New study shows more deaths in GM pickups

12/2/92

By Bryan Gruley
NEWS WASHINGTON BUREAU

WASHINGTON — A new General Motors Corp. analysis shows that GM's 1973-87 fullsize pickup trucks have a higher death rate in crashes than Ford and Chrysler models.

The new analysis, produced at the request of federal regulators, appears to contradict one of GM's key defenses of its pickups, which critics say have killed at least 115 people in crash-related fires.

Clarence Ditlow of the Center for Auto Safety, a Washington consumer group, accused GM of "rigging the data" to make its trucks look safer until regulators called a halt.

GM spokesman Ed Lechtzin said the company was merely cooperating with the the government's preliminary investigation of the trucks.

The National Highway Traffic Safety Administration (NHTSA) is considering whether to recall the vehicles, an estimated 5 million of which remain on the road. At issue is whether their sidesaddle fuel tanks are vulnerable to puncture in a crash.

GM repeatedly has said the trucks have a lower overall death rate in crashes than comparable Ford and Chrysler models.

But a revised study by a GM consultant shows the GM fullsize models with a fatality rate higher than that of both competitors.

Despite the new findings, GM spokesman Lechtzin said the fatality rates are "still comparable."

But, he said, "We can't make the specific statement we made earlier."

In a Nov. 24 letter, GM General Counsel Harry J. Pearce apologized to NHTSA Administrator Marion Blakey for providing data which "obfuscated" the automaker's belief that the trucks are safe.

"We are redoubling our vigilance to prevent such an occurrence in the future," Pearce wrote, adding, "there was absolutely no intention to mislead anyone."

NHTSA must decide by Dec. 14 whether to launch a full-scale investigation of the trucks. The Center for Auto Safety has asked the agency to order a recall.

"It's obvious that GM is now rigging the data to justify having

Please see Pickups, 2E

Pickups: New numbers differ

From page 1E

killed so many Americans in fire crashes," center director Ditlow said.

GM's previous claim that its trucks had a lower fatality rate than Ford and Chrysler models was based on a comparison of GM's fullsize pickups to fullsize and smaller trucks made by its rivals.

At NHTSA's prompting, GM asked its consultant, Failure Analysis Associates Inc. of Menlo Park, Calif., to redo the study minus the smaller Ford and Chrysler models.

The result: GM trucks had 1.51 deaths per 10,000 crashes of all types, Ford 1.45 and Chrysler 1.16.

NHTSA investigators are struggling to determine whether the differences between those numbers matter.

GM trucks fared better in other comparisons. For example, in side-impact crashes, Ford had a higher fatality rate than GM.

The rate of fatal fires in GM trucks was higher than either Ford or Chrysler.

Lechtzin said Pearce wrote NHTSA "so that the small discrepancy between those (new) numbers and our original numbers doesn't overshadow our good, sound case that the vehicles are safe."

A NHTSA official who spoke on the condition of anonymity said GM's revision appeared to be an honest effort to help the agency.

Agency officials Tuesday briefed Sen. Richard Bryan, D-Nev., on the truck matter. Bryan, who chairs a subcommittee with jurisdiction over the agency, is said to favor a full-scale investigation of the trucks.

GENERAL MOTORS CORPORATION
POST OFFICE BOX 33122
DETROIT, MICHIGAN 48232

HARRY J. PEARCE
EXECUTIVE VICE PRESIDENT
AND GENERAL COUNSEL

NEW CENTER ONE BUILDING
3031 WEST GRAND BOULEVARD
TELEPHONE 313/974-1404
FACSIMILE 313/974-0200

November 24, 1992

The Honorable Marion C. Blakey
Administrator
National Highway Traffic Safety
Administration
400 Seventh Street, S.W.
Washington, DC 20590

Dear Administrator Blakey:

General Motors is committed to working with the agency in a forthright and constructive fashion to resolve the questions that have arisen about our 1973-1987 C/K pickup trucks. As you know, it is our strongly-held belief that we have sound legal and factual arguments against the suggestion that these vehicles contain a safety-related defect. Given that, I was quite dismayed to learn yesterday that some aspects of the statistical analysis prepared by Failure Analysis Associates at our request and presented to the agency last month -- an analysis obviously submitted to the agency in an attempt to clarify our position -- may unfortunately have obfuscated it.

We are redoubling our vigilance to prevent such an occurrence in the future. You have my assurance that there was absolutely no intention to mislead anyone, and we trust that the additional information we are submitting to the agency will put this matter behind us.

Very truly yours,

Harry Pearce

OP92-016-27

Failure Analysis Associates

Failure Analysis Associates, Inc.
Engineering and Scientific Services
149 Commonwealth Drive, P.O. Box 3015
Menlo Park, California 94025
(415) 688-7100 Telex 704216 Fax (415) 326-2996

Dr. Roger L. McCarthy, P.E.
Chairman and President

VIA FAX

24 November 1992

Mr. William Boehly, Associate Administrator for Enforcement
U.S. Department of Transportation
The National Highway Traffic Safety Administration
400 Seventh Street, SW, Room 5321
Washington, DC 20590

Re: Failure Analysis Associates, Inc. report concerning GM C/K series pickups.

Dear Bill:

This letter is a written summary of the information provided by Mr. Robert Lange of Failure Analysis Associates, Inc. (FaAA) concerning the various categories of accident data analyzed in connection with our report concerning GM C/K series trucks. I also wish to reiterate the offer made by Mr. Lange that we would be most interested and willing to replicate the various analyses that the agency has performed on available accident data, using the agency selected definitions and categories, to insure that there is agreement on what the available accident data indicates. I am certain that all involved would prefer to move beyond any questions related to data, and instead discuss relevance and interpretation.

It is my understanding that there may have existed some confusion as to whether the analysis we performed concerning other manufacturers included only "full size" pickups or "all" pickups. We regret any confusion that may have existed. As set forth in our two page discussion of "Comparison Vehicle Selection," our report compares GM C/K pickup post collision fire rate "performance to the performance of all [emphasis added] other light-duty vehicles on-the-road and subject to the same collision environment as are the GM C/K pickup trucks." [pg. 20] Further, on the same page, we explicitly define the comparison sets to accomplish this goal by stating:

> "In summary, post collision fire rates of GM C/K pickups were compared to the following vehicle sets:
>
> - o Chrysler Pickups;
> - o Ford Pickups;
> - o Nissan Pickups;

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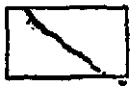
- o Toyota Pickups;
- o Average Passenger Car;
- o 95 percentile Passenger Car." [pg. 20]

I am informed by Mr. Lange that you inquired in the recent meeting if we had refined the analysis done in the report down to a comparison of "full size" GM pickups to "full size" Ford Pickups. We have developed data on selected "full size" pickup models subsequent to our initial report, and all this information will be provided this week. This analysis was not performed for the original report for reasons stated in Section 3.3 of our report:

> "Fundamentally, occupants of pickup trucks are entitled to the same level of overall safety (that is, the same level of relative rarity of collision-fire events) as are occupants of other light-duty motor vehicles: passenger cars, vans, utility vehicles, and special purpose vehicles. That is, a determination of an acceptable collision-fire rate must apply uniformly across all classes of vehicles likely to be used as passenger conveyances. NHTSA implicitly adopted this philosophy in defining the appropriate motor vehicle fuel system integrity requirement for various classes of vehicles when it promulgated FMVSS 301 to apply equally to passenger cars, light trucks, and utility vehicles." [pg. 19]

Apart from the fundamental considerations set forth above, as you are aware, there simply is not a uniformly agreed upon definition of a "full size" pickup, just as there is no uniform definition of a "full size" car. The National Highway Traffic Safety Administration has obtained directly from Ford and Chrysler definitions and/or a list of "full size" models. FaAA does not have this information. Therefore, any set of "full size" vehicles FaAA selects runs the risk of being inconsistent with the manufacturer's definitions, and potentially opens FaAA to criticism if we were to inadvertently omit a group of "full size" trucks from analysis of another manufacturer's production that significantly affected the results one way or the other. Subsequent to our report we have performed the previously mentioned analysis of selected "full size" competitor models, which we hope will be helpful.

While a comparison of fire rates amongst "full size trucks" of various manufacturers might be an interesting academic exercise it is not clear how that would relate to the question of whether the subject GM vehicles presented an "unreasonable" fire risk to their occupants, and thus contained a defect. Whatever the relative ranking of fire risk amongst the various full size trucks is, their rates all fall within the range of those for other vehicles. If we chose another accident mode, such as rollover, the rankings would certainly change. The FMVSS quite correctly do not set one standard for "full size" pickups, and another for different vehicle classes.



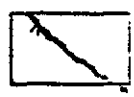
I understand there was some discussion of the standard for "comparability" concerning accident rates at last Friday's meeting. FaAA is comfortable with the well reasoned standards of comparability that the NHTSA has established in past investigations, such as the petition relating to the CJ 5/7, and has used the term in that manner.

I am looking forward to our further interaction.

Sincerely,

Roger L. McCarthy, P.E.
Chief Executive Officer

cc: Robert C. Lange, Regional Vice President
Edward Conner, Manager of Product Investigations



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Failure
Analysis
Associates®

Engineering and Scientific Services
149 Commonwealth Drive, P.O. Box 3015
Menlo Park, California 94025
(415) 326-9400 Telex 704216 Fax (415)326-8072

VIA FAX

November 24, 1992

Mr. Terry M. Klein
DOT/NHTSA
400 7th St. NW
Washington D.C. 20590

RE: C/K Pickup Analysis - Differences between NHTSA and FaAA Analyses

Dear Mr. Klein:

I have reviewed the NHTSA programs which were given to me at the November 20, 1992 meeting. By comparing this code with the analysis performed by FaAA, I was able to identify the following differences between the NHTSA and FaAA analyses. I have not yet had opportunity to replicate the NHTSA type analysis using FaAA's databases. There may be additional differences which I was unable to discern from the programs which were provided to me.

1. Restriction to Fatal Vehicles

   FaAA used only fatal vehicles, that is vehicles in which an occupant of the vehicle was killed in the accident. NHTSA used all vehicles involved in a fatal accident.

   Restriction to Collision Vehicles

   Only collision vehicles were included in the FaAA analysis. NHTSA apparently made no such restriction. The definition of a collision vehicle was included in the October 12, 1992 report. For your convenience, the definition of collision vehicle is as follows:

   - FARS variable: Manner of Collision 1-6; or
   - FARS variable: Rollover 1 or 2; or
   - FARS variable: Initial Impact Point 1-15 (1975-81), 1-16 (1982- 1990); or
   - FARS variable: Main Impact Point 1-15 (1975-81), 1-16 (1982- 1990).

2. Method of Selection of Vehicles

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NHTSA used the FARS make code and the FARS model year and the FARS VINA model to make vehicle selections. FaAA's selection is based upon the VINA/VINDICATOR decoded VIN information.

- VINA/VINDICATOR to select Vehicle Type = L (Light Truck);and
- VINA/VINDICATOR to select Body Style = (CP, CU, PC, PK, PM, PS, SP, CB, CH, CL, CS ,FB, IC, ST, YY) - Pickup Truck;
- VINA/VINDICATOR identified Make
- VINA/VINDICATOR identified Model Year
- VINA/VINDICATOR identified VSER to identify GMC and Chevy C&K. VSER = (C10, C15, C20, CC2, C25, C30, C35, R10, R15, R20, R25, R30, R35, CR3, K10, K15, K20, K25, K30, K35, GM4, V10, V15, V20, V25, V30, V35, CV3, SIE); the 1988 and later model year with inside the frame rail tanks were eliminated by excluding GMC or CHEVY trucks with fifth position of the VIN either C or K.

3. Vehicles Used

NHTSA used only the F series Ford Pickups and the D&W series Dodge Pickups. FaAA used all Ford and All Chrysler pickups as identified by make and body type. Note that the VINA/VINDICATOR program did not identify Dodge 4 wheel drive vehicles prior to model year 1977. The corresponding POLK registration was eliminated from the analysis.

4. Model Year

NHTSA restricted analysis to model years 1973-1987. FaAA included model years 1973-1989 in the FARS analyses. Model years 1973-1991 were used in the state analysis. The C&K pickups with inside the frame rail gas tanks in model years 1988 and later were excluded. The GM R/V series which were produced 1988 and later were included.

5. Direction of Impact

NHTSA apparently used only the FARS IMPACT1 to define impact. FaAA included information on rollover as well as direction of impact, and supplemented the Principal Impact code with the Initial Impact code when the Principal Impact code was missing. The Impact categories used by FaAA are:

Collision Subcategories:

*Principal Impact precedes Initial Impact

1). Rollover: Single Veh Acc and First Harmful Event = 01; or
Rollover = 1, 2 (78+); or Most Harmful Event = 01.

2). Left : 08-10 clock points

3). Right : 02-04 clock points

4). Rear : 05-07 clock points

Side includes Right and Left.

6. Definition of post collision fire.

NHTSA apparently used all fire_explosions. FaAA eliminated First Harmful Event fires.

Please feel free to call me to discuss. I will be out of the office on Wednesday, November 25, 1992. You may reach me at (510) 524-1820.

Sincerely,

Rose M. Ray, Ph.D.
Managing Scientist •

cc: Edward Conner, GM Manager of Product Investigation
cc: Robert Lange, FaAA Regional Vice President

GM Current Product Engineering
General Motors Corporation

449106

November 25, 1992

GM-425A

Mr. Charles L. Gauthier, Director
Office of Defects Investigation Enforcement
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

NEF-121jry
DP92-016

Dear Mr. Gauthier:

This completes our response to your letters of November 10, 1992 and November 23, 1992 requesting clarification of our October 9, 1992 response concerning the fuel storage system of certain General Motors C/K pickup trucks. General Motors requested Failure Analysis Associates to assist in responding to Questions 1 through 4 of your November 23, 1992 request. The responses to your numbered requests are detailed below.

1. *The following relate to the trucks used as "comparison" vehicles by FaAA for establishing the relative "crashworthiness" of the subject C/K pickups:*

   a. *Was the Ford Ranger (a mid-size pickup) included in "Ford pickup"? If so, please fully explain why.*

      Response: Ford Ranger pickup trucks were included in the designation "Ford pickup" as indicated in the FaAA report.

      Non-GM, small and medium-duty pickup trucks were included in FaAA's analysis along with all other light-duty vehicles. Such vehicles were included in FaAA's study based upon the rationale in Section 3.3 "Comparison Vehicle Selection" of FaAA's report (p. 19). FaAA stated:

      "Fundamentally, occupants of pickup trucks are entitled to the same level of overall safety (that is, the same level of relative rarity of collision-fire events) as are occupants of other light-duty motor vehicles: passenger cars, vans, utility vehicles, and special purpose vehicles. That is, a determination of an acceptable collision-fire rate must apply uniformly across all classes of vehicles likely to be used as passenger conveyances. NHTSA implicitly adopted this philosophy in defining the appropriate motor vehicle fuel system integrity requirement for various classes of vehicles when it promulgated FMVSS 301 to apply equally to passenger cars, light trucks, and utility vehicles.

30200 Mound Road/S3-EA Warren, MI 48090-9010

In this study, the postcollision fire rates of the GM C/K type pickup trucks were compared to the postcollision fire rates of comparison vehicles. The comparison included pickup trucks produced by all major manufacturers (Chrysler, Ford, Nissan, and Toyota) and passenger cars..."

b. *Was the Chevy S10 and/or GMC S15 pickup (a mid-size pickup) included in "C and K pickup"? If not, please fully explain why not.*

Response: No. Chevrolet S10 and GMC S15 pickup trucks were not included in the accident data tabulated for GM C and K pickup trucks, or calculations relating to GM C and K pickup trucks because the Center for Auto Safety's Petition and the National Highway Traffic Safety Administration's (NHTSA) investigation relate solely to the C/K pickup trucks with outside the frame rail fuel tanks. This tank location was not used on the Chevrolet S10 or GMC S15.

c. *Was the Dodge D50 (a mini-pickup produced by Mitsubishi) included in "Chrysler pickup?" If so, please fully explain why.*

Response: Yes. Dodge D50 pickup trucks were included in the designation "Chrysler pickup" as reported in FaAA's report.

Non-GM, small and medium-duty pickup trucks were included in FaAA's analysis along with all other light-duty vehicles. Such vehicles were included in FaAA's study based upon the rationale in Section 3.3 "Comparison Vehicle Selection" of FaAA's report (p. 19); the relevant portion of which is quoted in the response to question 1.a above and is incorporated by reference herein.

d. *Was the Chevy LUV pickup (a mini-pickup produced by Isuzu) included in "C/K pickup?" If not, please fully explain why not.*

Response: No. Chevrolet LUV pickup trucks were not included in the accident data tabulated for GM C and K pickup trucks since the LUV truck never utilized outside the frame rail fuel tanks.

2. *Was an analysis of the relative crashworthiness of the GM C/K series versus Ford F-100, F-150, F-250 and F-350 series conducted while preparing the FaAA report, "Analysis of Light-Duty Motor Vehicle Collision Fire Rates?" If not, why not and if so, please provide a copy as we discussed.*

Response: A complete set of corresponding data on Ford F-series pickup trucks was not developed while preparing the FaAA report for the reasons set forth in Section 3.3 "Comparison Vehicle Selection". However, after the report was filed, selected data from FARS has been separately broken out for Ford F-series pickup trucks. That data is tabulated in Table 1 attached hereto.

Subsequent to our meeting on Friday, November 20, 1992, GM has asked FaAA to complete a comparison of GM C and K series trucks, Ford F-series trucks, and Dodge D and W series trucks. This analysis was completed and the results of FaAA's analysis are attached in tabular form hereto as Table 2 - FARS All Collisions, Table 3 - FARS Side Collisions, Table 4 - All Collisions Six States Combined, and Side Collisions Only Six States Combined.

Small numerical differences might occur between rate data reported for C/K pickup trucks in Tables 2 through 4 attached hereto and the corresponding data included in Tables 4.2.1 through 4.4.2 from FaAA's report, because the model year restriction varies somewhat among the tables.

3. *State, by model and model year, those Nissan and Toyota trucks not used as "comparison vehicles" in the FaAA analysis provided with your response. For each vehicle identified, please fully explain why it was not included.*

Response: All Toyota and Nissan pickup trucks were included in the grouping of comparisons vehicles in FaAA's report. Table 5 attached hereto lists all of the Nissan trucks utilized in FaAA's comparison, and Table 6 attached hereto is a listing of all of the Toyota trucks utilized in FaAA's comparison.

4. *Provide a listing (similar to the one enclosed with this letter), by make, model, and model year, of all trucks included in FaAA's analysis.*

Response: Tables 5 and 6 list the Nissan and Toyota trucks used in FaAA's report. Tables of the other manufacturer's make, model and model year trucks used in FaAA's report were to have been FAXed to the NHTSA from GM's Washington, D.C. office on Friday, November 20, 1992; a duplicate of this communication will be forwarded to Mr. Terry Kline by the end of the day Wednesday, November 25, 1992. Table 7 lists the requested information for Dodge pickup trucks used in FaAA's just completed restricted analysis (ref. Tables 2 through 4 attached hereto), and Table 8 lists corresponding information for the Ford trucks used in FaAA's restricted analysis.

Please contact me if you require further information about this response or any of the attached material.

Very truly yours,

E. E. Conner
Manager
Product Investigations

Attach.

GM Current Product Engineering
General Motors Corporation

December 1, 1992

GM-425A

Mr. Charles Gauthier, Director
Office of Defects Investigations
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

44357

NEF-121jry
DP92-016

Dear Mr. Gauthier:

This is in reference to our telephone conversation on November 30, 1992, regarding the letter to Administrator Blakey from Harry Pearce dated November 24, 1992.

This will verify that the "additional information" referred to in Mr. Pearce's letter consists of the material provided with my letters of November 24 and November 25, 1992, together with the material provided directly to the agency from Failure Analysis Associates, Inc., during the week of November 23, 1992.

If there are additional questions regarding the material provided, please contact me.

Very truly yours,

E. E. Conner

E. E. Conner
Manager
Product Investigations

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