

Ford Motor Company

James P. Vondale, Director
Automotive Safety Office
Environmental & Safety Engineering

April 30, 2004

Ms. Kathleen C. DeMeter, Director
Office of Defects Investigation Safety Assurance
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Ms. DeMeter:

Subject: PE04-022:NVS-212pco

The Ford Motor Company (Ford) response to the agency's March 10, 2004 letter concerning reports alleging that power sliding doors do not latch adequately and may open while a vehicle is in motion in model year 1999-2003 Ford Windstar vehicles is attached.

Ford first began an investigation into alleged unintended power sliding door (PSD) opening on 1999 model year Windstar vehicles (first introduction of the PSD in Ford vehicles) based on a March 1999 report containing such an allegation. As will be discussed below, subsequent in-depth investigation and analysis of reported unintended door openings included vehicle inspections, customer interviews and instrumentation of repurchased and customer vehicles that allegedly experienced one or more unintended door openings. The result of this intense investigation effort is Ford's determination that, when properly closed, the PSD cannot and will not open while a vehicle is being driven. Rather, Ford believes the reports involve incidents of the PSD coming to the secondary latch position and not opening beyond that position. These earlier findings are consistent with our findings in a review of information and documents gathered in the preparation of this response.

Ford has been monitoring reports alleging PSD malfunction since the initial investigation began in 1999 and in the process has interviewed over 80 customers who have alleged PSD openings while driving. Based on follow-up customer interviews and vehicle inspections, Ford has found that many of the allegations of door openings while the vehicle is being driven are in fact reports of doors not being properly closed initially and subsequently opening to the secondary latch as a result of vehicle vibrations or driving maneuvers. (If the doors are not closed properly initially, i.e., the door is not fully engaged in the primary latch, the door ajar indicator in the instrument panel illuminates to inform the operator that a door is not completely closed. The PSD system is designed with multiple safeguards to prevent the opening of a properly closed door, even to the secondary latch position, while the vehicle is in motion.) Ford has been unable to verify any alleged unintended PSD openings through vehicle inspections.

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In addition, Ford re-purchased four vehicles that allegedly experienced unintended PSD opening. Throughout the course of extensive inspection and testing, none of the four vehicles experienced reoccurrence of PSD opening while being driven. In addition, Ford installed data recorders on at least five customer vehicles in the field (for periods ranging from a few weeks on one vehicle to as long as five months on another) to monitor PSD function. Again, none of the five vehicles exhibited the condition at any time during observation.

NHTSA included 58 VOQs with this PE that reportedly contain allegations of power sliding doors that did not latch adequately and may open while a vehicle is in motion. Ford believes seven of these are not related to the subject of this investigation or are duplicates. Owner comments in VOQ 881605 suggest the owner is complaining about the front passenger door operation, rather than the power sliding door operation. VOQs 751136, 751517 and 8020406 involve vehicles that are not equipped with the power sliding door option. VOQ 10019382/10021867, 754555/751856 and 10002448/10029154 report duplicate or repeated concerns on three vehicles. Ford also notes that owners reporting VOQs 894880 and 710388 do not mention that the vehicles were in motion when the alleged incident occurred. In addition, there are 18 VOQs that either have incorrect or missing VINs; accordingly Ford cannot determine if these pertain to vehicles that are equipped with power sliding doors.

Ford has provided in this response, copies of several service messages (TSBs and SSMEs) which were issued to describe operation of the system. The messages are intended to be used to assist in diagnosis, as well as a means for service personnel to explain system operation to vehicle owners. Both owners and service technicians were unfamiliar with the PSD operation when the feature was introduced. Ford notes that the number of reports has continued to decrease since model year 2000. This is likely due to increased familiarization with the PSD system by service personnel and vehicle owners.

Previously, the agency investigated similar allegations involving manual sliding doors allegedly coming open in 1995-1997 Mercury Villager vehicles (SQ00-008). Investigation and analysis by Ford determined that those allegations actually involved doors coming out of the primary latch position into the secondary latch position. Ford's findings in the instant matter are similar to our findings in the Villager matter. The agency closed SQ00-008 with the conclusion that the events of the sliding door rear latch popping open to a secondary latch position do not constitute a safety related defect.

Ford has provided a detailed description of the PSD system operation in response to Request 10. Given the complexity of the system, Ford believes that to understand the system operation and safeguards against unintended opening a vehicle review is necessary. Accordingly, Ford invites the agency to review a subject vehicle in Dearborn with Ford engineering personnel who will demonstrate the functioning of the PSD system and describe in detail the system operation and safeguards. The vehicle will have the sheet metal cutaway and trim removed in the areas of the PSD mechanism to allow viewing of the system during operation.

If you have any questions concerning this response, please feel free to contact me.

Sincerely,


James P. Vondale

Attachment

FORD MOTOR COMPANY (FORD) RESPONSE TO PE04-022

Ford's response to this Preliminary Evaluation (PE04-022) information request was prepared pursuant to a diligent search for the information requested. While we have employed our best efforts to provide responsive information, the breadth of the agency's request and the requirement that information be provided on an expedited basis make this a difficult task. We nevertheless have made every effort to provide thorough and accurate information, and we would be pleased to meet with agency personnel to discuss any aspect of this Preliminary Evaluation.

The scope of Ford's investigation conducted to locate responsive information focused on Ford employees most likely to be knowledgeable about the subject matter of this inquiry and on review of Ford files in which responsive information ordinarily would be expected to be found and to which Ford ordinarily would refer, as more fully described in this response. Ford notes that although electronic information was included within the scope of its search, Ford has not attempted to retrieve from computer storage electronic files that were overwritten or deleted. As the agency is aware, such files generally are unavailable to the computer user even if they still exist and are retrievable through expert means. To the extent that the agency's definition of Ford includes suppliers, contractors and affiliated enterprises for which Ford does not exercise day-to-day operational control, we note that information belonging to such entities ordinarily is not in Ford's possession, custody or control. Ford has construed this request as pertaining to vehicles manufactured for sale in the United States, its protectorates and territories.

The agency defined the subject vehicles as all model year 1999-2003 Ford Windstar vehicles and the subject component as the driver-side and passenger-side power sliding door assemblies. Ford notes that power sliding doors are offered as an option on the subject vehicles and not all model year 1999-2003 Ford Windstar vehicles are equipped with power sliding doors. Ford construed this request for information as pertaining to 1999-2003 Ford Windstar vehicles equipped with power sliding doors (PSD) and is providing the requested information on these vehicles.

Answers to your specific questions are set forth below. As requested, after each numeric designation, we have set forth verbatim the request for information, followed by our response. Unless otherwise stated, Ford has undertaken to provide responsive documents dated up to and including March 10, 2004, the date of your inquiry. Ford has searched business units and/or affiliates within the following offices for responsive documents: Environmental and Safety Engineering, Ford Customer Service Division, Marketing and Sales Operations, Purchasing, Quality, Research, Global Core Engineering, Office of the General Counsel, Vehicle Operations and North American Car Product Development.

Request 1

State, by model and model year, the number of subject vehicles Ford has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Ford, state the following;

- a. Vehicle identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Date of manufacture;
- f. Date warranty coverage commenced, and

g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

Answer

Ford records indicate that the approximate total number of Windstar vehicles sold in the United States (the 50 states and the District of Columbia) and its protectorates and territories (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and Virgin Islands) is 907,283.

The number of all Windstar vehicles and the subject vehicles (i.e., those equipped with PSD) sold in the United States by model year is shown below:

Model Year	1999	2000	2001	2002	2003
Windstar (All)	203,986	232,319	179,657	145,052	146,269
Windstar (Power Sliding Doors)	45,216	76,422	36,988	31,768	31,202

The requested data for each subject vehicle is provided electronically in Appendix A (filename: 2004-04-29_Appendix_A) on the enclosed CD.

Request 2

State the number of each of the following, received by Ford, or of which Ford are otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:

- a. Consumer complaints, including those from fleet operators;
- b. Field reports, including dealer field reports;
- c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d. Property damage claims; and
- e. Third-party arbitration proceedings where Ford is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which Ford is or was a defendant or codefendant.

For subparts "a" through "d," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "e" through "f," provide a summary description of the alleged problem and causal and contributing factors and Ford's assessment of the problem, with a summary of the significant underlying facts and evidence. For items f and g, identify

the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Answer

For purposes of identifying reports of incidents potentially involving the alleged defect and any related documents, Ford has gathered "owner reports" and "field reports" maintained by Ford Customer Service Division (FCSD), Intensified Customer Concern Definition (ICCD) data maintained by Ford's Quality Office, fleet reports maintained in a Fleet Test Database, and claim and lawsuit information maintained by Ford's Office of the General Counsel (OGC).

Descriptions of the FCSD owner and field report systems, the ICCD and the Fleet Test Database systems, and the criteria used to search each of these are provided electronically in Appendix B (file: 2004-04-29_Appendix_B) on the enclosed CD.

The following categorizations were used in the review of reports located in each of these searches:

<u>Category</u>	<u>Allegation</u>
A1	PSD allegedly opens beyond secondary latch position with vehicle in motion
A2	PSD allegedly opens beyond secondary latch position (not sure driving or parked)
A3	PSD allegedly opens in motion (not sure primary or secondary latch position)
B1	PSD allegedly came unlatched to secondary position while vehicle in motion
B2	PSD allegedly does not close properly/Pops open/Opens (no mention of vehicle motion)
C1*	Door allegedly opens but door location not specific (front or rear doors)
C2*	Ambiguous door malfunction.

"We are providing electronic copies of these reports as "non-specific allegations" for your review because of the broad scope of the request. Based on our engineering judgment, the information in these reports is insufficient to support a determination that they pertain to the alleged defect.

Owner Reports: The search and review of the Ford Master Owner Relations Systems (MORS) database records, as described in Appendix B, identified the following number of owner reports in accordance with the categories described above:

Category	A1	A2	A3	B1	B2
Reports	14	4	173	23	1,462

Copies of these owner reports and other ambiguous reports are provided in the MORS III portion of the electronic database contained in Appendix C (file: 2004-04-29_Appendix_C) on the enclosed CD. The categorization of each report is identified in the "Category" field. When we were able to identify that responsive (i.e., not ambiguous) duplicate owner reports for an alleged incident were received, each of these duplicate reports is marked accordingly, and the group is counted as one report. In other cases, certain vehicles may have experienced more than one incident and have more than one report associated with their VINs. These reports have been counted separately. Also, owner reports pertaining to the incidents already identified in the VOQs provided with the agency's inquiry letter are not included in the above count but are provided in MORSIII portion of Appendix C and are identified as "Y" in VOQDup field.

Legal Contacts: Ford is providing in Appendix B a description of Legal Contacts and the activity that is responsible for this information, Litigation Prevention. To the extent that responsive (i.e., not ambiguous) owner reports reflect that they are Legal Contacts, Ford has gathered the related files from the Litigation Prevention section. Based on this search, 33 files were identified. Ford was unable to locate four of the files. Copies of the located files will be provided in Appendix D under separate cover with a request for confidentiality.

Ford is not producing documents responsive to this request that are protected from disclosure by attorney-client privilege, work-product doctrine or other applicable immunity. Documents protected from disclosure on these bases, if any, will be described in a privilege log to be submitted approximately two weeks with our response to Request 8.

ICCD Information: A search of the ICCD database as described in Appendix B located one report that alleges door opening while driving (category A3), 307 reports alleging doors not closing properly (category B2), and other reports that are ambiguous as to whether they relate to the alleged defect; these reports are provided in Appendices E1 (file: 2004-04-29_Appendix_E1), E2 (file: 2004-04-29_Appendix_E2) and E3 (file: 2004-04-29_Appendix_E3) respectively, on the enclosed CD.

Fleet Reports: In addition to fleet reports that may be contained in the owner reports or field reports identified in this response, Ford conducted a search of its Fleet Test Database as described in Appendix B for reports that may relate to the alleged defect in the subject vehicles. One fleet report was identified and is provided in Appendix F. Ford notes that this was an early build unit and the doors on it were instrumented for evaluation as this was a new technology introduced in Ford vehicles at that time. It is possible that the intrusion of the hardware may have affected the performance of the door latching operation.

Field Reports: The search and review of the Ford Common Quality Indicator System (CQIS) and Unified Database (UDB) records, as described in Appendix B, identified the following number of field reports, excluding duplicates, in accordance with the categories described above:

CQIS

Category	A1	A3	B1	B2
Reports	18	181	49	4,267

Copies of these field reports and other ambiguous reports are provided in the CQIS portion of the electronic database contained in Appendix C. The categorization of each report is identified in the "Category" field. When we were able to identify that responsive (i.e., not ambiguous) duplicate field reports for an alleged incident were received, each of these duplicate reports is marked accordingly, and the group is counted as one report. In other cases, certain vehicles may have experienced more than one incident and have more than one report associated with their VINs. These reports have been counted separately. In addition, 19 category A1, 59 A3, 15 B1 and 440 B2 CQIS reports are duplicative of owner reports and are provided in Appendix C; the counts are not included in the report count above.

Unified Database: The Unified Database (UDB) was created to facilitate parts availability by tracking part sales and is not intended as a problem reporting system. However, because a small percentage of the records may contain verbatim comments that could potentially relate to the agency's inquiry, we are including these in response to Request 2. A search of UDB, as described in Appendix B, was conducted. The following number of UDB records, excluding duplicates, were identified in accordance with the categories described above:

UDB

Category	A3	B2
Reports	6	317

Copies of these potentially relevant reports and ambiguous reports are provided in the UDB portion of the electronic database contained in Appendix C on the enclosed CD. The categorization of each report is identified in the "Category" field. When we were able to identify that responsive (i.e., not ambiguous) duplicate UDB reports for an alleged incident were received, each of these duplicate reports has been marked accordingly, and the group is counted as one report. In other cases, certain vehicles may have experienced more than one incident and have more than one report associated with their VINs. These reports have been counted separately. In addition, three category A3 and 237 B2 UDB records are duplicative of warranty reports and are provided in Appendix C; the counts are not reflected in the report count above.

VOQ Data: NHTSA included 58 VOQs with this PE reportedly containing allegations of power sliding door that did not latch adequately and may open while the vehicle is in motion. Ford believes seven of these are not related to the subject of this investigation or are duplicates. Owner comments in VOQ# 881605, suggest the owner is complaining about front passenger door operation, rather than the power sliding door operation. VOQs 751136, 751517 and 8020406 involve vehicles that are not equipped with the power sliding door option. VOQ's 10019382/10021867, 754555/751856 and 10002448/10029154 report duplicate or repeated concerns on three vehicles. Ford also notes that owners reporting VOQs 884880 and 710368 do not mention that the vehicles were in motion when the alleged incident occurred. In addition, there are 18 VOQs that either have incorrect or missing VINs; accordingly Ford cannot determine whether these pertain to vehicles that are equipped with power sliding doors.

Ford made inquiries of its MORS database for customer contacts and its CQIS database for field reports regarding the vehicles identified in the VOQs. Ford notes that in some instances, where a VOQ does not contain a VIN, or the owner's last name and zip code, it is not possible to query the databases for owner and field reports specifically corresponding to the VOQs. Any reports located on a vehicle identified in the VOQs related to the alleged defect are included in the MORS and CQIS portions of the electronic database provided in Appendix C and have been identified by a "Y" in the "VOQDup" field.

Crash/Injury Incident Claims: For purposes of identifying alleged accidents or injuries potentially related to the alleged defect, Ford has reviewed responsive (i.e., not ambiguous) owner and field reports, lawsuits and claims, and warranty claims. Based on a reasonable and diligent search, Ford located two owner (MORS) reports [VINS: 2FMZA5346YE [REDACTED] and 2FMZA5347YE [REDACTED] alleging minor injuries that may be related to the alleged defect. Ford also located two owner reports [VINS: 2FMZA53401E [REDACTED] and 2FMZA5345XE [REDACTED] alleging minor accidents and three owner reports [VINS: 2FMZA5247YBA24416, 2FMZA5246XE [REDACTED] and 2FMZA58492E [REDACTED] alleging property damages that may be related to the alleged defect.

Ford located one lawsuit [VIN: 2FMZA5142YE [REDACTED] alleging minor injury caused by a power sliding door malfunction. The owner and field reports and warranty claims referenced above are included in the MORS, CQIS, and Analytical Warranty System (AWS) portions of the electronic database provided in Appendix C. Lawsuit and claim information is provided as described below. Ford also located one lawsuit [VIN: 2FMZA5246XE [REDACTED] alleging property damage that may be related to the alleged defect.

Claims, Lawsuits, and Arbitrations: For purposes of identifying incidents potentially related to the alleged defect, Ford has gathered claim and lawsuit information maintained by Ford's Office of the General Counsel (OGC). Ford's OGC is responsible for handling product liability lawsuits, claims, and consumer breach of warranty lawsuits and arbitrations against the Company.

Based on a reasonable and diligent search, Ford located eleven lawsuits and one claim or consumer breach of warranty lawsuit, and no arbitrations that allege power sliding doors opening while driving in the subject vehicles. Additionally, Ford located 46 lawsuits and two claims or consumer breach of warranty lawsuits that allege that a power sliding door did not close properly or came open, without an allegation that the vehicle was in motion. We are providing the requested detailed information, where available, on the responsive lawsuits and claims in our Log of Lawsuits and Claims, as Appendix G1 (file:2004-04-29_Appendix_G1) on the enclosed CD. To the extent available, electronic copies of complaints, first notices, or MORs reports relating to matters shown on the Log are provided in Appendix G2 (file: 2004-04-29_Appendix_G2) on the enclosed CD. With regard to these lawsuits and claims, Ford has not undertaken to contact outside law firms to obtain additional documentation. Ford notes that it was unable to locate one product claim file and, therefore, is unable to determine if the case is related to the alleged defect.

Ford is not producing documents responsive to this request that are protected from disclosure by attorney-client privilege, work-product doctrine or other applicable immunity. Documents protected from disclosure on these bases, if any, will be described in a privilege log to be submitted in the near future.

Request 3

Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request 2, state the following information:

- a. Ford's file number or other identifier used;
- b. The category of the item, as identified in Request 2 (i.e., consumer complaint, field report, etc.);
- c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
- d. Vehicle's VIN;
- e. Vehicle's make, model and model year;
- f. Vehicle's mileage at time of incident;
- g. Incident date;
- h. Report or claim date;
- i. Whether a crash is alleged;
- j. Whether property damage is alleged;
- k. Number of alleged injuries, if any; and
- l. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA." See Enclosure 1, Data Collection Disc, for a preformatted table that provides further details regarding this submission.

Answer

Ford is providing owner and field reports in the electronic database contained in Appendix C on the enclosed CD in response to Request 2. To the extent that the information requested in Request 3 is available, it is provided in that database.

Request 4

Produce copies of all documents related to each item within the scope of Request 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Ford used for organizing the documents.

Answer

Ford is providing electronic copies of responsive, as well as ambiguous owner and field reports, in the database contained in Appendix C on the enclosed CD in response to Request 2. The categorization of each report, as to whether the report appears to be responsive or ambiguous, is identified in the "Category" field. These reports are provided under separate sections for owner (MORSIII) reports and field (CQIS) reports in the database.

Request 5

State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Ford to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following reformation:

- a. Ford's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

Answer

In responding to this information request, Ford electronically searched its Analytical Warranty System (AWS) for all claims meeting the criteria described in Appendix B. The resulting claims were then reviewed individually for allegations that may relate to the alleged defect. This search and review of the Ford AWS database records identified the following number of non-duplicative warranty claims in accordance with the categories described above:

Category	A1	A3	B1	B2
Reports	17	362	70	14,727

Electronic copies of these claims are provided in the AWS portion of the electronic database contained in Appendix C. The categorization of each report is identified in the "Category" field. When we were able to identify that duplicate claims for an alleged incident were received, each of these duplicate claims is marked accordingly, and the group is counted as one report. In other cases, certain vehicles may have experienced more than one incident and have more than one claim associated with their VINs. These claims have been counted separately.

The requested customer concern codes and the warranty condition codes are provided in Appendix B.

Requests for "goodwill, field, or zone adjustments" received by Ford to date that relate to the alleged defect in the subject vehicles that were not honored, if any, would be indicated in the MORS reports identified above in response to Request 2. Requests for goodwill that were honored, if any, are contained in the warranty data provided.

Request 6

Describe in detail the search criteria used by Ford to identify the claims identified in response to Request 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Ford on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that Ford offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

Answer

The criteria used for searching Ford's Analytical Warranty System (AWS) are described in Appendix B. All claims coded under the selected part numbers were included in this search regardless of labor operations or problem codes. The resulting claims were then keyword searched and reviewed individually for allegations that may relate to the alleged defect.

The standard new vehicle warranty coverage for 1999-2003 model year Ford Windstar vehicles is 3 years or 36,000 miles, whichever occurs first. A list of Extended Service Plans (ESP) is provided in Appendix H (file: 2004-04-29_Appendix_H) on the enclosed CD along with time-in-service and mileage coverage by plan. This appendix also includes the count of subject vehicles that are covered by each ESP.

Request 7

Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Ford has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that Ford is planning to issue within the next 120 days.

Answer

For purposes of identifying communications to dealers, zone office, or field offices pertaining, at least in part, to the alleged defect in the subject vehicles, Ford has reviewed the following FCSD databases and files: The On-Line Automotive Service Information System (OASIS) containing Technical Service Bulletins (TSBs) and Special Service Messages (SSMs); Internal Service Messages (ISMs) contained in the CQIS; and, Field Review Committee (FRC) files. We assume this request does not seek information related to electronic communications between Ford and its dealers regarding the order, delivery, or payment for replacement parts, so we have not included these kinds of information in our answer.

A description of Ford's OASIS messages, Internal Service Messages, and the Field Review Committee files and the search criteria used are provided in Appendix B.

OASIS Messages: Ford did not identify any SSMs and TSBs that relate to unintended PSD opening while driving. However, Ford has identified six SSMs and six TSBs that may relate to improper PSD latching in the subject vehicles and is providing copies of them in Appendix I (file: 2004-04-29_Appendix_I) on the enclosed CD.

Internal Service Messages: Ford did not identify any ISMs that relate to unintended PSD opening while driving. However, Ford has identified five ISMs that may relate to improper PSD and is providing copies of them in Appendix I on the enclosed CD.

Field Review Committee: Ford did not identify any field service action communications that relate to the unintended PSD opening while driving.

Request 8

Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Ford. For each such action, provide the following information:

- a. Action title or identifier,
- b. The actual or planned start date;
- c. The actual or expected end date;
- d. Brief summary of the subject and objective of the action;
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
- f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

Answer

On April 13, 2004 the agency contacted ASO personnel and inquired if the information responsive to Request 8 could be provided in electronic format to aid the agency's review. ASO personnel informed the agency on April 21, 2004 that the earliest this request could be accommodated would be approximately two weeks after the April 29 due date for the response. The agency agreed with that timing. Therefore, Ford anticipates that all the information responsive to Request 8 will be provided separately in electronic format in approximately two weeks.

Ford has developed processes for identifying, investigating, and assessing potential safety or quality concerns in our products. In responding to this request, Ford has conducted a reasonably diligent search of those organizations that normally would be involved in our safety or quality investigation processes related to the alleged defect. Reports on subject vehicles alleging PSD opening while driving were investigated through Ford's Critical Concern Review Group [CCRG] process. Ford will produce documents related to the CCRG investigation and assessment of this condition in response to this request. Documents reflecting the CCRG activities for which Ford will request confidential treatment on the grounds that such items contain commercially sensitive business information and/or trade secrets will be submitted under separate cover to the agency's Office of Chief Counsel in Appendix J. No other such actions are being conducted or planned to be conducted at this time.

Further, Ford will voluntarily submit additional documents that, while not directly related to Ford's CCRG investigation process, may assist in the agency's analysis of this matter. Copies of documents reflecting such activities that are not customarily disclosed outside of Ford will be submitted in approximately two weeks under separate cover with a request for confidentiality to the agency's Office of Chief Counsel in Appendix K.

Documents for which Ford is not requesting confidentiality will be submitted in approximately two weeks in Appendix L.

Ford is not producing documents responsive to this request that are protected from disclosure by attorney-client privilege, work-product doctrine or other applicable immunity. Documents protected from disclosure on these bases, if any, will be described in a privilege log to be submitted in Appendix M in approximately two weeks.

Request 9

Describe all modifications or changes made by, or on behalf of, Ford in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:

- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
- b. A detailed description of the modification or change;
- c. The reason(s) for the modification or change;

- d. The part numbers (service and engineering) of the original component;
- e. The part number (service and engineering) of the modified component;
- f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
- g. When the modified component was made available as a service component; and
- h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that Ford is aware of which may be incorporated into vehicle production within the next 120 days.

Answer

A table of the requested changes is provided electronically as Appendix N (file: 2004-04-29_Appendix_N) on the enclosed CD. Ford notes that these changes were not specifically made to address unintended PSD opening while driving. Rather, the changes are results of on-going product development related to the PSD system.

Request 10

Describe the operational sequence for door locking/unlocking and power-sliding door operations for each power-sliding door including for the following:

- a. Available remote and manual activation modes (inside and outside of vehicle);
- b. Available automatic locking or unlocking modes;
- c. With engine "off" and engine in "running" conditions;
- d. With vehicle stationary (Park) and in motion (Drive/Out of Park) conditions;
- e. A description of the components involved (latches, locks, electrical sensors, control unit etc.) in the above door operations including a diagram showing the number and location of each of these components;
- f. Warning/audible and lockout devices;
- g. The relationships/sequences between the mechanical and the electrical components; and
- h. A fault flow diagram outlining the possible steps needed for an "unintended door reversal/opening" of power-sliding door when the vehicle is in motion (including the possibility from misalignments in the primary latch and electrical door position contacts).

Answer

A description of the system operation is provided in Appendix O (file: 2004-04-29_Appendix_O) under separate cover with a request for confidentiality to the agency's Office of Chief Counsel. Ford will be providing a detailed fault tree diagram on page bates numbered 15467 in Appendix J as part of the confidential submission in response to Request 8.

Request 11

State the number of each of the following that Ford has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):

- a. Subject component; and
- b. Any kits that have been released, or developed, by Ford for use in service repairs to the subject component/assembly.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which Ford is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

Answer

As the agency is aware, Ford service parts are sold in the U.S. to authorized Ford and Lincoln-Mercury dealers. Ford has no means by which to determine how many of the parts were actually installed on vehicles, the vehicle model on which a particular part was installed, or the reason that the installation was made.

Ford is providing in electronic form in Appendix P (file: 2004-04-29_Appendix_P) on the enclosed CD the total number of Ford service replacement parts for power sliding doors by part number (both service and engineering) and calendar month and year of sale where available. A list of models and model years for which these parts are released and supplier names and contacts are also provided in this appendix.

Request 12

Furnish Ford's assessment of the alleged defect in the subject vehicle, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports included with the inquiry.

Answer

Ford first began an investigation into alleged unintended power sliding door opening on 1999 model year Windstar vehicles (first introduction of the PSD in Ford vehicles) based on a March 1999 report containing such an allegation. As will be discussed below, subsequent in-depth investigation and analysis of reported unintended door openings included vehicle inspections, customer interviews and instrumentation of repurchased and customer vehicles that allegedly experienced one or more unintended door openings. The result of this intense investigation effort is Ford's determination that, when properly closed, the PSD cannot and will not open while a vehicle is being driven. Rather, Ford believes those reports to involve incidents of the PSD coming to secondary/partial latch position and not opening beyond the secondary latch. These earlier findings are consistent with our findings in a review of information and documents gathered in the preparation of this response.

As described in Appendix O provided in response to Request 10, there are five methods for opening the PSD: three remote activation methods (keyfob, overhead console switch and B-pillar switches) and two hands-on methods (pulling the door handle while fully closed or partially opened). The hands-on methods require activation of the door handle or 3-6 inches movement of the door. All of the opening methods require specific conditions for the system to interpret the request as a valid command to open the PSD. These conditions include; 1) key in ignition off/accessories position or key in ignition on/start position; 2) gear selector in park; 3) speed sensor (redundant check) indicating vehicle speed less than six mph; and, 4) door unlocked before the unlatch actuator can be activated. As stated previously, all Windstar vehicles are equipped with an autolock system, that locks all properly closed doors once the gear selector is shifted out of park. If the doors are not closed properly, i.e., the door is not fully engaged in the primary latch, the door ajar indicator in the instrument panel illuminates to inform the operator that a door is not completely closed. The PSD system is designed with multiple safeguards to prevent the opening of a properly closed door while the vehicle is in motion.

As discussed earlier, Ford has been monitoring reports alleging PSD malfunction since early 1999 and in the process interviewed over 80 customers who alleged PSD openings while driving. Based on follow-up customer interviews and vehicle inspections, Ford has found that many of the allegations of the door opening while driving were in fact reports of doors not being properly closed initially and subsequently opening to the secondary latch as a result of vehicle vibrations or driving maneuvers. Ford was unable to verify any alleged unintended PSD openings through vehicle inspections. Following are some examples of incidents where a customer alleged doors opening while driving. These reports are provided in Appendix C on the enclosed CD.

Source	VIN	Customer Allegation
CQIS	2FMZA5248Y [REDACTED]	"DOOR FULLY OPENED WHILE DRIVING AT HIGHWAY SPEEDS"
MORS	2FMDA5147X [REDACTED]	"PASSENGER DOOR OPENS WHILE DRIVING"
CQIS	2FMDA5245X [REDACTED]	"WHILE DRIVING PASS PSD WILL OPEN UP"
CQIS	2FMDA53491 [REDACTED]	"PSD HAS OPENED WHILE DRIVING"
CQIS	2FMZA53412 [REDACTED]	"PASS PSD WILL OPEN WHILE DRIVING"
CQIS	2FMZA57441 [REDACTED]	"THE PSD PASS. WILL OPEN WHILE DRIVING"
CQIS	2FMZA574X1 [REDACTED]	"POWER SLIDING DOOR HAS OPENED WHILE DRIVING"
AWS	2FMZA57471 [REDACTED]	"INTERMITTENTLY COMES OPEN ON ACEL"

In each of these cases, the follow-up interview or inspection found that the PSD did not open. Rather it remained latched in the secondary latch position. Ford notes that in MORS report (VIN: 2FMDA5147XB [REDACTED]) identified above, the owner alleged that the incident happened multiple times, but based on a follow-up interview and a vehicle inspection, Ford determined the incidents reported by the customer actually involved a secondary latch condition - not door opening while driving condition.

Previously, the agency investigated (SQ00-008) similar allegations involving manual sliding doors allegedly coming open in 1995-1997 Mercury Villager vehicles. Similar investigation and

analysis by Ford determined that those allegations actually involved doors coming out of the primary latch position into the secondary latch position. Ford's findings in the instant matter are similar to the findings in the Villager matter. The agency closed SQ00-008 with the conclusion that the events of the sliding door rear latch popping open to a secondary latch position do not constitute a safety related defect.

In addition to the efforts described above, Ford re-purchased four vehicles that allegedly experienced unintended PSD opening. Throughout the course of extensive inspection and testing, none of the four vehicles experienced recurrence of PSD opening while being driven. In addition, Ford installed data recorders on at least five customer vehicles in the field (for periods ranging from a few weeks on one vehicle to as long as five months on another) to monitor PSD function. Again, none of the five vehicles exhibited the condition at any time during observation.

As discussed in detail in Appendix O in response to Request 10, the PSD incorporates several features to prevent unintended operation. As elaborated in the fault tree diagram provided in Appendix J (bates No.15467) in response to Request 8, several simultaneous malfunctions are required to send an erroneous signal to the PSD module to power open the door while a vehicle is in motion. Three potential scenarios for door opening are analyzed in detail in the fault tree - each scenario requires simultaneous failure of multiple components to circumvent features intended to prevent unintended opening, including: 1) ignition in the "off" position or transmission in the "park" position; 2) vehicle speed less than six mph; and 3) an auto-lock malfunction. Ford believes that such a scenario is extremely unlikely. Further, in the unlikely event these multiple malfunctions did occur, post-incident vehicle inspection would identify failed parts and/or trouble codes stored in module(s). As previously noted, extensive analysis and testing of vehicles that allegedly exhibited unintended door openings did not identify any failed components that would have contributed to the alleged incident or detect any fault codes.

NHTSA included 58 VOQs with this PE reportedly containing allegations of power sliding doors that did not latch adequately and may open while the vehicle is in motion. Ford believes seven of these are not related to the subject of this investigation or are duplicates. Owner comments in VOQ 881605 suggest the owner is complaining about the front passenger door operation, rather than the power sliding door operation. VOQs 751136, 751517 and 8020406 involve vehicles that are not equipped with the power sliding door option. And VOQ's 10019382/10021867, 754555/751856 and 10002448/10029154 report duplicate or repeated concerns on three vehicles. Ford also notes that owners reporting VOQs 894880 and 710368 do not mention that the vehicles were in motion when the alleged incident occurred. In addition, there are 18 VOQs that either have incorrect or missing VINs; accordingly Ford cannot determine if these pertain to vehicles that are equipped with power sliding door.

During data collection in response to this inquiry, Ford identified 462 (category A1/A2/A3/B1) non-duplicative owner and field reports that allege power sliding door opening while driving, with most not specific enough to determine if the door fully opened or just came off the primary latch, but remained secure in the secondary latch. Based on Ford's extensive customer surveys and vehicle inspections, we believe that virtually all of these allegations do not relate to unintended opening of the PSD while the vehicles are in motion.

Ford has provided in this response, copies of several service messages (TSBs and SSMs) which were issued to describe operation of the system. The messages are intended to be used to assist in diagnosis, as well as a means for service personnel to explain the system operation

to vehicle owners. Both owners and service technicians were unfamiliar with the PSD operation when it was introduced. Ford notes that the number of reports has continued to decrease since model year 2000. This is likely due to increased familiarization with the PSD system by service personnel and vehicle owners.

Ford has provided a detailed description of the PSD system operation in response to Request 10. Given the complexity of the system, Ford believes that to understand the system operation and safeguards against unintended opening a vehicle review is necessary. Accordingly, Ford invites the agency to review a subject vehicle in Dearborn with Ford engineering personnel who will demonstrate the functioning of the PSD system and describe in detail the system operation and safeguards. The vehicle will have the sheet metal cutaway and trim removed in the areas of the PSD mechanism to allow viewing of the system during operation.

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