered Owner's Name (Last, First, MI)						
Address (Street, City, State, Zip)						
License No.						
Make Year Lic St Lic Yr						

Driver's Name (Last, First, MI)		Driver's License No.		Lic Type	Lic St	Restr
[REDACTED]		[REDACTED]				
Color	Ven Yr	Make	Model Name	Lic Yr	License No.	Lic State
Ven Type (enter no.)	Speed Limit	Fuel Tax No.				
Ven Use (enter no.)	No Occupants	Fat?	No Asles	Transporting Hazardous Mat.		
Direction of Travel	Towed To	Towed By				
Registered Owner's Name (Last, First, MI)						
Address (Street, City, State, Zip)						
Registered Owner's Name (Last, First, MI)						
Address (Street, City, State, Zip)						
License No.						
Make Year Lic St Lic Yr						

INITIAL IMPACT	Area Damaged (Multiples)	Vehicle 1	Vehicle 2
3 2	10 - Undercarriage	3 4 8	3 4 8
DAMAGE EST	11 - Trailer	2 9 6	2 9 6
3 2	12 - None	1 8 7	1 8 7
OTHER PROPERTY (INCLUDE CARGO)			
Name of Object	OWNER'S NAME AND ADDRESS	Damage Est (use chart)	

Direction	Street/Highway	Arrested?	Apparent Phys. Stat. (enter no.)
		Yes No	
What was pedestrian doing before accident? Enter No.			
1 Not in roadway 2 Standing in roadway 3 Playing in roadway 4 Pushing or working on vehicle 5 Other working in roadway 6 Working in roadway with traffic 7 Working in roadway against traffic 8 Getting on or off vehicle 9 Getting on or off school bus 10 Crossing or entering road at intersection 11 Crossing or entering at intersection 12 Other			
Pedestrian Traffic Control? <input type="checkbox"/> Yes <input type="checkbox"/> No			

16	17	18	19	20	21	22	23	24	25	26	27	28	29
3	1	1	DRIVER OF VEHICLE 3 (as listed above)										
			DRIVER OF VEHICLE 2 (as listed above)										
Police Dept Certified to be true copy													



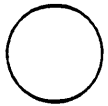
Driver #1 said she was E/R in the curb lane of [REDACTED]. At the intersection of [REDACTED] and [REDACTED] Av., driver #1 had the green automatic signal and she proceeded thru the intersection when vehicle #2 disregarded the red light and came into the intersection. Driver #1 could not stop, and struck vehicle #2. Vehicle #2 then spun into vehicle #3, waiting in the [REDACTED] of [REDACTED] Av. at [REDACTED]. Vehicle #2 then spun over the curb and came to rest on the S/E corner of [REDACTED] St. & [REDACTED] Av.

Driver #2 said he was waiting at the light at [redacted] St, N. [redacted] facing S/B. Driver #2 said the light turned green for him and he proceeded S/B on N. [redacted] vehicle #1 came thru the intersection and struck vehicle #2 spinning him into vehicle #3 and then onto the curb.

Driver #3 said she was waiting for the light at [REDACTED] St. and W. [REDACTED] p/r. Driver #3

D1 Injured By					D2 Injured By					
Other Participant(s) Name, Address (etc.)										
Name of Witness No. 1				Address			Location at Time of Accident			
Name of Witness No. 2				Address			Location at Time of Accident			
Name of Person Arrested				I.C. Code(s)		Name of Person Arrested			I.C. Code(s)	
INVESTIGATION	Phone Notified	AM	Time Arrived	PM	Other Location of Investigation			Investigation Complete	Photos Taken	
	<input checked="" type="checkbox"/>	PM	11:30	<input type="checkbox"/>				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	Arresting Officer				I.D. No.		Agency		Date of Report	
	Arresting Officer				I.D. No.		Agency		Driver Report Form Furnished	
	Officer's Signature				I.D. No.		Agency		Police Dept.	

Diagram


 Indicate NORTH  
by an arrow


SEE PAGE #1

## NARRATIVE (Refer to Vehicle by Number)

said light was red for N/S traffic on [REDACTED] Av. when vehicle #2 ran the red light starting the chain reaction accident.

D3 Insured By [REDACTED]				D2 Insured By [REDACTED]			
Other Participant(s) Name, Address (No.)							
Name of Witness No. 1				Address		Location at Time of Accident	
Name of Witness No. 2				Address		Location at Time of Accident	
Name of Person Arrested				I.C. Code(s)		Name of Person Arrested	
						I.C. Code(s)	
INVESTIGATION	Time Notified	AM	PM	Other Location of Investigation		Investigation Complete	Photos Taken
						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Assisting Officer		I.D. No.		Agency		
	Assisting Officer		I.D. No.		Agency		
Investigator's Signature [REDACTED]				I.D. No. [REDACTED]		Agency [REDACTED]	
						Driver Report Form Furnished <input checked="" type="checkbox"/> 03 <input checked="" type="checkbox"/> 02	



TOWING SERVICE		PHONE
— 24 HOUR TOWING SERVICE —		
		
DATE <u>1/20</u>		
P.O. # <u>13673</u>		
CUSTOMER'S NAME <u>13673</u>		
ADDRESS <u>246</u>		
CASH	CHEQ	CRANE FROM
<input checked="" type="checkbox"/>	<input type="checkbox"/>	TO <u>1.0.1</u>
MAKE OF CAR <u>White</u>		LABOR <u>40.00</u>
LICENSE <u>13673</u>		STORAGE <u>11.50</u>
MOTOR NO. <u>246</u>		CRANE OUT <u>55.00</u>
YEAR <u>90</u>		<u>106.50</u>
AUTHORIZED BY <u>13673</u>		DRIVER <u>8</u>
Not Responsible for Fire, Theft, or Driver's Negligence.		

UNIVERSITY OF MICHIGAN LIBRARY

## BODY SHOP

INDIANA

"Good people to do business with"



TAG NO.

DATE

92

NAME

ADDRESS

YEAR

MAKE

MODEL

LICENSE NO.

COLOR

CODE OR LD. NO.

INSURANCE COMPANY

CLAIM NUMBER

ADDRESS

ADJUSTER

PHONE

CUSTOMER PAYS

INSURANCE CO. PAYS

SUPPLEMENT AMOUNT

INSTRUCTIONS

LABOR

## INTERNAL SALES

## BODY SHOP SALES

ACCT.	KEY	AMOUNT	COST	DESC.	ACCT.	KEY	AMOUNT	COST
473	-			CAR LABOR	470	-		
481	-			TRUCK LABOR	471	-		
	-			CAR PARTS	477	-		
	-			TRUCK PARTS	478	-		
	-			SUB-REPAIR	476	-		
472	-			GAS. OIL GREASE	491	-		
480	-			PART & BODY MAT	245	-		
	-				220	-		
476	-				220	-		
491	-					-		
479	-					-		
	-			TAX	324	-		
67E	+			POLICY WORK BODY SHOP	CHG. SALE	220	+	
15A	+			POLICY WORK NEW VEHICLES	CASH SALE	225	+	
263	+				220C	+		

TOTAL

SUBLET REPAIRS

TOTAL

## TERMS: STRICTLY CASH UNLESS ARRANGEMENTS MADE

I hereby authorize the above repair work to be done along with necessary materials. You and your employees may operate above vehicle for purposes of testing, inspection or delivery at my risk. An express mechanic's lien is acknowledged on above vehicle to secure the amount of repair charges. You and not be held responsible for loss or damage to vehicle or articles left in vehicle.

- ☐ CASH  
☐ CHARGE  
☐ INTERNAL  
 OK'D BY

10650 Wheeler's P.O. 10245



Case [REDACTED]

[REDACTED]  
[REDACTED]  
Post Office [REDACTED]  
[REDACTED]

Telephone [REDACTED]  
Facsimile [REDACTED]

[REDACTED] 1992

Chevrolet Motor Division  
Branch

Attn: [REDACTED]  
PO Box [REDACTED]

[REDACTED], OH [REDACTED]

RE: Viewing of 1990 Chevrolet (Air bag failure)

Please find enclosed the information requested regarding the above captioned matter:

Date of Collision:  
Time of Collision:  
Collision Scene:

[REDACTED] /92  
[REDACTED] p.m.

[REDACTED], Indiana; [REDACTED]  
Street at intersection of [REDACTED]

Status of Automobile:

Remains at [REDACTED]  
[REDACTED]

Police Report:

Enclosed

Personal Injuries to Client: Upper back and neck

Parties Involved:

Vehicle Identification Number: Unknown at this time

Name/Address of our Clients:

With kind regards, I remain.

Cordially,  
[REDACTED]  
[REDACTED]  
[REDACTED]

Enclosure: Police Report

Law Offices of

Indiana

Telephone

Facsimile

1992

Certified Mail

Account Manager Service

OR

Re: 1990 Chevrolet Corvette  
(Damaged in accident)

Wade:

This letter is sent to you to inform you to protect the integrity of any documents or pictures as a result of your viewing the automobile on 1992. Furthermore, you are specifically instructed NOT to view the automobile or remove any objects from it.

With kind regards, I remain.

Cordially,

A.C.

by VME.  
Instructed him to find what he  
has & will send case to Royal

