



U.S. Department of Transportation  
National Highway Traffic Safety Administration

DOT Auto Safety Hotline  
**Vehicle Owner's Questionnaire**  
To Report Vehicle Safety Defects  
1-888-DASH-2-DOT  
(1-888-327-4236)  
INTERNET: www.nhtsa.dot.gov/hotline

FOR AGENCY USE ONLY 100182

Date Received

2004 APR -6  
07-JUN-2004

Repository

Reference No.  
10075795

OWNER INFORMATION (Type or Print)

Name

Address

City

Wagon Fayette

State ME

Zip Code

Daytime Telephone Number

E-mail Address

Evening Telephone Number

Do you authorize NHTSA to provide a copy of this report to the manufacturer of your vehicle?  YES  NO  
In the absence of an authorization, NHTSA WILL NOT provide your name or address to the vehicle manufacturer.  
Signature of Owner \_\_\_\_\_ Date 3/26/2008

VEHICLE INFORMATION

17 digit Vehicle Identification Number Located at bottom of windshield on driver's side

SALJY1283

Make

LAND ROVER

Model

DISCOVERY

Model Year

1994

Date Purchased

Sept. 2003

Dealer's Name and Telephone Number

Engine:

No: Cylinders

Fuel Type:

Original Owner

Dealer's City

Amesbury

State

MA

Zip Code

Transmission Type

Antilock Brakes

Powertrain

Cruise Control

Vehicle Component Code

046100 SERVICE BRAKES, AIR:ANTILOCK:CONTROL UNIT/MODULE

Multiple Failure: 1

FAILED COMPONENT(S)/PART(S) INFORMATION

Incident Date(s)

3/10/04, 3/21/04

Failure Mileage

120000

Failure Speed

~ 25 mph

ADDITIONAL ITEMS TO BE COMPLETED WHEN REPORTING A TIRE FAILURE

Tire Make

Tire Model (Name or Number)

Tire Size (Example P215/65R15)

DOT No. (Example: DOTMALSABC036)

Original Equipment  
 Prior Repair

Failure Location:

Tire Component Code

Tire Failure Type

ADDITIONAL ITEMS TO BE COMPLETED WHEN REPORTING A CHILD SEAT FAILURE

Make:

Date Manufactured:

Model No./Name:

Seat Type:

Installation System:

Child Seat Component Code:

Failed Part:

APPLICABLE INCIDENT INFORMATION

(Please describe in detail the incident(s), failure(s), crash(es), and injury(ies).)

Crash

Yes  No

Fire

Yes  No

Number of Persons Injured

0

Number of Deaths

0

Reported to Police

Y

Narrative Description of Incident(s), Crash(es), and Injury(ies).

Please describe (1) events leading up to the failure, (2) failure and its consequences, and (3) what was done to correct the failure: i.e. parts repaired or replaced (and if old part is available).

CONSUMER COMPLAINED ABOUT ABS BRAKE PROBLEM, WHEELS LOCK WHEN TRAVELING ON A NON TRACTION ROAD. \*AK

See enclosed letter & photos

NPB-405

Include, if available: Police/Fire Department Report, Photos, and Repair Invoice.

IF NECESSARY

The Privacy Act of 1974 (Public Law 93-579) This information is requested pursuant to authority vested in the \_\_\_\_\_ and subsequent amendments. You are under no obligation to respond to this questionnaire. Your response may be used to assist the NHTSA in determining whether a Manufacturer should take appropriate action to correct a safety defect. If the NHTSA proceeds with administrative enforcement or litigation against a manufacturer, your response, or a statistical summary thereof, may be used in support of the agency's action.

February 20, 2006

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
400 Seventh Street, S.S.  
Washington, D.C. 20590

re: reference no. 10075748

Dear Sirs,

I realize that this is a lengthy letter, and I hope it will find its way to someone who will actually read it all the way through and take appropriate action. If you who are currently reading this are not the person who will do so, please hand it on to someone who will.

Two years ago, our daughter had a terrible accident with her 1994 Land Rover Discovery Series I, in which we believe her ABS brakes nearly killed her. Having recently experienced poor performance of ABS brakes on snow myself, I am finally getting around to writing to you. In researching the subject, I learned that ABS brakes have not performed as well as tests predicted; the expected reduction in accident claims has not occurred, and for a while there was actually an increase in single-car fatalities in cars that had ABS. It was speculated that driver error might be to blame, but no one knew for sure. I don't know if more recent studies have solved this mystery; it must be difficult to determine what went wrong when the driver was killed and is therefore unable to explain what happened. Our daughter should have been killed in her accident, but wasn't, so we thought her story might provide valuable information.

First, you should know that our daughter has several years of driving experience in all kinds of conditions, including a substantial amount of driving on snow in a variety of vehicles. Up until 2004 she had *never had an accident*. Then she had *two* accidents in less than one month, shortly after her purchase of the Land Rover. (She has had no such problems with the Land Rover in the two years since then, after we unplugged the fuse to the ABS.) The first time she drove the Land Rover on snow she complained that it was difficult to steer and stop when the ABS kicked in, so her father took her out and had her practice proper use of the ABS brakes, explaining to her how they are designed to work. Her father, incidentally, is a master mechanic by profession with some 35 years of experience repairing vehicles of every size and description. He had already personally gone over her entire braking system when she bought the car, replacing worn parts and testing the brakes to see that they were operating as they are designed to, including the antilock feature. He also has 34 years of experience as a School Bus Driver, and as such has developed and has taught to our daughter safe driving habits that have gotten him - and her - out of countless emergency situations.

Both of our daughter's accidents occurred on fresh wet snow, which, we have learned, is known to be a road condition that actually causes ABS brakes to require a LONGER stopping distance and LESS efficient steering than she would have had without ABS brakes, due in part to the wedging effect of snow piling up in front of a locked (skidding) tire. In her first accident, a van in front of her stopped suddenly. She applied the brakes and tried to steer her way around it. The ABS kicked in, and although she held the pedal down as instructed with ABS, she was unable to steer around the van or stop in time. Piecing together what she told us with what I have learned from your website and other sources, this is what we think happened:

The van, which was old enough to NOT have ABS brakes, was actually able to stop more quickly in the greasy snow. As soon as our daughter applied her brakes, the ABS kicked in. The ABS recognized a "no traction" condition, and began releasing and re-applying the brakes many

back-end-to into the Androscoggin River where it finally stopped, half submerged, with its front wheels just off the ice shelf and its front bumper resting on the edge of the ice.

Our daughter, hearing the roar of the river, immediately undid her seatbelt and opened the door, and stepped up over the door hinge and onto the hood. At that point she felt a thump and realized that the vehicle had settled and was not sinking any farther. (The trailer hitch had come to rest on a large flat submerged boulder several feet from the shore.) She was able to step from the hood to the shore, unhurt.

If she had not aimed head on at the guard rail and had instead rolled over it sideways, the airbags would not have protected her much, and she would have tobogganed down the embankment on her roof. If the guard rail had not been quite so weak, it would have set the airbags off so that they would no longer have been there to cushion her when she hit the far side of the gully. If the vehicle had not turned back-end-to before hitting the water, the front end would have been in deep enough to have made it difficult to open the door, and she would have been submerged in icy water up to her waist. If she had been even inches to the left or right of where she went, she would have either struck the utility pole, the tree, or the bridge abutment, and she would have missed the boulder that prevented the vehicle from either sinking or being swept out into the current. The exact path she took, combined with a very solidly built vehicle, made the difference between a fatal accident and one with no injury.

As I said at the start, by all logic and probability this should have been a fatal accident, or at the very least, much worse than it was. (I believe it was the power of prayer that spared her to tell you this tale.) According to my research on your website and other similar sites, I find that under those driving conditions, she should have had a drag factor of 0.10, giving her a skid distance at 20 m.p.h. of 133 feet if all four tires remained locked for the entire skid distance. Add a perception-reaction distance of 41 feet, and she should have been able to stop in 174 feet. The distance from where the stop sign is first visible over the rise, to the stop sign, is 135 feet. It is another 70 feet across the intersection to the guard rail, making a total of 205 feet. Even factoring in the effects of the hill and the weight of the Land Rover, chances are that without ABS brakes she could have slowed the vehicle enough so it would not have had the momentum to take it through the guard rail, and it is likely she could have slowed it enough so that when she released the brake she could have made the corner onto the bridge.

But consider the following excerpt from an article by James O. Harris of Harris Technical Services – Traffic Accident Reconstructionists:

“Tests conducted by the International Association of Accident Reconstruction Specialists and the Michigan State Police Traffic Reconstruction Unit had results that were not expected.

“In these tests, antilock brake equipped vehicles were placed in hard cornering maneuvers while braking. This is a situation motorists could find themselves in if they were turning sharply to avoid a collision while braking hard. The test vehicles stopping distances were between 19 and 70 percent greater than those of standard brakes.”

In other words, if she should have been able to stop in 174 feet without ABS, once she tried to make the corner *with* ABS, her stopping distance could be expected to increase to anywhere from 207 feet to 295.8 feet. In other words, the ABS brakes were capable of stopping her somewhere within 100 feet *after* the guard rail! Aside from the possibility of her driving at a crawl, it is obvious from what she did that she was thinking clearly and responding as appropriately as possible throughout the accident, so this is not a case of ABS failing to prevent an accident because of driver panic or failure to use the ABS properly. If she had NOT had ABS brakes, it is likely that she could have at least slowed and steered the vehicle well enough to have

been able to make the corner and eventually get the vehicle stopped, or at the very least, made it far enough around the corner to have obliquely struck the more solid guard rails on the bridge, and at a slow enough speed that they would have held her.

How is it that ABS were developed without discovering their deficiencies in real-life driving conditions? If our reasoning is correct, the problem is that ABS braking was not developed originally for cars, but for aircraft, which need to go in a straight line when they land. If one brake locks while a plane is traveling across ice or water on a runway, the brake that has traction will yank the aircraft to one side, possibly even flipping it. ABS is not designed so much to stop the vehicle, but to release the brakes, theoretically to allow for *straight* stopping. ABS can help achieve a straight line stop when you have flaps, reverse thrust, etc which can help slow the aircraft. The less friction the vehicle encounters, the more the brakes will release to keep the tires from skidding, so if the vehicle is on good pavement, the ABS will brake enough to slow the vehicle some, whether you need to steer or not. This would be helpful for aircraft, which have another method of slowing down besides their brakes. (Although I do wonder if ABS were responsible for this winter's accident in which a plane skidded off the end of the runway.)

The idea was extrapolated to cars without taking into account all the ramifications of the fact that cars do not always drive in straight lines, and that there are likely to be stationary obstacles in front of them, as well as edges of the road with poor traction just a few feet to either side of the paved surface. It was thought that it would be a good idea to keep vehicles from locking their brakes, in order to maintain the driver's ability to steer. But if we need to stop within a specified distance, (i.e. when there is an accident ahead and cars on each side, or coming down a snowy driveway, or having to make a stop at a snowy 4-way intersection,) we want to be able to get the most braking we possibly can, even if it digs a hole in the gravel off the side of the road, or through the snow down to the pavement to get the traction we need in order to stop.

Think about it. When approaching a busy intersection on snow, which would you rather be able to do – stop half sideways before entering the cross-traffic, or make a nice straight stop in your own lane, halfway across the intersection and broadside to oncoming traffic which is also unable to stop before the intersection? Would you rather stop crooked before a stop sign, or be able to keep the vehicle aimed straight as you plow through the guard rail on the other side? There are times when trading stopping distance for straight stopping is not a good bargain. Add to this the finding cited above that hard cornering while braking causes a marked increase in stopping distance with ABS, and you have a recipe for disaster.

With ABS brakes, the idea is that the wheel that has traction will slow the vehicle as much as it can be slowed while still giving the ability to steer. That is acceptable as long as one wheel still has good enough traction to slow the vehicle sufficiently. If, however, the vehicle is already on bad traction, or goes off of good traction onto bad traction, i.e. snow, ice, wet grass, loose gravel, etc, then one of two things may happen. The ABS may allow all 4 wheels to just free roll because the instant the brakes try to grab, the ABS detects a lockup and releases them without leaving a mark. Or on the other hand, if the vehicle is traveling slowly enough when the brakes are slammed on, the wheels will instantly lock and the computer hasn't time enough to release the brakes because it thinks the vehicle has already stopped. This can happen when a driver comes into an intersection slowly, then hits the brakes and slides. Since drivers are instructed to hold the brake so the ABS will work properly, the driver may or may not realize that the brakes are not doing what they are supposed to do.

reference no. 10075795

REPORTING AGENCY: [REDACTED] **TRAFFIC ACCIDENT REPORT** STATE OF MAINE **0402120** FOR D.P.S. USE ONLY **F**

DATE OF ACCIDENT: MONTH **02** DAY **21** YEAR **2004** DAY OF WEEK **Sat** TIME **23:11** TIME REPORTED **23:16** TIME ARRIVED **23:58**

ON ROUTE **ROUTE 219** OR NAME OF STREET OR HIGHWAY [REDACTED] CITY OR TOWN **Turner** CODE NUMBER **01120** COUNTY **Androscoggin** HIT AND RUN

AT BETWEEN NODE NUMBERS **05094** DISTANCE FROM SCENE TO NUMBER [REDACTED] MILES [REDACTED] TENTHS [REDACTED] MILES AND TENTHS TO LANDMARK [REDACTED]

E → UNIT NO. **1 - Vehicle** TOTAL UNITS INV. **1** UNIT NO. [REDACTED]  VEH. 2  PED.  BIKE

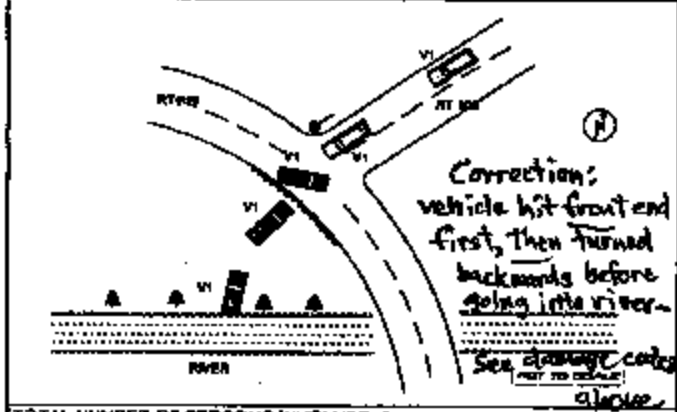
DRIVER'S LICENSE NUMBER 1 **11B2265** STATE **ME** DRIVER'S LICENSE NUMBER [REDACTED] STATE [REDACTED]  
 LAST NAME [REDACTED] FIRST NAME [REDACTED] MIDDLE [REDACTED]  
 NUMBER AND STREET [REDACTED]  
 CITY **Wayne** STATE **ME** CODE NUMBER **20** CITY [REDACTED] STATE [REDACTED] CODE NUMBER [REDACTED]

DATE OF BIRTH [REDACTED] SEX **F** LICENSE STATUS **A S P N** REST/PERM **0** CLASS **C** DATE OF BIRTH [REDACTED] SEX [REDACTED] LICENSE STATUS **A S P N** REST/PERM [REDACTED] CLASS [REDACTED]

LAST NAME - OWNER 1 [REDACTED] FIRST NAME [REDACTED] MIDDLE [REDACTED] LAST NAME - OWNER 2 [REDACTED] FIRST NAME [REDACTED] MIDDLE [REDACTED]  
 NUMBER AND STREET [REDACTED]  
 CITY **Wayne** STATE **ME** CITY [REDACTED] STATE [REDACTED]

VEHICLE TYPE **SUV** YEAR AND MAKE **1994 Other** COLOR **Black** VEHICLE TYPE [REDACTED] YEAR AND MAKE [REDACTED] COLOR [REDACTED]  
 LICENSE PLATE NUMBER [REDACTED] YEAR **2003** ISSUE STATE **ME** NO OCCUP. **1** LICENSE PLATE NUMBER [REDACTED] YEAR [REDACTED] ISSUE STATE [REDACTED] NO OCCUP. [REDACTED]  
 VEHICLE IDENTIFICATION NO. **SALJY12** VEHICLE IDENTIFICATION NO. [REDACTED]

INSURANCE CO. **NORTH EAST INSURANCE** INSURANCE CO. [REDACTED]  
 POLICY NO. [REDACTED] POLICY NO. [REDACTED]  
 TOWED BY: **WINS BODY SHOP** TOWED BY: [REDACTED]  
 DAMAGE CODES **1, 2, 8, 10** DAMAGE ESTIMATE **\$ 7,000.00** DAMAGE CODES [REDACTED] DAMAGE ESTIMATE [REDACTED]



DESCRIPTION: **Please see attached Form 13.91.**

AMBULANCE CODES **N/A(1000)**

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.) [REDACTED]

TOTAL NUMBER OF PERSONS INVOLVED: **1**

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
[REDACTED] (per)	11	11	2	5	1	1	1	1	F	20

INVESTIGATING OFFICER (SIGNATURE) [REDACTED] OFFICER NUMBER **8508** TROOP OR DEPARTMENT **ANDROSCOGGIN COUNTY SHERIFFS UNIT** APPROVED BY: **SGT JAMES JACQUES** DATE **2/22/2004**

13  
16  
14  
15  
13  
16  
17  
5  
18  
19  
1  
20  
21  
2  
23  
1  
24  
LOGAL CODE 6

reference no. 10075785

0402120  
02

State of Maine  
Supplement to

**POLICE  
TRAFFIC ACCIDENT REPORT**  
for  
ADDITIONAL DIAGRAMS, DATA OR ANY  
NECESSARY STATEMENTS TAKEN

ACCIDENT REPORT DO NOT WRITE IN THIS SPACE	City or Town	Month	Date	Year
	IN Turner	02	21	2004
	Number of Highway	Or - Name of Street or Highway		
	ON ROUTE 218 and	HOWES CORNER RD		
Driver - Name	Vehicle 1			
Driver - Name				

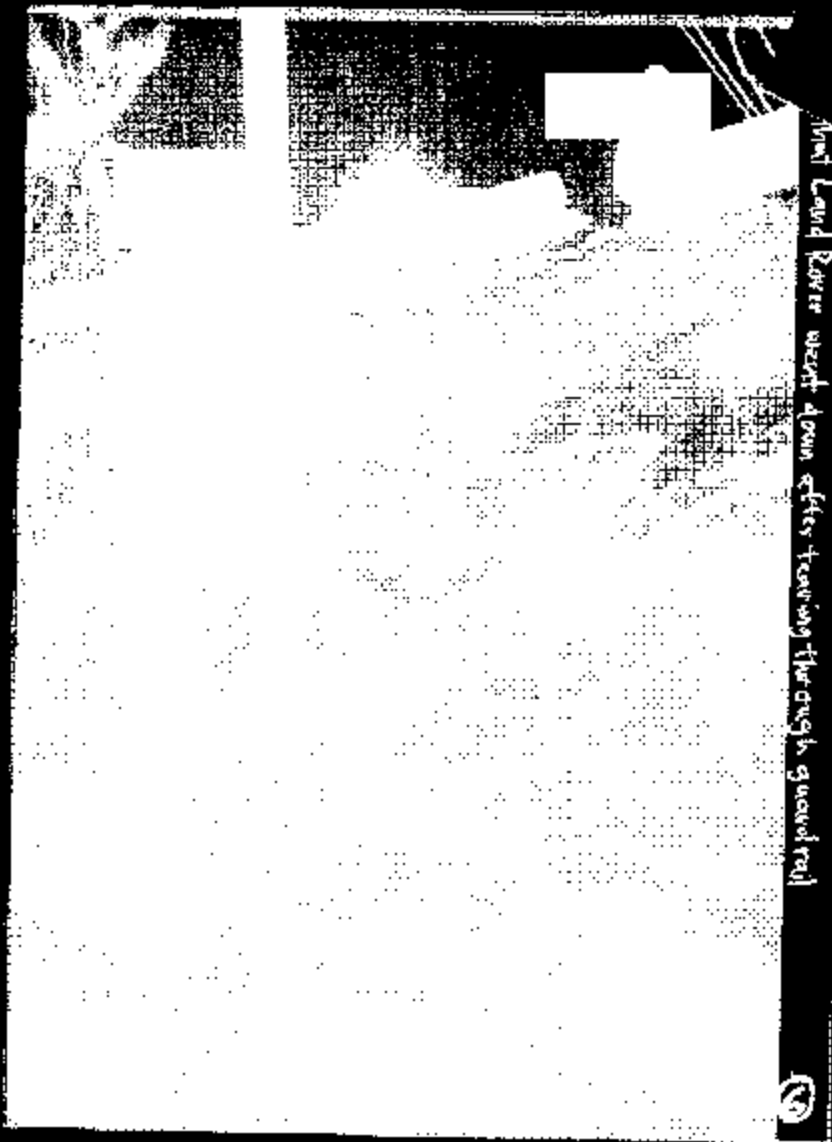
Confidential if so Marked

**VEHICLE ONE WAS HEADING EAST ON RT 108 WHEN SHE RAN THOUGHT THE STOP SIGN AT RT 108 AND RT 219. VEHICLE ONE THEN LOST CONTROL AND SPUN AROUND AND THEN DOWN OVER THE GUARD RAILS ON RT 219. VEHICLE ONE WENT INTO THE RIVER.**

**Other Values:**

**Unit 1 - Vehicle Make: LAND ROVER**

*Corrections She didn't run the stop sign and then lose control - she lost control because the ABS locked, then as a result she went through the stop sign. She did not spin around backwards until after she went through the guard rail.*

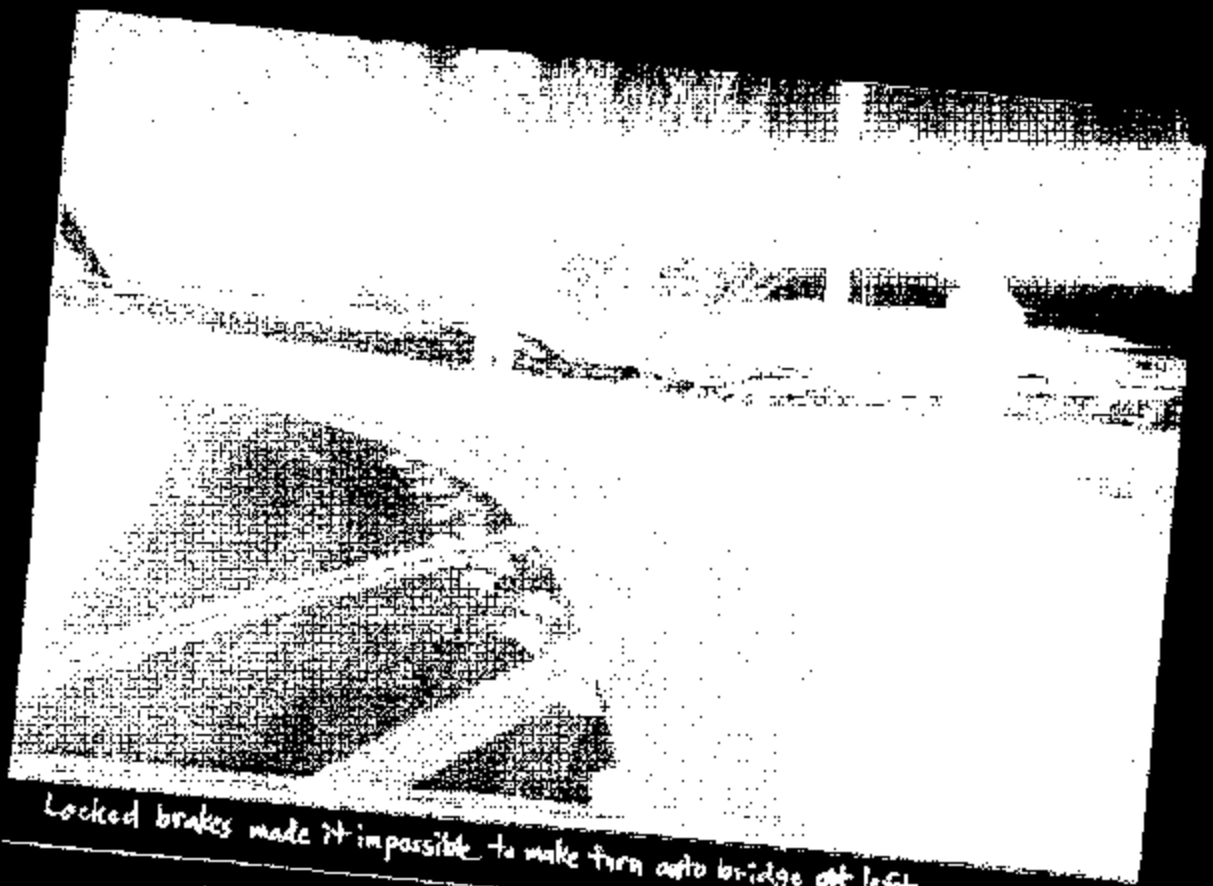


① Inlet Land Rover went down after tearing thru rough gravel trail

②



③ Morning after the accident -  
Approach the slope sign; down hill, greasy snow on top of ice,  
shell hatched the descent



2

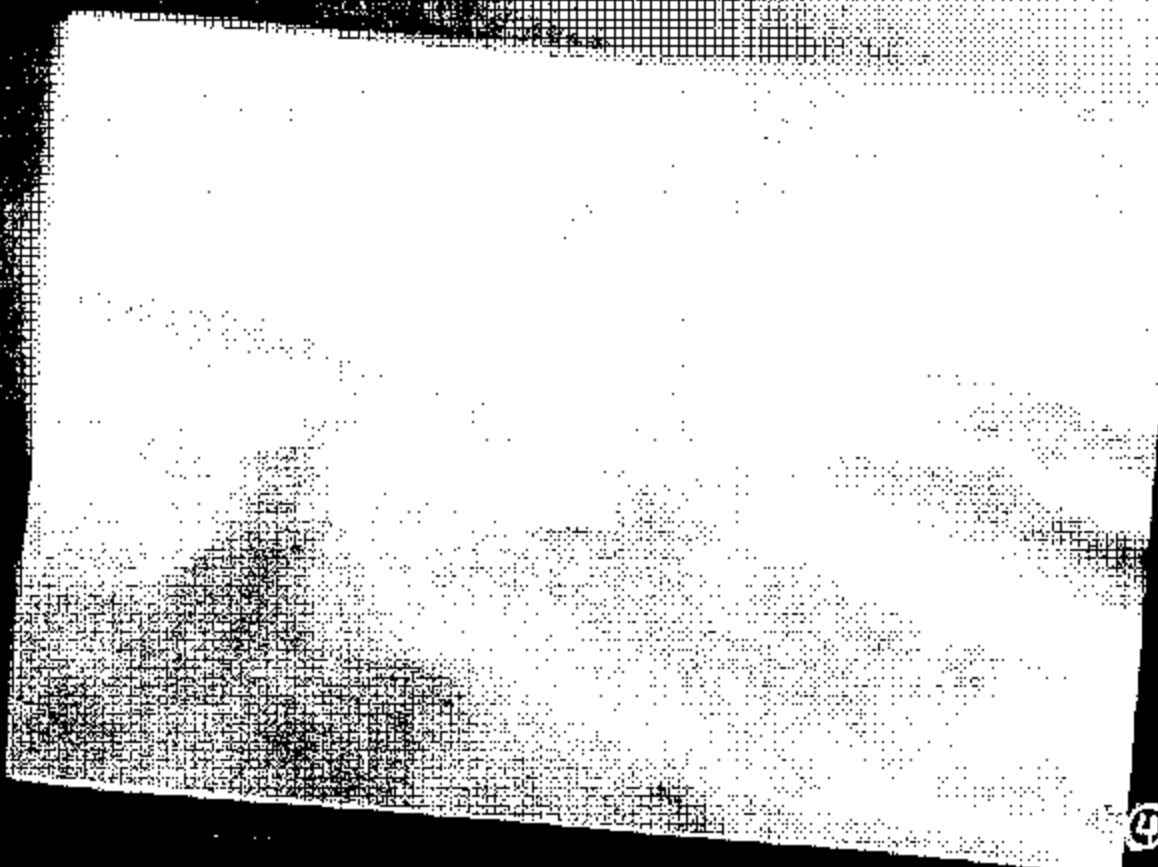
Locked brakes made it impossible to make turn onto bridge off left



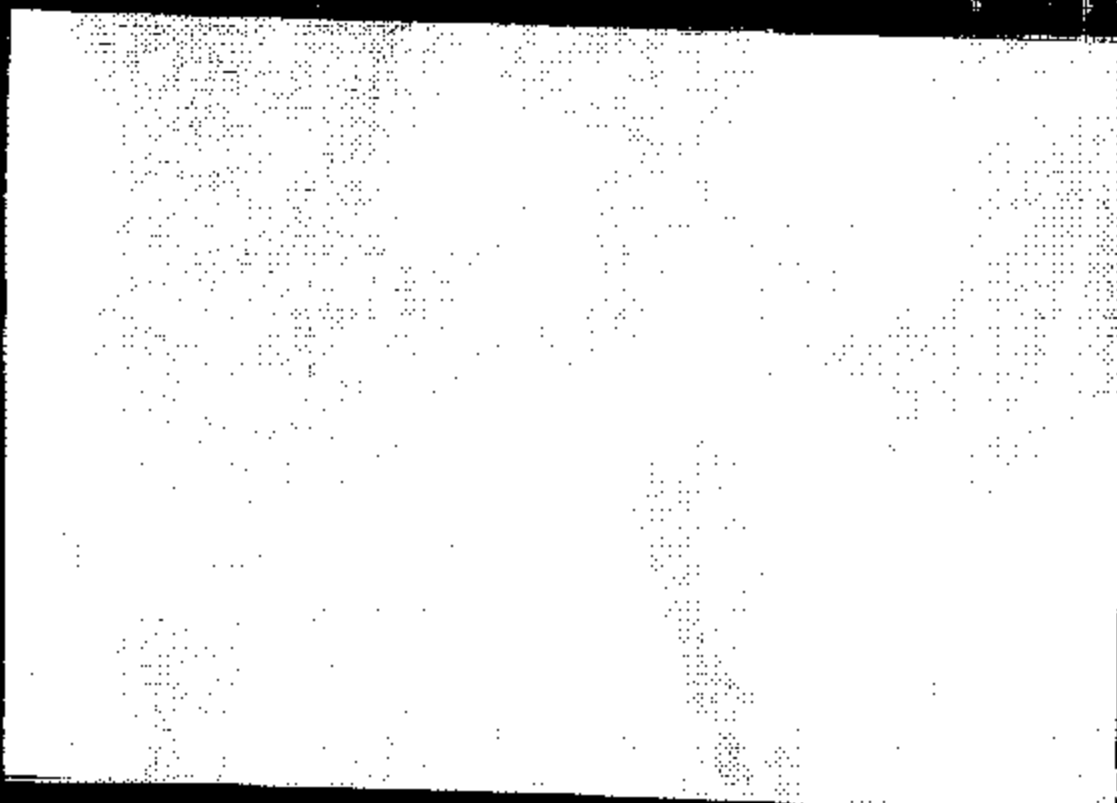
3

Thank God for airbags!

She missed the utility pole and went through the guard rail just to the left of the pole. That's Elizabeth - not a mark on her.



View from edge of road - Elizabeth 12' down road -  
Turn 8 vertical and decrease down bank  
⑦



Turn edge of general and decrease, Airphoto stop  
decrease road - road surface - road surface - road surface  
the road surface at the bottom of the hill  
⑧



After hitting road first where Chabon is showing a road where a trail is. The bridge about 100 feet and collapsed. We were down where David is.



3  
ble in guardrail where Land Rover went through and into Androscooggin River. Trailer hit and came to rest.

9

Androscooggin River where Land Rover landed



10 Damage to front end of Land Rover, left side. Frame was undamaged.

11

Damage to front end of Land Rover, right side



Side of driver's seat - note high leather mark between arrows. Water was over the back seat and running up back window.

