



NISSAN NORTH AMERICA, INC.

May 31, 2001

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Thomas Z. Cooper, Chief
Vehicle Integrity Division
Office of Defects Investigation
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

RECEIVED
NHTSA
MAY 31 2001

Re: NSA-12pco
PE01-008

Dear Mr. Cooper:

Enclosed is Nissan's response to the referenced NHTSA Information Request of April 5, 2001 concerning the Agency's evaluation of passenger side air bags in 1994 and 1995 Nissan Altima vehicles.

Nissan has carefully and comprehensively investigated the performance of the 1994 and early 1995 Altima passenger air bag. For all of the reasons that follow in the attached response, Nissan submits that the early Altima passenger side air bag does not contain the alleged defect.

The facts and analysis accompanying this response support several conclusions about the passenger side air bag in MY 1994 and early 1995 Altima models:

- First, the early Altima passenger air bag has an *excellent record in preventing fatalities*, whether that comparison is made with vehicles in general, or with air bag-equipped peer vehicles. The early Altima passenger air bag has also done an *excellent job in avoiding deployment-related life-threatening and fatal injuries*. This real world safety record is not surprising, because the design and performance characteristics of the early Altima air bag are within the state of the art, *well within acceptable levels*, and similar to comparable vehicles, as summarized in NHTSA's 1999 Report on Air Bag Technology in Passenger Vehicles. By the measures NHTSA has used to evaluate air bag aggressivity, the early Altima air bag is not aggressive.

459

- Second, the risk of facial (including eye) injuries to passengers in the early Altima is neither unique nor unreasonable. Information from the University of Michigan Transportation Research Institute (UMTRI) demonstrates that facial (including eye) injuries occur in many collisions in a wide variety of makes/models in which the air bag deploys. In fact, the rate of facial and eye injuries from a deploying passenger air bag in the early Altima is *much lower than the average rate* of facial and eye injuries from deploying driver or passenger air bags, according to UMTRI data.
- Facial and eye injuries from deploying air bags have occurred in virtually all makes/models of air bag-equipped vehicles, and have been analyzed in the medical literature. These injuries have many causes *unrelated to the design of the air bag itself* including contact between the occupant's face and the deploying air bag (particularly when the occupant is unrestrained or out of position) or from contact between the occupant's face and an intervening object (such as an occupant's hand, a soda can or eyeglasses) that is thrust into the occupant's face during the deployment of the air bag.
- Third, the evaluation of the risk of facial (including eye) injuries cannot be done in a vacuum, because the available information shows that the early Altima has done an outstanding job of protecting its passengers from air bag-induced injuries. In fact, based on claims received by Nissan, the early Altima appears to have received reports of air bag related injuries at the same, or lower rate as the 1995.5 Altima air bag, and *has a lower rate of air bag-related injuries* to passengers when compared with other manufacturers' vehicles.
- Fourth, the reason why the early Altima passenger air bag has done so well in the real world is because it was well engineered and thoroughly tested for safety before it was brought to market, and performed exceedingly well in those safety performance tests. It also performed well in the Agency's tests, *with HIC values 68% below* the FMVSS 208 criterion in the 30 mph test. While it is possible to hypothesize alternative air bag designs and different air bag performance parameters, as contingency fee lawyers and their hired witnesses have done, any given air bag design parameter that might have avoided a particular air bag-related injury in a particular collision might have contributed to another person's injury in a different collision circumstance. In fact, some aspects of the alternative air bag designs proposed by contingency fee lawyers and their hired witnesses have been associated with air bag-

Thomas Z. Cooper, Chief
May 31, 2001
Page 3

induced fatalities in other vehicles. *The early Altima, in contrast, has not been associated with any deployment-related passenger fatalities.*

- Fifth, Nissan provided Altima owners and occupants with extensive information and *state-of-the-art warnings* about the risks of injury from deploying air bags and has actively participated in several public education campaigns about the risks of injury from a deploying air bag. In fact, the various public information efforts sponsored by NHTSA, the industry and Nissan about reducing the risks of injury from deploying air bags have been successful in reducing the number of allegations of facial (including eye) injuries in early Altimas, confirming the available evidence that demonstrates a correlation between many of the allegations of deployment-related facial (including eye) injury to passengers in the early Altima and the position of the passenger at the time of air bag deployment, either as a result of being unrestrained or otherwise out of position.

The evidence discussed in Nissan's response will show that the early Altima passenger side air bag does not contain the alleged defect. Nissan respectfully urges NHTSA to close this Preliminary Evaluation.

The attached response restates each of the Agency's questions, and then provides Nissan's answers. Please contact us if you have any questions.

Sincerely,



Frank D. Slaveter
Corporate Manager, Technical Compliance

Enclosures

461

INTRODUCTION

In accordance with discussions with the Agency's Thomas Cooper, an extension of time was granted until May 31, 2001 to respond to this Information Request ("IR"). Nissan appreciates the Agency's courtesy in this regard.

In responding to this IR, information has been obtained from those places within Nissan likely to contain such information in the regular and ordinary course of business. When a particular Request seeks "documents" as defined in the IR, reasonable, good faith searches have also been made of corporate records in those places likely to maintain them in the regular and ordinary course of business.

The definitions of "documents" and "Nissan", however, are unreasonably broad, vague and ambiguous in the context of the information sought by this IR. For example, "calendars", "appointment books", "financial statements" and "personnel records" would not contain investigations pertaining to the alleged defect. Therefore, searches were not made for such "documents", inasmuch as they would not likely contain responsive information. In addition, Nissan has not provided information from persons or entities over which it does not ordinarily exercise control.

Nissan understands this IR to seek information on vehicles manufactured for sale in the United States. After issuing this IR, and after further discussion concerning other Nissan vehicles that might have identical passenger side air bags as the subject vehicles, the Agency agreed that the 1993.5-1996 Infiniti G20, (designated by Nissan as the P10 model series) did not have an identical passenger air bag. These G20 models have a passenger air bag that uses the same inflators as the ones in the subject vehicles (1994-early 1995 models) and the same air bag and fold pattern. Otherwise, the vehicles and air bag system are not substantially similar to the subject vehicles. Nevertheless, Nissan is providing information about these G20 vehicles on a voluntary basis. The same inflator/fold pattern passenger air bag was also used in certain Primera, Bluebird, and Avenir models sold in Japan and Primera models sold in Europe, but the Agency agreed that it was not necessary to provide information about these models. These models are not substantially similar to the "subject vehicles".

Responses are provided after each request, and Attachments are utilized as appropriate. The source of information used as a basis for the data in each Attachment, including the date the data were updated and retrieved, is identified at the beginning of each Attachment, as applicable. If a document itself is the source for the requested information and it is provided, we assume no further source identification is called for. If a document, drawing or component is requested, or if no responsive information is available, we assume no further source identification is called for.

462

With regard to claims of privilege, Nissan understands that it is acceptable to the Agency for Nissan to identify specific categories of privileged documents rather than any specific document. These specific categories are: 1) communications between outside counsel and Nissan Legal Department employees, other Nissan employees, or other Nissan-represented parties in litigation and claims; 2) communications between Nissan Legal Department employees and other Nissan employees or other Nissan-represented parties in litigation or claims; 3) notes and other work product of outside counsel or of Nissan Legal Department employees concerning communications with Nissan employees or consultants, and the work product of those employees or consultants done for or at the request of outside counsel or Legal Department employees; and 4) other categories to be identified later as necessary. For any privileged documents that are not included in these categories, such documents, if any, will be specifically identified on a separate privilege index at a later time. To the extent that a document (for example, an investigation report responsive to Question 2) that may be privileged is furnished, Nissan is not asserting a privilege claim for that document. Also, we understand documents specifically related to the preparation of the responses are not sought.

Nissan believes NHTSA's policy is to protect the privacy of individuals under exemption 6 of the Freedom of Information Act, 5 U.S.C. Section 552(b)(6). We understand that owner name, address, and other personal information contained in any of the attachments in this response will not be made available to the public. Therefore, Nissan is not requesting confidential treatment for this information pursuant to 49 CFR, Part 512, but we believe any private information concerning individuals should not be made public. Pursuant to Agency discussions, medical information about individuals are not being included, but copies of information specifically identified by the Agency, if any, will be provided later (however, some medical information or reports which may be related to or associated with the owner reports or claims responsive to Question 2 will be submitted as part of the owner report or claim; we assume the Agency will treat this information confidentially).

I. State the number of subject vehicles sold in the United States by make, model, model year, manufacturing plant, and build month.

The total number of subject 1994 and 1995 Nissan Altima vehicles (designated by Nissan as the U13 model series) sold in the United States by make, model, model year, manufacturing plant, and build month is provided in Attachment A. Please note that the decision was made in 1993 to adopt a different passenger air bag for the Altima, and this was implemented in production beginning March 3, 1995. These models are referred to as the 1995.5 Altima. See response to Question 4, below. In these responses the 1994-early 1995 Altimas (up to March 3, 1995 production) may be referred to as the "early Altima".

Nissan is voluntarily supplying information concerning the 1993.5-1996 Infiniti G20 model as indicated above. The total number of such G20 vehicles sold in the United States by make, model, model year, manufacturing plant, and build month is provided in Attachment B.

2. State the number and provide copies of all of the following, from all sources, of which Nissan is aware and which relate, or could relate to the alleged defect in the subject vehicles:
- a) owner/fleet complaints;
 - b) field reports;
 - c) crash/incident claims;
 - d) subrogation claims;
 - e) lawsuits; and
 - f) third-party arbitration proceedings (where Nissan is a party to the arbitration).

Please list and collate your responses for each category ("a" through "f") by date of claim. Please provide for each item in this response the incident date, mileage of vehicle at time of incident (if known), approximate age of vehicle or model year, vehicle build date, disposition of matter, and, where a fleet vehicle is involved, the name of the fleet, and the name and telephone number of a contact person at that fleet. For items "a" through "d," please provide all related information and reports whether or not Nissan has verified each one. For items "e" and "f," summaries are acceptable. Please identify in the summary the caption, court, docket number, and filing date of each lawsuit if a copy of the complaint initiating the lawsuit is not provided.

The numbers and copies of the requested reports, claims and other information from the sources identified for the 1994 and 1995 Altimas (including 1995.5 models) are contained in Attachments C, D and E. Because reports from owners and other sources are often unspecific and not made with technical precision, it is not usually clear whether such reports relate or could relate to the alleged defect (i.e., aggressive deployment of the front passenger air bag that may result in facial and/or eye injury to the front passenger). Therefore, the reports being provided include alleged facial (including eye) injury where there is an apparent deployment of the passenger air bag in the subject vehicles, whether or not the specific claim of "aggressive deployment" has been made (thus making Nissan's response broader than the request). Related information and reports, whether or not verified, are included for items "a" through "d".

Attachment C contains owner reports concerning 1994-1995 (including 1995.5) Altimas not otherwise contained in Attachment D.

Attachment D contains crash/incident claims and subrogation claims concerning 1994-1995 (including 1995.5) Altimas. Also included within this Attachment are the owner reports and related information and incident investigation (field) reports that are associated with the claims for which a privilege is not asserted.

Attachment E contains summaries of lawsuits concerning 1994-1995 (including 1995.5) Altimas.

There are no fleet complaints or third-party arbitration proceedings concerning the Altima.

Nissan is voluntarily supplying information concerning the 1993.5-1996 Infiniti G20 model as indicated above. Using the same search and reporting method noted above for the Altimas, Nissan has located no reports, claims, lawsuits or other information in categories a) through f) above involving the 1993.5-1996 G20.

3. If Nissan has issued any service or technical bulletins, advisories, or other communications to dealers, zone offices, or field offices pertaining to the alleged defect in the subject vehicles, provide a copy of each such document. If no such documents have been issued, so state. For each document identified:
- a) Provide a complete chronology listing all activities or events including, but not limited to, incidents involving the subject component which led Nissan to believe it needed to undertake the communication.
 - b) Provide a listing (in chronological order) of all information related to any testing through which the need for the communication was identified and/or assessed, even if the testing was being conducted for another purpose. Please provide a copy of each item listed.
 - c) Provide the number of repairs and/or replacements paid for by Nissan that resulted from the communication identified. List your response by repairing dealer.

Nissan has not issued any service or technical bulletins to dealers, zone offices, or field offices pertaining to the alleged defect in the subject vehicles. As a result of NHTSA's opening PE01-008, communications regarding that subject were distributed within Nissan, including field offices, and to dealers. These communications are in Attachment F.

4. Identify and describe all significant modifications or changes made by or on behalf of Nissan in the manufacture, assembly, design, or material composition of any component of the passenger-side air bag system or instrumentation panel (e.g., air bag cover door opening) in the subject vehicles that relate, or could relate to the alleged defect in the model years of the subject vehicles and two subsequent years. The following information must be included for each such modification or change:
- a) The date, or approximate date on which the modification or change was incorporated into production;
 - b) a description of the modification or change;
 - c) the reason for the modification or change;
 - d) the part numbers of the original part and modified part;
 - e) whether the original unmodified component was withdrawn from sale, and if so, when; and whether the modified or changed components can be interchanged with earlier production components; and
 - f) identify any and all changes made to service parts for the subject component, the date such changes were made and the disposition of unused service parts held in inventory.

As clarified by the Agency in a conversation with Mr. Cooper, this question seeks information concerning the components of the passenger side air bag module for the subject vehicles,

465

along with the instrument panel in the vicinity of the passenger side air bag (e.g., air bag cover door opening).

a)-c) No significant modifications or changes have been made in the passenger air bag in the subject vehicles and two subsequent model years that relate to the alleged defect. However, beginning with production on March 3, 1995, the passenger air bag system for the Altima was changed from a dual inflator to a single cylindrical inflator when the technology became available to meet Nissan performance requirements. This reduced component complexity without adversely affecting airbag performance and reduced costs to customers. The decision to change to a single inflator was made in 1993. All modifications or changes to the passenger air bag in the 1994 and early 1995 Altimas are described in the design notes and specification tenders submitted in Confidential Attachment G and the design drawings submitted in Confidential Attachment J in response to Question 5 of this inquiry. All modifications or changes to the passenger air bag in the 1995.5 and later Altimas are described in the design notes and specification tenders submitted in Confidential Attachment H and the design drawings submitted in Confidential Attachment K in response to Question 5 of this inquiry.

- d) Part number information is contained in Attachment GG.
- e) No original unmodified components have been withdrawn from sale. The passenger air bag module for the 1994-early 1995 Altima is not interchangeable with the module used in the 1995.5 and later Altima and vice versa.
- f) The service parts held in Nissan's inventory are the same as the subject components. Nissan may make available an S13-compliant service part. Nissan will supplement this response as additional information becomes available.

Nissan is voluntarily supplying information concerning the 1993.5-1996 Infiniti G20 model as indicated above. No significant modifications or changes have been made in the passenger air bag in the G20 model. All modifications or changes to the passenger air bag in the G20 model are described in the design notes and specification tenders submitted in Confidential Attachment I and the design drawings submitted in Confidential Attachment L in response to Question 5 of this inquiry.

5. Provide Nissan's specifications for the subject components. This should include all specifications for dimensions, tolerances, material, material quality, fold pattern, deployment path, amount of solid propellant or compressed gas stored, peak pressure and temperature of the inflator during tank test, etc. on the subject vehicle and on subsequent passenger-side air bag module designs as installed in MY 1996 and later models of the subject vehicle.

The specifications for the subject components in the 1994-early 1995 Altimas are provided in Confidential Attachments G and J.

The specifications for the subject components in the 1995.5 Altimas are provided in Confidential Attachments H and K. These specifications apply to the 1996-1997 Altima. This model series (designated by Nissan as the U13) was not produced after the 1997 model year.

Nissan is voluntarily supplying information concerning the 1993.5-1996 Infiniti G20 model as indicated above. This specification information for the G20 is contained in Confidential Attachments I and L.

6. Identify the subject component supplier. Please provide a complete street address, contact name and telephone number.

The component supplier for the passenger airbag for the 1994 and 1995 (including 1995.5) Altima is:

Takata Restraint Systems Inc.
629 Green Valley Road Suite 8000
Greensboro, NC 27408
TEL : 336-547-1600

Contact:

Mr. Al Bernat
TK Holdings Inc.
2500 Takata Drive
Auburn Hills, MI 48326
TEL : 248-373-8040

7. Identify and provide a copy of all communication between Nissan and the supplier/manufacturer of the subject component relating to the alleged defect.

Nissan has located no communications between it and the subject component supplier relating to the alleged defect.

8. State the number of all frontal impact tests and other test involving the passenger-side air bag deployment which were conducted during vehicle development and product validation of the subject vehicles, by type of test, description of test, test date, position of occupant or test dummies and position of the front passenger seat. Furnish copies of all reports and other documents (including video showing passenger air bag deployment path) concerning the tests involving the deployment of the passenger-side frontal air bag for the subject vehicle as well as the passenger-side frontal air bag system on MY 1996 Altima vehicles. Component level tests to characterize the deployment path, deployment angle, inflator pressure-time curve, bag unfolding pattern and HIC measurements to the head region shall be provided.

Numerous tests of the passenger air bag were conducted at both the component and vehicle level during development and prior to production release of the Nissan Altima (U13) model series. The types of tests are outlined in the chart contained in Attachment CC at Tab 6. Nissan cannot state the total number of such tests, but each type was repeated many times during development to assure the air bag system met all requirements and specifications.

Copies of available frontal crash test reports applicable to the 1994 and 1995 (including 1995.5) Altima and the 1996 Altima, which describe the requested information, if noted, are contained in Attachments M and O and Confidential Attachments N and P.

Copies of test reports and other documents applicable to the deployment of the passenger air bag in the subject vehicles at the component level are in Confidential Attachments Q and U.

In addition, see response to question 9, below.

Nissan is voluntarily supplying frontal crash test information concerning the 1993.5-1996 Infiniti G20 model as indicated above. Available test information is contained in Confidential Attachments R and S.

Available video of frontal crash tests applicable to the tests on the Altima and G20 models noted above is contained in Confidential Attachment T.)

9. Identify and provide copies of all documents reflecting any study, survey, and investigation pertaining to the alleged defect that is known to Nissan. Include all pertinent documents, regardless of whether they are in interim, draft, or final form.

Documents reflecting studies, surveys and investigations known to Nissan that may pertain to the alleged defect are contained in Attachments V, V-1, V-2, W, X and Y and Confidential Attachments Z and Z-1.

10. Furnish Nissan's assessment of the alleged defect in the subject vehicles, including:

- a) all causal or contributory factors;
- b) failure mode;
- c) root cause of the failures;
- d) its potential effect on occupant safety; and
- e) potential for future occurrences of facial and/or eye injury due to passenger air bag deployment.

NHTSA has defined the "alleged defect" to be the "aggressive deployment of the front passenger air bag that may result in facial and/or eye injury to the front passenger." Nissan has carefully and comprehensively investigated the performance of the 1994 and early 1995 Altima passenger air bag. For all of the reasons that follow, Nissan submits that the subject Altima vehicles do not contain the alleged defect.