



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

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

**SEP 28 1995**

Mr. Dale Dawkins  
Director, Vehicle Compliance and Safety Affairs  
Chrysler Technology Center  
800 Chrysler Drive (CIMS 482-00-01)  
Auburn Hills, MI 48326-2757

Dear Mr. Dawkins:

As I indicated in my letter to you dated September 25, 1995, the National Highway Traffic Safety Administration (NHTSA) was very concerned by a recent national television report which showed Chrysler's minivan hotline operators minimizing the safety implications of Chrysler's latch replacement campaign in the course of various phone calls with minivan owners.

Since sending that letter, NHTSA has obtained a copy of the question and answer script which the minivan hotline operators have been using to respond to owner inquiries. In a phone conversation on September 27, you confirmed that the script was being used by the operators.

NHTSA is very troubled by the tone and substance of the script. Like the operators shown on the television report, the script attempts to minimize, if not deny outright, the safety concerns which prompted NHTSA to open its investigation into the minivan latches. To resolve these concerns, NHTSA insisted on Chrysler's agreement to provide stronger, safer latches at no charge to all minivan owners.

Indeed, the script leads minivan owners to incorrectly believe that NHTSA found the minivan latches to contain no defect. For example, at one point, the script states that NHTSA has "made no finding of defect;" a few lines later, the script states, "there is no defect with the current latch." Perhaps most disturbingly, the script states that "[a]fter careful review and extensive cooperation with NHTSA it is clear that there is no problem with the minivan latch and no safety defect."

As Chrysler is well aware, NHTSA at no time made any finding that the minivan latches contain no defect. Rather, shortly before the point in the investigation when NHTSA would have decided whether a safety defect exists, Chrysler offered to conduct a latch replacement campaign which will provide minivan owners with a stronger, safer latch at no charge. NHTSA accepted the offer because it promised to provide minivan owners with all the safety benefits of a formal recall campaign at the earliest possible date. Under the circumstances, it was no longer necessary for NHTSA to decide whether to make a formal defect finding. NHTSA did not do so. NHTSA at no time found the latches to be safe.



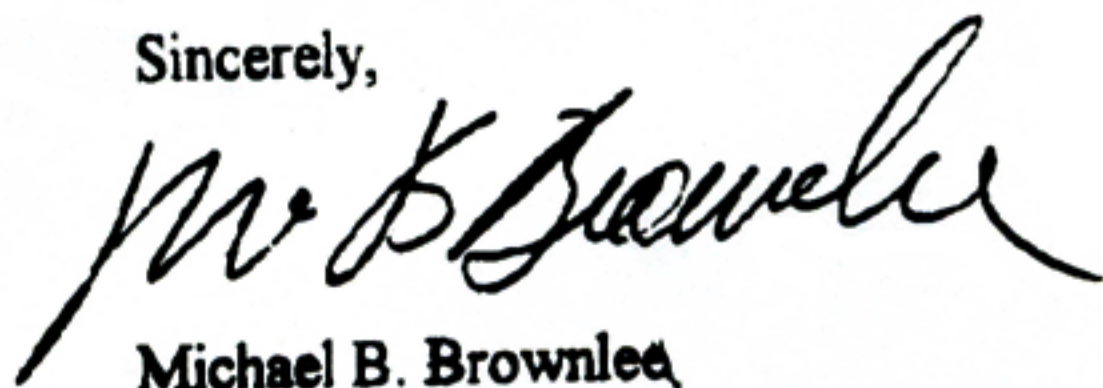
ALTO SAFETY HOTLINE  
(800) 424-9393  
Wash. D.C. Area 366-0123

NHTSA's concerns with the hotline script are not simply academic. Indeed, while it disturbs us that our position in this investigation would be distorted, we are much more disturbed by the prospect that numerous minivan owners are being led into a false sense of security about the safety of their minivan latches. This could lead them to be less concerned with buckling up and less prone to have their latches replaced.

In our most recent conversation concerning this matter, you stated that, in response to NHTSA's concerns, Chrysler would take immediate action to revise the script to eliminate the misleading portions. We look forward to working with you to assure that the revisions do not mislead the public.

In the meantime, Chrysler should communicate in the near future with its minivan owners to inform them of the replacement schedule, to clearly convey the safety concerns which underlie NHTSA's investigation, and to encourage them to have the repairs made promptly upon being notified that parts are available.

Sincerely,



**Michael B. Brownlee**  
Associate Administrator for Safety Assurance

**Theodor R Cunningham**  
Executive Vice President - Sales and Marketing  
General Manager - Minivan Operations

Dear

There has been recent and highly visible media coverage questioning the safety of liftgate latches on 1984 - 1994 Chrysler, Plymouth and Dodge minivans. This coverage is emotional in nature, and may have raised concern among some of the four million owners of Chrysler, Plymouth and Dodge minivans. Peace of mind among minivan owners is very important to Chrysler, so we are writing to explain our views and the actions we intend to take.

Chrysler Corporation firmly stands behind the quality and safety of our minivans, including the liftgate latches. There has been no formal determination that a safety defect exists with minivan latches. However, to help ensure peace of mind that your minivan is safe, Chrysler has decided to provide a stronger latch. We will replace your minivan's liftgate latch with a stronger component at no charge to you.

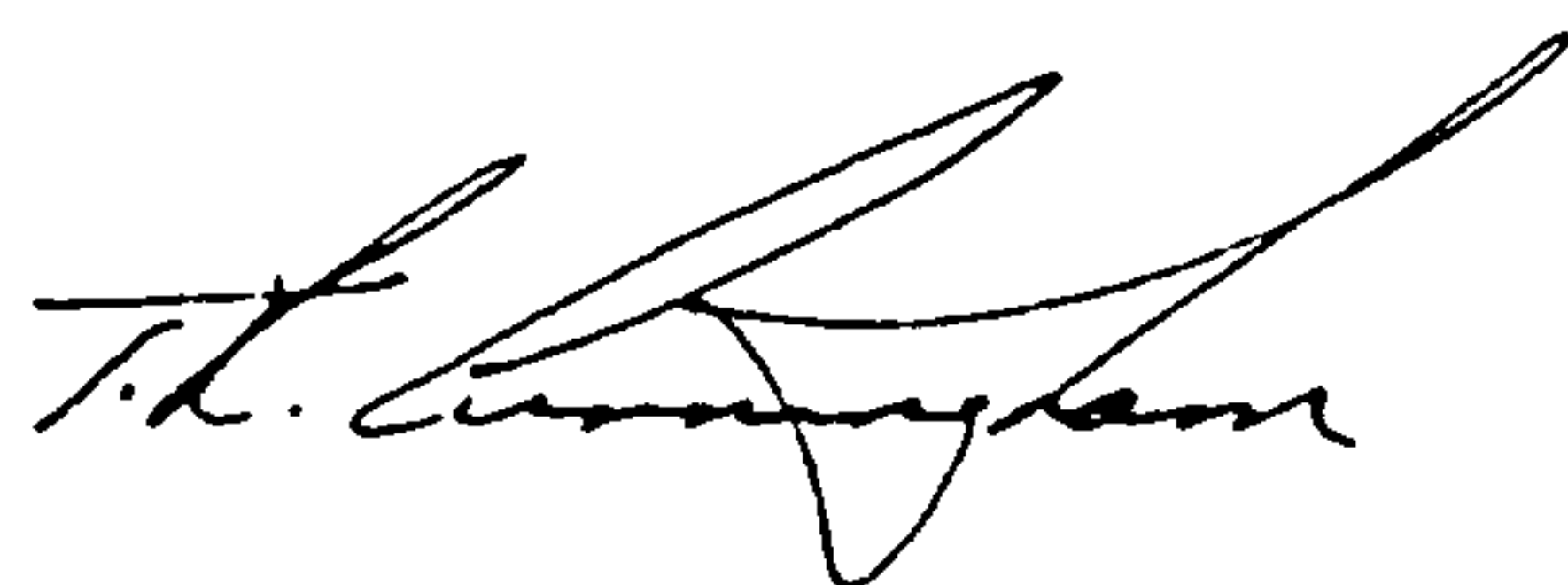
Because new latches must be tooled and fabricated to fit your minivan, it will take some time to have a supply of new latches available. During the next several months, we will notify you when the proper parts are on hand at dealerships to perform this service action. All you need do when you receive the notice is to telephone your dealer to schedule an appointment. Your dealer will schedule you for the earliest possible appointment as soon as parts availability permits. For more information regarding minivan liftgate latches and anticipated parts availability, please call us toll-free at 1-800-MINIVAN (646-4826).

We believe, and the National Highway Traffic Safety Administration (NHTSA) agrees, that the single most important safety action you can take is to ensure that all occupants are wearing seat belts properly at all times. And, of course, never allow anyone to occupy the cargo area. Also, please ensure that any removable seat has been securely reattached before the vehicle is driven.

NHTSA has been conducting an investigation of the latches on these vehicles. If you have any concerns regarding this service action, you may call the NHTSA Toll Free Safety Hotline at 1-800-424-9393.

Chrysler Corporation has a history of safety leadership. We take it very seriously. We at Chrysler Corporation want you to be safe--and certain.

Sincerely,





U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# Memorandum

Subject Engineering Analysis: EA94-005

Date 12 8 1994

*Julie Abraham*  
From Julie Abraham  
Safety Defect Engineer

Report to  
Attorney

To File

A meeting between NHTSA and Chrysler Corporation officials was held on November 17, 1994. The purpose of the meeting was for the Office of Defects Investigation to brief Chrysler about the results of its analysis and testing in relation to the minivan liftgate latch investigation. The following people were present at the meeting:

Coleman Sachs, NHTSA Chief Counsel Staff  
Bill Boehly, NHTSA Enforcement  
Lou Brown, NHTSA Office of Defects Investigation (ODI)  
John Hinch, NHTSA (ODI)  
Tom Cooper, NHTSA (ODI)  
Julie Abraham, NHTSA (ODI)  
Dale Dawkins, Chrysler  
Lou Goldfarb, Chrysler  
Ron Boltz, Chrysler  
Jim Tracy, Chrysler

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6003629

**EA94-005 CHRYSLER MINIVAN  
LIFTGATE LATCH FAILURE**

**INVESTIGATION REVIEW**



COPY OF MATERIALS  
SHOWN TO CHRYSLER OFFICIALS;  
NOVEMBER 17, 1994

# **EA94-005 CHRYSLER MINIVAN LIFTGATE LATCH FAILURE**

## **DOOR LATCH SPECIFICATIONS**

- **FMVSS No. 206 (SIDE DOORS) REQUIRES: (1) PRIMARY AND SECONDARY LATCH POSITIONS (2) NON-SEPARATION UNDER TRANSVERSE LOAD OF 2000 LBS. ON PRIMARY AND 1000 LBS. ON SECONDARY (3) NON-SEPARATION UNDER LONGITUDINAL LOAD OF 2500 LBS. ON PRIMARY AND 1000 LBS. ON SECONDARY. NO REQUIREMENT FOR LIFTGATE LATCH.**
- **CHRYSLER SPECIFICATION FOR REAR HATCH: (1) ONLY ONE LATCH POSITION (2) TRANSVERSE DIRECTION- 750 LBS. (3) NO REQUIREMENTS FOR THE LONGITUDINAL DIRECTION.**
- **FORD AEROSTAR AND GM APV SPECIFICATIONS: (1) PRIMARY AND SECONDARY LATCH POSITIONS (2) NON-SEPARATION UNDER LOADS THAT EQUAL OR EXCEED STANDARD 206 REQUIREMENTS FOR BOTH THE LATERAL AND LONGITUDINAL DIRECTIONS. THE FORD LATCH IS ENCLOSED IN A METAL CASE, AND THE APV INCORPORATES TWO LATCHES ONE ON EACH SIDE OF THE LIFTGATE.**
- **MOST OTHER PEER MINIVANS AS WELL AS STATION WAGONS INCORPORATE PRIMARY AND SECONDARY LATCH POSITIONS.**

# **EA94-005 CHRYSLER MINIVAN LIFTGATE LATCH FAILURE**

## **TESTING (STATIC)**

- **ODI STATIC TESTING OF CHRYSLER AND PEER MINIVANS (FMVSS 206)**

- **CHRYSLER MINIVANS, FORD AEROSTAR, CHEVROLET LUMINA APV, TOYOTA PREVIA MITSUBISHI EXPO, VOLKSWAGEN EURO VAN, MAZDA MPV, NISSAN QUEST, AND MERCURY VILLAGER WERE ALL TESTED AGAINST FMVSS No. 206.**
- **PRE 1989 CHRYSLER MINIVANS HAVE NO LONGITUDINAL RETENTION CAPABILITY (NO UPSET HEAD ON STRIKER).**
- **ONLY CHRYSLER MINIVAN LATCHES HAD FAILURE LOADS BELOW THE FMVSS 206 REQUIREMENT FOR THE TRANSVERSE DIRECTION ( A MEAN OF 1300 LBS., 700 LBS BELOW THE 206 REQUIREMENT). THE MODIFIED LATCH FOR 1995 MODELS PASSED THE REQUIREMENT IN THE TRANSVERSE DIRECTION (2202 LBS).**
- **MAZDA MPV LATCHES HAD FAILURE LOADS BELOW THE FMVSS 206 REQUIREMENT FOR THE LONGITUDINAL DIRECTION ( A MEAN OF 1885 LBS., 615 LBS. BELOW THE 206 REQUIREMENT). TOYOTA PREVIA marginally FAILED AT 2437 LBS.**

# **EA94-005 CHRYSLER MINIVAN LIFTGATE LATCH FAILURE**

## **TESTING (STATIC)**

- **STATIC TESTING (MODIFIED LATERAL FMVSS 206)**
  - **GOAL WAS TO DUPLICATE THE FORK BOLT-DETENT LEVER BYPASS FAILURE SEEN IN THE FIELD**
  - **LATCH WAS TESTED AT ANGLES BETWEEN +90 AND -90 DEGREES.**
  - **THE 1991-1993 CHRYSLER MINIVAN WAS THE WORST PERFORMER IN ALL BUT THE -90 DEGREES DIRECTION AMONG ALL THE LATCHES TESTED. THIS DIRECTION IS SIMILAR TO A RIGHT-SIDE IMPACT TO THE VEHICLE.**
  - **THE DAMAGE PATTERN SEEN IN THE REAL WORLD WAS DUPLICATED IN +90 DEGREES DIRECTION. THE FORK BOLT AND DETENT LEVER BYPASSED EACH OTHER AND THE RESTRICTOR SLIPPED BEFORE ANY SIGNIFICANT BENDING HAD OCCURRED.**
  - **CHRYSLER'S TEST RESULTS COINCIDE WITH ODI'S TEST RESULTS.**



# **EA94-005 CHRYSLER MINIVAN LIFTGATE LATCH FAILURE**

## **TESTING (DYNAMIC, LEFT REAR QUARTER PANEL, MOVING DEFORMABLE BARRIER, MDB)**

<b>TEST NO.</b>	<b>MODEL</b>	<b>IMPACT SPEED</b>	<b>IMPACT DIRECTION</b>	<b>IMPACTING OBJECT</b>	<b>HATCH OPENED</b>	<b>EJECTION</b>	<b>REAR SEAT</b>
<b>1</b>	<b>'87 CARAVAN</b>	<b>33.6 MPH</b>	<b>26.4 DEG. FORWARD</b>	<b>3600 lb MDB</b>	<b>YES</b>	<b>2 DUMMIES</b>	<b>BENT</b>
<b>2</b>	<b>'91 CARAVAN</b>	<b>30.2 MPH</b>	<b>26.4 DEG. FORWARD</b>	<b>3600 lb MDB</b>	<b>NO</b>	<b>NO EJECTIONS</b>	<b>BENT</b>
<b>3</b>	<b>'91 CARAVAN</b>	<b>31.1 MPH</b>	<b>15 DEG. REARWARD</b>	<b>3600 lb MDB</b>	<b>YES</b>	<b>1 DUMMY</b>	<b>BENT</b>
<b>4</b>	<b>'91 AEROSTAR</b>	<b>31.1 MPH</b>	<b>15 DEG. REARWARD</b>	<b>3600 lb MDB</b>	<b>NO</b>	<b>NO EJECTIONS</b>	<b>OK</b>
<b>5</b>	<b>'91 MAZDA MPV</b>	<b>31.2 MPH</b>	<b>15 DEG. REARWARD</b>	<b>3600 lb MDB</b>	<b>NO</b>	<b>NO EJECTIONS</b>	<b>OK</b>
<b>6</b>	<b>'95 LATCH</b>	<b>31.1 MPH</b>	<b>15 DEG. REARWARD</b>	<b>3600 lb MDB</b>	<b>NO</b>	<b>NO EJECTIONS</b>	<b>BENT</b>

# **EA94-005 CHRYSLER MINIVAN LIFTGATE LATCH FAILURE**

## **CONCLUSIONS**

- **ANNECTODAL CASES**
  - **AT LOW AND MODERATE IMPACT SPEEDS, LIFTGATE OPENS AND OCCUPANTS ARE EJECTED.**
  - **LIFTGATE LATCHES EXHIBIT A COMMON FAILURE MODE ( FORK BOLT-DETENT LEVER BYPASS).**
  
- **FARS DATA**
  - **CHRYSLER EJECTION RATE FOR KNOWN EJECTION PATHS IS TWICE THAT OF ALL OTHER MINIVANS.**
  - **75% OF EJECTIONS ARE CODED UNDER UNKNOWN EJECTION PATHS. ANALYSIS OF THESE UNKNOWN CASES INDICATES THAT MANY MAY BE LIFTGATE FATAL EJECTIONS.**
  
- **NASS DATA**
  - **LIFTGATES OPEN DURING LOW AND MODERATE IMPACT SEVERITY.**
  - **LIFTGATE LATCH FAILURE ACCOUNTS FOR THE MAJORITY OF THE FAILURE MODES IN CHRYSLER MINIVANS.**
  - **CRASH SEVERITY IS LESS ON CHRYSLER VEHICLES.**

# **EA94-005 CHRYSLER MINIVAN LIFTGATE LATCH FAILURE**

## **CONCLUSIONS (CONT.)**

- **STATIC COMPONENT TESTS**
  - **CHRYSLER'S DESIGN CRITERIA FOR THE LIFTGATE LATCH ARE LOWER THAN PEER AND FMVSS 206 STANDARDS**
  - **ONLY CHRYSLER MINIVAN LATCHES FAILED THE FMVSS 206 REQUIREMENT IN THE TRANSVERSE DIRECTION.**
  
- **DYNAMIC TESTS**
  - **AT A MODERATE SPEED IMPACT (30 MPH), CHRYSLER MINIVANS RESULT IN LIFTGATE LATCH FAILURE AND OCCUPANT EJECTIONS.**
  - **UNDER THE SAME TEST CONDITIONS, PEER VEHICLES' LIFTGATES REMAINED CLOSED.**
  
- **LATCH DESIGN**
  - **CHRYSLER HAS BEEN MODIFYING THE LATCH/STIKER MECHANISM SINCE JANUARY OF 1988.**
  - **THE LATEST MODIFICATION IMPROVES THE STRENGTH OF THE LATCH BY 50% AND IS CURRENTLY BEING USED IN 1995 MODEL YEAR VEHICLES. IT COULD ALSO BE USED IN 1991 THROUGH 1994 MODEL YEAR VEHICLES.**
  - **THE INCREASED STRENGTH IN THE 1995 LATCH WAS DEMONSTRATED IN BOTH COMPONENT AND CRASH TESTS.**
  
- **THE LATCH FAILURE IS A SAFETY DEFECT THAT INVOLVES CHILDREN.**