



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

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

DEC 10 1996

Mr. Paul V. Sheridan  
22357 Columbia  
Dearborn, MI 48124-3431

Dear Mr. Sheridan:

In response to your letter of December 9, 1996, I have enclosed a copy of the trip report that NHTSA investigator Julie Abraham and I prepared after we interviewed you on April 11, 1995 in Detroit. We prepared no other documents reflecting the contents of that interview.

Please note that the enclosed copy is taken from the public file that NHTSA maintains on the Chrysler Minivan Liftgate Investigation, EA94-005. Some information has been deleted from this version of the report pursuant to a request for confidentiality that Chrysler Corporation filed under NHTSA's regulations at 49 CFR Part 512 governing the protection of confidential business information obtained by the agency. The deleted portions appear as blank spaces in the copy being furnishing.

If you have any questions concerning this matter, feel free to contact me at 202-366-5238.

Sincerely,

Coleman R. Sachs  
Staff Attorney

Enclosure



AUTO SAFETY HOTLINE  
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U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# Memorandum

Chrysler Minivan Liftgate Latches

Date: October 24, 1995

Julie Abraham  
Safety Defects Engineer  
Vehicle Integrity Branch

Reply to  
Attn. of:

EA94-005 File  
Office of Defects Investigation

Enclosed is a trip report filed by Coleman Sachs and Julie Abraham concerning their interview of former Chrysler employee, Paul V. Sheridan, on April 11, 1995, in which Mr. Sheridan discussed issues pertaining to the subject investigation. Portions of this document have been redacted as a result of a confidentiality request filed by Chrysler that NHTSA has granted.

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T-R-I-P--R-E-P-O-R-T

Filed By: Coleman Sachs, Trial Attorney, NCC-10, and  
Julie Abraham, Safety Defects Engineer, NSA-12

Subject: Trip to Detroit, MI on April 11, 1995 to  
Interview Former Chrysler Employee Paul V.  
Sheridan on Chrysler Minivan Rear Liftgate  
Latches, EA94-005

Date: May 10, 1995

We arrived in Detroit on April 11, 1995 at approximately 12:40 pm, and proceeded downtown for a 1:30 appointment with Mr. Sheridan at the office of his attorney, Courtney Morgan of Chambers Steiner, 1490 First National Building, Detroit, MI. We waited in the outer office from 1:30 to 1:50, when Messrs. Sheridan and Morgan returned from lunch. We then proceeded to a conference room where the interview was to be held.

Coleman asked Mr. Morgan whether he wanted us to make a tape recording of the interview. He responded "no." Coleman then informed him that we would confine ourselves to taking handwritten notes that would be used to compile a trip report.

The interview began at approximately 2:00 pm. Coleman asked Mr. Sheridan to describe his educational background. He handed us a resume (Exhibit 1) showing that he was awarded a Bachelor of Science degree from the State University of New York at Albany in June 1978 with concentration in Mathematics and Physics. In response to a question from Julie, Mr. Sheridan stated that his degree was in applied physics. He also stated that he holds an M.B.A. from Cornell. Coleman asked Mr. Sheridan whether he had received any training in engineering. He stated that while working for Ford and Chrysler, he had taken an extensive number of in-house and SAE seminars on engineering subjects.

Coleman asked Mr. Sheridan to describe his employment history in the automotive field. He stated that from late 1980 to 1981, he held a product planning position with the Ford Motor Company. This required him to establish communications among a variety of functional areas within the corporation, including engineering, marketing, and sales, to develop a product plan for future models, including the Ford Taurus.

In 1984, Mr. Sheridan moved to the Chrysler Corporation, where he was offered a promotion into a position as a program planning manager in the company's Advanced Vehicle Planning Office. The areas he worked in included powertrain, chassis, and body component planning. In 1985, Mr. Sheridan received a "Your Personal Best" award (Exhibit 2) from Chrysler Chairman Lee Iacocca, which carried high recognition, as it was only the third such award presented in the corporation. In

September, 1987, he moved into truck operations, where he concentrated on full-size, "B-Class" trucks, including the Dodge Dakota and full size vans. He stated that safety issues were not emphasized at that time in the product planning process for trucks. From September to April 1988, he was an Engineering Program Manager in a group responsible for N-Body and B-Body vehicles, including the Dodge Dakota. The engineering issues he dealt with included program timing, cost and weight. Starting in April 1988, he spent three and one half years working on a Cummins diesel project for the Dodge Dakota truck.

In January 1991, Mr. Sheridan forwarded to Chrysler Chairman Lee Iacocca a confidential report rebutting a low performance appraisal that he had received, and alleging what he characterized as serious ethical breaches on the part of certain named managers in Jeep and Dodge Truck Engineering (Exhibit 3). Mr. Sheridan stated that Mr. Iacocca read this report, and ordered an investigation that verified all of the information that it contained. One outcome of this investigation was that Robert Lutz was denied the Chairmanship of the Chrysler Corporation.

Upon completion of the Cummins diesel project, Mr. Sheridan was transferred, on April 1, 1991, to a position as Product Planning Manager for Chrysler minivans. Mr. Sheridan stated that this was a desirable position, because at that time everyone in the corporation wanted to work on the minivan platform. Mr. Sheridan attributed this career move to his rebuttal of the performance appraisal he received in his prior position, as well as to his reputation in the corporation. (See Chrysler Times article attached as Exhibit 4). The areas he dealt with included power train, body, and chassis systems for the AS body minivan that Chrysler planned to introduce in 1996. Door latches were included in the body systems work. Mr. Sheridan was asked whether Chrysler compared minivans to other body types, such as station wagons and hatchbacks, for the purpose of competitive analysis. He responded that the company looked at vehicles other than minivans only if those vehicles exhibited a new, innovative option that could be used to embellish the product. As an example, Mr. Sheridan cited side air bags on Volvo sedans. He stated that otherwise, marketability considerations generally govern Chrysler's peer review. Mr. Sheridan stated that the planning work on the Chrysler minivan included comparisons of that vehicle to the Ford Aerostar, Toyota Previa, Mazda MPV, and the GM Astro/Safari/Lumina.

In late 1992, Mr. Sheridan conceived the idea of forming a Safety Leadership Team (SLT) for the minivan program. This idea was inspired by Mr. Sheridan's awareness that through the introduction of the air bag and other safety features,

Chrysler could advertise itself as a safety leader through 1990 and 1991, but that it was facing competition in this area from other manufacturers. The SLT was to address the gamut of safety issues involving the minivan, and analyze those aspects of the minivan that connoted safety.

The SLT met for one to one and one half hours every other week. Its recommendations were to be reported to Chrysler's Product Direction Team, comprised of senior company officials.

At one of the first meetings of the SLT, Mr. Sheridan played a videotape of a "60 Minutes" segment on seatback failure to introduce the concept of automotive safety (video attached as Exhibit 6). This video was of interest to Mr. Sheridan because he had experienced seatback failure while participating in a stock car race. The video featured a number of vehicles, including the Chrysler minivan. Mr. Sheridan expressed the belief that there should be a dynamic test standard for seatback strength. He said that he agrees with the substance of the 60 Minutes segment, and that probably everybody else in the industry, including Chrysler, does also. As described by Mr. Sheridan, the segment highlights the fact that seat belts do not restrain occupants during rear impacts, and that the only restraint in that crash mode is the seat back. If the seat back is not designed to withstand certain moderate accelerations, Mr. Sheridan stated that the risk of injury, or even death, increases, since occupants may be ejected from under the belt, or they may fall backwards, breaking their necks and backs. After showing the video, Mr. Sheridan was told not to mention the seatback issue again. He understood that this direction came from Francois Castaing, Chrysler's head of Engineering, who was upset that Mr. Sheridan was showing the video.

Mr. Sheridan stated that the minivan rear liftgate latch was raised as an issue at SLT meetings because (1) Chrysler had conducted bumper tests in which the liftgate had popped open; (2) Ron Zarowitz, an attorney from the Safety group who was a member of the SLT, brought to the team's attention a case in Saginaw, Michigan in which occupants were ejected through an open minivan liftgate, and other cases that were pending against the company; and (3) most members of the SLT considered liftgate latch openings to be a safety problem. The SLT's Engineering Liaison, Ernie Laginnes, recommended a dual stage latch to duplicate side door latches. The SLT adopted this recommendation after noting that dual stage latches were then being used on the liftgate of the Ford Windstar.

In early 1993, the SLT made a presentation to the Product Direction Team proposing a dual stage latch for minivan

liftgates. Sixty members of the Product Direction Team were in attendance at that time. One of those members, Chris Theodore, stated at the meeting: "If we make that change we indict ourselves. We are not going to do that."

After its defeat on the dual stage latch recommendation, the SLT focused on Ford's claim that the Windstar had more safety features than any other minivan. Ford was advertising the Windstar as "the only minivan that meets all passenger car standards." Mr. Sheridan feared that the Windstar would become the principal competitor of the Chrysler minivan because Ford had the capability to produce a large quantity of these vehicles. This was not the case for the Toyota Previa, the Mazda MPV, or other minivan models.

The SLT made a second presentation to the Product Direction Team on a dual stage latch for the minivan liftgate in February 1994. Since the Ford Windstar liftgate had two latches, each with a dual latching capability, Mr. Sheridan tried to attack the latch issue from a competitive perspective for this presentation. The SLT's recommendation was not favorably received. At the meeting, Chris Theodore stated: "That ship has sailed."

Julie asked Mr. Sheridan whether inertial unlatching of the rear liftgate was ever a topic of discussion within Chrysler. Mr. Sheridan responded that there were no such discussions during the meetings in which he participated.

forty, who he described as the predominant <sup>women over</sup> minivan drivers,

Mr. Sheridan stated that if a safety problem is encountered in a vehicle with such drivers, then it is a real problem. He also stated that Chrysler markets its minivans to women and to families with children.

In 1993, the SLT formed consumer focus groups and, in 1994, it conducted research clinics for input on minivan safety issues. In the winter of 1994, it was to address side air bags at a clinic held in Boston. Before the presentation was made, Chris Theodore instructed the SLT to "pull side airbags-- Legal has a problem." Attorney Ron Zarowitz, who was a member of the SLT, told Chris Theodore: "Nobody inside Legal knows what you're talking about . . . Chris, you do Engineering, I'll do Legal." Mr. Sheridan stated that side air bags were ordered to be pulled because Chrysler's head of Engineering, Francois Castaing, stated that he did not know how to engineer them yet.

Mr. Sheridan was asked by Theodore R. Cunningham, a corporate vice president who served as General Product Manager for the

minivan platform, to prepare a status report on the SLT.

After issuing this memo, Mr. Sheridan was invited to a meeting concerning the SLT. He assumed that the meeting was to discuss the problems facing the SLT that were documented in his memo. Instead, he was instructed at the meeting on matters that he should and should not write about. Sheridan recalls that he was specifically told not to write anything about minivan liftgate latches.

Mr. Sheridan stated that on October 14, 1994, at the Chrysler Testing Center, Chrysler Proving Grounds, a hand assembled "P-Zero" 1996 Chrysler minivan was crashed into a wall at 30 mph. The Chest G meter registered 60 G's in 22 milliseconds and 68 G's for a final reading. Standard 208 allows 60 G's. Mr. Sheridan stated that Chrysler's "bogey" is 48 G's, so that the worst performing vehicles would not exceed the Federal limits. On November 4, a second test was run, which produced a failing chest measurement of 75 G's and a failing measurement for femur load. In a third test, on November 21, the chest measurement was 44 G's. Mr. Sheridan stated that prior to conducting that test, the steering column had been redesigned and welded in place, and modifications had been made to the vehicle's front rails, front bumpers, and engine mounts.

As a result of these test failures, Mr. Sheridan stated that Chrysler was holding meetings twice a day to deal with the problem. Additionally, Chrysler decided on December 1, 1994 that 50 to 100 "C-1" minivans built in late November could not be sold by Chrysler. Mr. Sheridan identified the C-1 as the only phase before production in the assembly plant that can be serialized and sold. Chrysler also pushed the production date to February 23, 1995.

Mr. Sheridan stated that his employment at Chrysler was terminated on December 19, 1994, after he was accused of leaking a document concerning the minivan test failures to a friend who gave the document to Automotive News. He stated that he was not allowed in his office after that date, and that an inventory of his office files that was prepared by Chrysler identified as empty several folders that contained documents at the time of his departure.

Coleman asked whether Chrysler documents modifications in component designs. Mr. Sheridan responded that it did so with a Product Change Notice (PCN). He stated that all information on PCNs involving latches would be maintained by the Door Hardware Group within Body Engineering. Mr. Sheridan identified Wayne Brock as the Group Leader, and stated that Ernie Laginnes was in Body Engineering at that time. Mr. Sheridan stated that the PCN would describe the design of the change, including underlying technical data. He stated that engineering drawings would also be attached. The need for PCN is specified in Chrysler's Engineering Practices Manual. Chrysler's policy is to retain this information for seven years. Mr. Sheridan stated that any change would also be noted in Chrysler's "Engineering Smart Book," which is compiled by outside contractors on an annual basis to detail each engineering change that has taken place. Mr. Sheridan noted, however, that the liftgate latch modifications for the 1995 minivan were kept at such a low profile that they were not even included in the Smart Book.

Mr. Sheridan identified Ernie Laginnes as the Executive Engineer for Body Engineering on the Minivan platform. He also stated that Jim Peters, Paul Corby, and Frank Chaniese of the Bumper Group would have information on what was going wrong with the minivan latch. He also mentioned Tom Edson, Chief of Engineering Program Management, as a possible information source.

Mr. Sheridan stated that a major portion of the NS project was to strengthen the minivan body to increase torsional and bending moments. He contended that a new latch on an old minivan will not solve the hatch opening problem because the body will deform to produce a fork bolt-detent lever bypass. Mr. Sheridan stated that there was so little body rigidity that the rear liftgate had to be taped shut in frontal impact tests that Chrysler conducted on 1991 and 1992 model year minivans.

Mr. Sheridan stated that in early 1992, the Door hardware Group compared the Chrysler minivan only to other minivans, including the Previa, Aerostar, Villager, and Quest. The group conducted a weight and cost analysis, corrosion resistance analysis, and an opening and closing analysis.

Mr. Sheridan could not name anyone on the workgroup, but recommended that we check with Jim Peters, one of the Body Engineering Managers.

Mr. Sheridan stated that the 1996 Chrysler minivan has a rear door handle. This will eliminate what he described as the weakest aspect of the current latch, which is the fact that it must be sufficiently sensitive to be sprung by turning a thin key.

On the issue of fasteners, Mr. Sheridan identified Paul Doolan, an Engineering Program Manager, as a possible information source. He stated that an effort was made to standardize fasteners on the minivan and that problems were encountered with counterfeits coming in. Mr. Sheridan stated that Chrysler dealt very sternly with suppliers whenever counterfeits were found.

Mr. Sheridan also stated that there was a special task force on ABS for minivans, and that Peter Rosenfeld and Bernie Swanson were members. He stated that the company received a high volume of complaints on ABS warning lights. He also stated that Chrysler changed its ABS supplier from Bendix to ITT Tevis.

Mr. Sheridan stated that if consumer complaints raised a safety issue, Ron Boltz would get a copy. Field reports would be maintained by Parts and Service in Centerline, Michigan. Technical Service Bulletins (TSB) were issued in response to field reports.

Mr. Sheridan stated that the air bags placed in the first production 1996 minivans were not tethered and had an E-fold. During October and November the company decided that the air bags had to be tethered, and adopted a standard fold. Because automatic equipment was not available to fold these bags, they had to be folded by hand. Mr. Sheridan believes that this may pose a problem.

We concluded our interview of Mr. Sheridan at 6:00 pm.

Documents we were given by Mr. Sheridan that have not been previously referenced as exhibits in this trip report are attached as follows:

Documents detailing Mr. Sheridan's background, assigned projects, and other activities-- Exhibit 11;

Other miscellaneous documents-- Exhibit 13.