Ford Motor Company

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

August 26, 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: RQ04-003:NVS-213bby

Attached is the Ford Motor Company (Ford) response to the agency's June 21, 2004 letter concerning reports of alleged right front brake line failure as a result of corrosion and/or abrasion from contact with the vehicle's dash panel exterior insulator blanket in 1995-1996 model year Ford Windstar vehicles.

Ford thoroughly analyzed ten years of field data related to the subject vehicles and has identified no defect trend in the non-recalled vehicles. Vehicles not included in the recall population have been in service an average of nine years and have a very low rate of allegedly related owner and field reports – less than 0.0095 allegations of leakage per 1,000 vehicles per year in service. We are confident that the scope of Safety Recall 02S36 is correct.

As the agency is aware, Ford initiated Safety Recall 02S36 after receiving and investigating a limited number of field reports concerning right front brake line corrosion on Ford Windstar vehicles in Canada. At the time of the recall, the vehicles had been in service for an average of seven years. Extensive investigation that led to the decision to conduct Safety Recall 02S36 found that the reported premature corrosion initially identified on vehicles operated in Canada resulted from a combination of factors. First, the right front brake line on some vehicles was mis-assembled such that there was contact between it and the dash panel insulator blanket. Second, the contact of the brake line and the dash panel abraded the corrosion protection from the brake line. Continued exposure to road salt such as occurs in "salt belt" states could ultimately cause the brake line to corrode and possibly leak. Ford's analysis determined that this condition presented itself in the form of premature corrosion in highly corrosive environments, such as Nova Scotia, Canada. Based on incidents of premature corrosion in certain areas of Canada, Ford anticipated that this condition could present itself in similarly corrosive environments within the United States. Accordingly, Ford conducted Safety Recall 02S36 in both Canada and the United States.

Ford believes the implementation of Safety Recall 02S36 in the U.S. prior to a notable rise in the quantity of reports of the "alleged defect" kept the number of incidents low. This is due to the inspection and repair of vehicles with mis-assembled front right brake lines prior to the symptoms of the alleged defect. Ford's proactive approach and repair of the vehicles in the recall population effectively prevented a high incident rate.

In addition, Ford continues to believe that the scope of Safety Recall 02S36 was correct due to the extremely low report rate and accident rate of subject vehicles outside the recall population.

The extremely low report rate (0.0115 R/1000/year of service) of all responsive incidents and the almost negligible accident rate (0.0008/1000 vehicles/year of service) with only one alleged minor injury on the subject non-recalled vehicles that have been in service eight to ten years is a compelling indicator that there is not a pattern of a front right brake line defect of any kind in the non-recalled subject vehicles that would pose an unreasonable risk to motor vehicle safety.

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

Sincerely,

R. A. Mair

James P. Vondale

Attachment

Attachment
August 26, 2004

FORD MOTOR COMPANY (FORD) RESPONSE TO RQ04-003

Ford's response to this Recall Query 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 Recall Query.

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.

In a July 13, 2004 telephone conversation Mr. Bruce York, of the agency, clarified the subject component of the inquiry to be the right front brake line, the same line that was the subject of Ford Safety Recall 02S36.

In addition, in a July 21, 2004 telephone conversation Mr. York defined the word search criteria to be used by Ford in searching for potentially relevant reports in Ford's databases. The criteria are intended to gather reports that would most likely contain allegations of right front brake line failure due to the "alleged defect."

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 June 21, 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, North American Car Product Development, and North American Truck Product Development.

Request 1

State, by model, model year, and brake system (ABS or non-ABS) 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. Brake system;
e. Model year;
f. Date of manufacture;
g. Date warranty coverage commenced;
h. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease); and
i. Inclusion in 02V-101.

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

Answer

Ford records indicate that the approximate total number of subject 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 553,213. The totals of all vehicles by model year and inclusion in 02V-101 (Ford Safety Recall 02S36) are shown in the table below. Ford records indicate all 1995 and 1996 model year Windstar vehicles were equipped with four-wheel anti-lock brake system (ABS) brakes.

	MY 1995	MY 1996	Total
Total Windstar Production	321,612	231,601	553,213
02S36 Recall Population	186,716	93,241	279,957

The requested detailed information is provided electronically in Appendix A (file: 2004-08-26_Appendix_A) on the enclosed CD.

Request 2

State, by model and model year, the number of each of the following, received by Ford, or of which Ford is 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. Third-party arbitration proceedings where Ford is or was a party to the arbitration; and,
e. Lawsuits, both pending and closed, in which Ford is or was a defendant or codefendant

For subparts "a" through "e," 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 "c" through "e," 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 "d" and "e", 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: 2004-08-26_Appendix_B) on the enclosed CD.

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

Category	Allegation
A1	Alleged Right Front Line Leak Due To Abrasion
A2	Alleged Right Front Line Leak Due To Corrosion
B1	Right Front Line Replaced - Unknown If Leaking *
B2	Unidentified Line Leak *
B3	Alleged Brake (Red) Light, Ambiguous Brake Issue, Pedal To Floor *
B4	Alleged Right Front Line Leak - Unknown If Abrasion Or Corrosion *

* 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.

Ford is providing the requested reports in two separate databases as described in the table below:

Description	Appendix	File
Recalled Vehicles	C1	2004-08-26_Appendix_C1
Non-Recalled Vehicles	C2	2004-08-26_Appendix_C2

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 non-duplicative owner reports in accordance with the categories described above:

	A1	A2
Recalled Vehicles	4	45

Non-Recalled Vehicles	3	5

Copies of the owner reports referenced above and ambiguous owner reports are provided in the MORS II and MORS III portions of the electronic database contained in Appendices C1 and C2 on the enclosed CD as described in the table above. 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 VIN. These reports have been counted separately. In addition, the counts for the Non-Recalled Vehicles do not contain one category A1 MORS III report that is duplicative of one VOQ report and four category A2 MORS III reports that are duplicative of four VOQ reports; these reports are provided in Appendix C2.

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 indicate that they are Legal Contacts, Ford has gathered the related files from the Litigation Prevention section. Based on this search, three files were located and are provided in Appendix D.

ICCD Information: A search of the ICCD database as described in Appendix B located no reports that may relate to the alleged defect.

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; no related reports were identified.

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

	A1	A2
Recalled Vehicles	1	17
Non-Recalled Vehicles	0	2

Copies of the field reports referenced above and ambiguous field reports are provided in the CQIS portion of the electronic database contained in Appendices C1and C2 on the enclosed CD as described in the table above. 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 VIN. These reports have been counted separately.

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. Copies of potentially relevant reports and ambiguous

reports are provided in the UDB portion of the electronic database contained in Appendices C1 and C2 on the enclosed CD as described in the table above. The search and review of the UDB, as described in Appendix B, identified the following number of reports, excluding duplicates, in accordance with the categories described above:

	A1	A2
Recalled Vehicles	1	9
Non-Recalled Vehicles	0	9

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 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, the counts for the Non-Recalled Vehicles do not contain one category A1 UDB report and one category A2 UDB report that are duplicative of two VOQs; these reports are provided in Appendix C2.

VOQ Data: This information request had an attachment that included 15 Vehicle Owner's Questionnaires (VOQs). 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 the VOQ does not contain the 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 C2 and have been identified by a "Y" in the "VOQ Dup" field.

In the case of right front brake line leakage due to abrasion or corrosion, the compromise to the line is typically a pinhole leak. Tests conducted for this type of condition have demonstrated that the driver will continue to have effective braking for several stops before braking power on the compromised circuit begins to diminish and that the left front/right rear brakes will remain fully functional and will continue to provide enough stopping power to satisfy the typical stopping requirements of normal driving. The customer descriptions of a "total loss of brakes" or similar allegation in ten of the 15 VOQ's are not consistent with the symptoms of the alleged failure. Of the 15 VOQ reports, only one (ODI number 88149) notes the expected customer observations of the change in brake pedal feel and extended stopping distance which the driver would likely experience if the subject part experienced the alleged failure. The customer also reported that he was able to contact the dealer for repair of the vehicle without any further incident related to the alleged failure. The performance of a vehicle with a compromised brake line will be discussed further in the response to Request 12.

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.

Recall Population:
Ford notes that all the following incidents on the Recalled Vehicle population occurred prior to any repair actions under Safety Recall 02S36, and that no incidents have been located that appear to relate to a subsequent alleged defect in a vehicle that had been previously repaired under Safety Recall 02S36.

Based on a reasonable and diligent search of reports from subject vehicles included in Safety Recall 02S36, Ford identified three incidents that allege an accident related to the alleged defect, two of which were filed after the Safety Recall notification. The first incident involved two claims related to the alleged accident involving vehicle VIN: 2FMDA5145TB[redacted] The claims include two alleged injuries to the vehicle's occupants and one injury from the driver of the vehicle allegedly struck by the subject vehicle. The second incident involves one lawsuit, alleging one injury, from a vehicle allegedly struck by a subject vehicle [VIN: 2FMDA5142TB[redacted]. The third incident was identified in an owner (MORS) report [VIN: 2FMDA514XTB[redacted] alleging the alleged defect caused the owner to hit another car parked in his driveway. The owner did not file an insurance claim because he felt it was not necessary (the report only mentions damage to front bumper fascia). The accident reportedly occurred "a few months" prior to the owner receiving the Safety Recall notification. No injuries were reported.

Ford has located three owner (MORS) reports [VINs: 2FMDA5145SB[redacted] 2FMDA5146SB[redacted] and 2FMDA5147TB[redacted] and one warranty (AWS) report [VIN: 2FMDA5144TB[redacted] alleging a "fire" due to the alleged defect. All of these vehicles were repaired and returned to service. When reported, the repair costs ranged from $267.98 to $500. Ford believes these incidents may have been related to smoke and not fire, due to the relatively minor repair costs. The warranty claim and owner reports are included in the AWS and MORS portions of the electronic database contained in Appendix C1 on the enclosed CD as described in the table above.

Non-recall Population:
Based on a reasonable and diligent search of reports regarding subject vehicles not included in Safety Recall 02S36, Ford located one owner (MORS) report [VIN: 2FMDA514XTB[redacted] that alleged a minor accident, with no injuries, when the vehicle was unable to stop in time after the driver was cut-off by a neighbor while driving in a subdivision and one VOQ/MORS report [ODI: 10039504, VIN: 2FMDA5143TB[redacted] alleging a minor accident with no injuries. No one in the subject vehicle was injured, however, in the litigation prevention file regarding this incident, the driver of the other vehicle alleged a minor injury.

Ford has also located one owner (MORS) report [VIN: 2FMDA5145TB[redacted] requesting reimbursement for $126.90 due to an alleged "fire" purportedly caused by the alleged defect. Based on the low cost of the repair required, Ford believes the incident may have been related to smoke and not fire. It is very likely that the repair involved only replacement of the brake line. The owner report is included in the MORS portion of the electronic database contained in Appendix C2 on the enclosed CD as described in the table above. The litigation prevention file is provided in Appendix D.

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 OGC. Ford's OGC is responsible for handling product liability lawsuits, claims, and consumer breach of warranty lawsuits and arbitrations against the Company.

Recall Population:
Based on a reasonable and diligent search of the subject vehicles included in Safety Recall 02S36, Ford has located two responsive claims regarding the same incident, and one responsive lawsuit. Ford has also located other lawsuits, claims or consumer breach of warranty lawsuits that are ambiguous as to whether they meet the alleged defect criteria. We have included these lawsuits and claims as "non-specific allegations" for your review because of

the broad scope of the request. Based on our engineering judgment, the information in these lawsuits and claims is insufficient to support a determination that they pertain to the alleged defect.

We are providing the requested detailed information, where available, on the responsive and ambiguous lawsuits and claims in our Log of Lawsuits and Claims, as Appendix E (file: 2004-08-26_Appendix_E) on the enclosed CD. To the extent available, copies of non-privileged complaints, first notices, or MORS reports relating to matters shown on the Log are provided in Appendix F. With regard to these lawsuits and claims, Ford has not undertaken to contact outside law firms to obtain additional documentation.

Non-recall Population:
Based on a reasonable and diligent search of the subject vehicles not included in Safety Recall 02S36, Ford has located no responsive claims or lawsuits. Ford has located other lawsuits, claims or consumer breach of warranty lawsuits that are ambiguous as to whether they meet the alleged defect criteria. We have included these lawsuits and claims as "non-specific allegations" for your review in our Log of Lawsuits and Claims, as Appendix E on the enclosed CD, because of the broad scope of the request. Based on our engineering judgment, the information in these lawsuits and claims is insufficient to support a determination that they pertain to the alleged defect.

Request 3

Separately for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:

a. Ford's file number or other identifier used;
b. The category of the item, as identified in Request No. 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. Type of failure (abrasion, corrosion, other, unknown);
j. The general location of the failure;
k. Whether a crash is alleged;
l. Whether property damage is alleged;
m. Number of alleged injuries, if any;
n. Number of alleged fatalities, if any;
o. Complaint summary; and,
p. Consumer comments, 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 pre-formatted table designed for this submission.

Answer

Ford is providing owner and field reports in the electronic database contained in Appendices C1 and C2 on the enclosed CD in response to Request 2. To the extent information requested in Request 3 is available for the owner and field reports, it is provided in the database. As stated in the response to Request 2, Ford is providing the requested detailed information, where available, on the responsive and ambiguous lawsuits and claims in our Log of Lawsuits and Claims, as Appendix E.

Request 4

> Produce copies of all documents related to each item within the scope of Request No. 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 Appendices C1 and C2 on the enclosed CD in response to Request 2. To the extent available, copies of complaints, first notices, or MORS reports relating to matters shown on the Log of Lawsuits and Claims are provided in Appendix F.

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 and peer 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, customer satisfaction campaign, or recall. This should include all repairs that were completed under 02V-101 (Ford 02S36) with the repair codes that were used in completing the recall.
>
> Separately, for each such claim, state the following information:
> 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 designed for 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 using the process described in Appendix B. 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:

	A1	A2
Recalled Vehicles	2	54
Non-Recalled Vehicles	0	5

Electronic copies of these claims and ambiguous claims are provided in the AWS portion of the electronic database contained in Appendices C1 and C2.

The categorization of each report in Appendices C1 and C2 are 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 VIN. These claims have been counted separately. In addition, the counts of the Recalled Vehicles do not contain one category A2 AWS claim that is duplicative of one MORS III report; this claim is provided in Appendix C1. Ford assumes that providing the warranty claims in the electronic database format meets the requirements of this request, because the agency can review or order the claims as desired.

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 included 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.

As part of this information request, the agency specifically requested information regarding repairs made in accordance with Safety Recall 02S36 on the subject vehicles. Ford searched its AWS database for these claims utilizing the labor operation codes to identify repairs under 02S36. The labor operation codes are described in Appendix B. Ford has not attempted to categorize these claims beyond the categories shown below.

Category	Description
IN	Inspection Of Subject Component
IR	Inspection And Repositioning Of Subject Component
RE	Replacement Of Subject Component And Bleeding Of Brake System

This categorization of the Ford AWS database records identified the following number of non-duplicative warranty claims in accordance with the categories described above:

IN	77,910
IR	52,312
RE	47,814
Total	178,036

Ford reviewed a sample of the RE claims and found a large portion of the technician comments were insufficient to determine whether the subject component was leaking or only corroded when it was replaced. Many comments merely noted the replacement of the subject component as part of the Safety Recall action and did not provide any detailed diagnostic comments.

Ford notes that 73% (130,222 out of 178,036) of the vehicles inspected under Safety Recall 02S36 did not require replacement of the subject component due to corrosion, abrasion, or leakage.

Electronic copies of these claims are provided in the AWS portion of the electronic database contained in Appendix C3 (file: 2004-08-26_Appendix_C3) on the enclosed CD.

Request 6

> Describe in detail the search criteria used by Ford to identify the claims identified in response to Request No. 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) related to the alleged defect 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 and process used for searching and reviewing Ford's AWS database is described in Appendix B.

The standard new vehicle warranty coverage for 1995-1996 model year Ford Windstar vehicles is three years or 36,000 miles, whichever occurs first. A list of Extended Service Plans (ESP) available on the subject component is provided electronically on the enclosed CD in Appendix G (file: 2004-08-26_Appendix_G) with time/mileage coverage. This appendix also includes the count of total vehicles participating in those ESP's.

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 manufacturer's short name 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 has not identified any SSMs/TSBs that may relate to the alleged defect in the subject vehicles.

Internal Service Messages: Ford has not identified any ISMs that may relate to the alleged defect in the subject vehicles.

Field Review Committee: Ford has identified one responsive field service action communication, a dealer bulletin related to Safety Recall 02S36, and is providing a copy of it in Appendix H.

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 components that have been conducted, are being conducted, are planned, or are being planned by, or for, Ford. This should include copies of all 14D reports that are related to 02V-101 (Ford 02S36). 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

Ford has developed specific, recognized processes for identifying, investigating, and assessing potential safety concerns in Ford products. Ford interprets the agency's request as seeking the documents resulting from such processes or actions, such as documents from Ford's Critical Concern Review Group (CCRG) and Field Review Committee (FRC), if any, and final field service action evaluation papers (14 D's and 8 D's) concerning allegation of right front brake line failure as a result of corrosion or abrasion. Ford has conducted a reasonable diligent search for such documents that it is providing to the agency's Office of Chief Counsel, under separate cover, with a request for confidential treatment on the grounds that such items contain commercially sensitive business information and/or trade secrets. Copies of such documents are provided in Appendix I. No other such actions are being conducted or planned to be conducted at this time.

Further, Ford is voluntarily submitting additional documents that may assist in the agency's analysis of this matter. Copies of such documents that are not customarily disclosed outside of Ford will be submitted under separate cover with a request for confidentiality to the agency's Office of Chief Counsel in Appendix J1 and electronic documents are provided in Appendix J2 (file: 2004-08-26_Appendix_J2) on a CD provided along with the confidential material.

Documents for which Ford is not requesting confidentiality are included in Appendix K1 and electronic documents are provided in Appendix K2 (file: 2004-08-26_Appendix_K2) on the enclosed CD.

Ford is not providing 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 are described in a privilege log in Appendix L1(file: 2004-08-26_Appendix_L1 on the enclosed CD) and redacted copies of the documents will be provided under separate cover with a request for confidentiality to the agency's Office of Chief Counsel as Appendix L2.

Request 9

> Provide copies of all documents related to reports, presentations, or other communications within Ford that relate in any way to the occurrence of the brake line failure condition addressed by 02V-101 in vehicles located outside the region, or built outside the production range, covered by Ford's campaign.

Answer

Documents responsive to this request are provided in the response to Request 8.

Request 10

> 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, parts distribution center, and month/year of sale (including the cut-off date for sales, if applicable):
>
> a. Subject component; and

b. Ford kit #F58Z-2283-BA;
c. Any other 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

Ford is providing the requested part sales information in Appendix M (file: 2004-08-26_Appendix_M) on the enclosed CD. The data is broken down by part names and service/engineering numbers. The service kit was released in support of Safety Recall 02S36, but the total number of brake tubes sold is greater than the number of recalled vehicles serviced, as each kit contains three brake tube assemblies and three bags of brake tube clips and is sufficient to repair three vehicles. This bulk ordering requirement may result in a larger number of brake lines sold than the number of brake lines actually installed, as many dealers may have partially used kits in stock. 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 was installed, the number of partially used service kits, or the reason that the installation was made. In addition, dealers typically use bulk tube to repair brake line leaks. Accordingly, Ford is also providing information concerning bulk tube sales.

Request 11

Provide the following information regarding the brake tubes used in the subject vehicles:

a. The base material composition and manufacturing method (i.e., single-walled or double-walled);
b. Tube coating systems;
c. Tube nominal outer diameter;
d. Tube outer diameter tolerances;
e. Tube nominal wall thickness;
f. Tube wall thickness tolerances;
g. Tube design pressure;
h. Tube maximum service pressures (ABS and non-ABS);
i. Tube burst pressure;
j. The minimum wall thickness necessary to contain maximum service pressures (include consideration with and without stress concentration factors representative of corroded tube walls and state all calculations used and the values of all calculation parameters);
k. Summaries and copies of corrosion performance test specifications – conditions (e.g., salt spray tests, cyclical corrosion tests) and end-of-test requirements;
l. Summaries and copies of all corrosion performance test results; and
m. Identify all suppliers by models and model years.

Answer

Ford has provided a table that contains information addressing sections a-l, k and m in an electronic format in Appendix N1 (file: 2004-08-26_Appendix_N1) on the enclosed CD. For section l, Ford has provided a corrosion test summary table, test reports, and photographs in Appendix N2. With respect to the information requested in item j (the minimum wall thickness necessary to contain the maximum service pressure for the brake system) Ford does not customarily perform such calculations during the course of brake system design because the brake tube design specifications meet the requirements stated in SAE J1677, which are standard for the industry. Parameters affecting the calculations for the minimum wall thickness (stress concentration factors due to manufacturing operations and adjustment due to fatigue) are difficult if not impossible to determine for new vehicles, let alone for vehicles which have experienced eight to ten years of vehicle service. Ford notes that brake tube suppliers customarily perform brake tube burst pressure tests on new brake tubes as a quality control procedure. Burst strength tests on brake tubes from that time period indicate the typical burst pressure for tube stock was approximately 17,000-20,000 psi. Considering the maximum service pressure is 2,000 psi on the subject vehicles, there is a minimum 8.5 times tolerance factor when new. Ford further notes that even in instances where corrosion has produced a pin-hole in the tube wall, maximum service pressures and full braking effectiveness can still be maintained even though some fluid may leak.

Request 12

Provide Ford's assessment of the alleged defect in the subject vehicles that were not included in Recall 02V-101. Include the following information in your response:

a. Compare the failure mode(s) of the alleged defect in the vehicles outside the recall region and the vehicle repaired under 02V-101;
b. Compare the failure mechanism(s) of the alleged defect in the vehicles outside the recall region and the vehicles repaired under 02V-101;
c. Compare the risk to motor vehicle safety of the alleged defect in the vehicles outside the recall region and the vehicles repaired under 02V-101;
d. Provide a detailed analysis of the frequency and trend of the subject component failures for subject vehicles that are outside the regional scope of the subject recall; and
e. Describe Ford's general policy for notifying consumers outside of regions covered by regional recalls (or consumer that own vehicles that are not on Ford's list of eligible VIN's, but are located in the affected region) and the practice followed in the subject recall.

Answer

During the preparation of this response Ford thoroughly analyzed ten years of field data related to the subject vehicles and has identified no defect trend in the non-recalled vehicles. Vehicles not included in the recall population have been in service an average of nine years and have a very low rate of allegedly related owner and field reports – less than 0.0095 allegations of leakage per 1,000 vehicles per year in service. We are confident that the scope of Safety Recall 02S36 is correct.

Safety Recall 02S36: Proactive Response By Ford Prevented a Higher Incident Rate.

As the agency is aware, Ford initiated Safety Recall 02S36 after receiving and investigating a limited number of field reports concerning right front brake line corrosion on Ford Windstar vehicles in Canada. At the time of the recall, the vehicles had been in service for an average of seven years. Extensive investigation that led to the decision to conduct Safety Recall 02S36 found that the reported premature corrosion initially identified on vehicles operated in Canada resulted from a combination of factors. First, the right front brake line on some vehicles was mis-assembled such that there was contact between it and the dash panel exterior insulator blanket. Second, the contact of the brake line and the dash panel exterior insulator blanket abraded the corrosion protection from the brake line. Continued exposure to road salt such as occurs in "salt belt" states could ultimately cause the brake line to corrode and possibly leak. Ford's analysis determined that this condition presented itself in the form of premature corrosion in highly corrosive environments, such as Nova Scotia, Canada. Based on incidents of premature corrosion in certain areas of Canada, Ford anticipated that this condition could present itself in similarly corrosive environments within the United States. Accordingly, Ford conducted Safety Recall 02S36 in both Canada and the United States.

No Safety Defect: Very Small Number Of Incidents In Nearly A Decade of Service.

It is without question that Ford's early initiation of this campaign in the U.S. corrosion states prevented a larger number of consumer incidents related to this concern. Safety Recall 02S36 led to the inspection and repair of vehicles with mis-assembled right front brake lines prior to appearance of any brake line corrosion related symptoms. The low number (60) of responsive owner (MORS, lawsuits and claims) and field (CQIS and UDB) reports clearly indicates that Safety Recall 02S36 successfully truncated the field concern to a low 0.0408 R/1000 per year of vehicle service at the time of the Safety Recall (average seven years in service). However, the vehicles in the non-recall population are performing even better, with only 24 comparable incidents that equate to a rate of 0.0095 R/1000 per year over an even longer period of service (9.25 years). These data demonstrate the scope of Safety Recall 02S36 is correct.

In addition to the low incident rate, the non-recall population allegedly experienced only two accidents related to alleged brake line leakage in the nearly ten years the vehicles have now been in service. In both of these incidents, there is insufficient information to enable Ford to determine whether a leak due to purported brake line corrosion or abrasion contributed in any way to the alleged events.

As part of this response, Ford provides the agency with accident claims for the recalled population of subject vehicles, as well as for the non-recalled population of subject vehicles. While the recalled population of vehicles has a low accident rate of 0.0011/1000 vehicles per year of service; the non-recalled population of vehicles has an even lower accident rate of just 0.0008/1000 vehicles per year of service. (The non-recalled population totals 273,256 vehicles versus 279,957 in the recalled population and has an average service life of 9.25 years versus the average service life of 9.4 years for the recalled population.) If the non-recalled population of vehicles were experiencing a defect, it would be evident when compared against the recalled population of vehicles. Instead, the non-recalled population is performing better than the recalled population, which itself is performing well. This data bears out the absence of a defect trend attributable to the right front brake lines in the non-recalled vehicle population.

As reviewed with the agency in 1998, a pinhole leak in a brake line does not pose an unreasonable risk to safety

Condition Is Overt
Excessive corrosion of a brake line is most likely to lead to brake fluid weepage through a pinhole during initial stages. Prior to experiencing any notable increase in stopping distance, a vehicle with a pinhole leak in a brake line presents the indication of a potential brake concern to an operator by:

- A change in brake pedal feel and effort
- A gradual increase in brake pedal travel
- Brake fluid stains on the pavement underneath the vehicle indicating a leak
- Illumination of brake system indicator lamp in the event the customer ignores the initial overt indicators and continues to operate the vehicle without seeking service

Customer reports confirm these overt indicators. For instance, VOQ 855149 involved a customer who reported a change in brake pedal travel before experiencing an "extended stopping distance." The customer also reported that he was able to obtain repair of the vehicle without any further incident related to the alleged brake line leak.

Brake Performance Is Maintained
In the event that a customer ignores the many overt indicators, the illuminated brake system indicator lamp, *and* all the brake fluid is lost from the affected brake circuit, the subject vehicles are equipped with a split diagonal master cylinder system that allows one circuit of the brake system to remain functional should the other circuit be compromised. Even when all brake fluid is lost from the affected brake circuit, the left front/right rear brakes will remain fully functional and will continue to provide enough stopping power to satisfy the typical stopping requirements of normal driving.

While Ford acknowledges that there are customer descriptions of a "total loss of brakes" or similar allegations in ten of the 15 VOQ's, such descriptions are not consistent with the symptoms of the subject corroded brake line condition. The robustness of the split diagonal design and its ability to meet typical driving requirements even if one circuit is fully compromised indicate these allegations are overstatements of the actual symptom or may not relate to the "alleged defect."

The Scope of Safety Recall 02S36 Is Correct.

Support for the recall scope is found in the results of the recall inspection process. The majority – 73% – of the recall population vehicles inspected under Safety Recall 02S36 did not require replacement of the subject component due to corrosion, abrasion, or leakage. While these vehicles already accumulated five to seven years of service prior to the recall inspection, they still did not exhibit any signs of unusual corrosion that would necessitate replacement of the brake lines. Perhaps the most compelling fact is the extremely low report rate (0.0115 R/1000/year in service) and nearly negligible accident rate (0.0008/1000 vehicles/year in service) for the non-recalled population of vehicles that have been in service for eight to ten years. This fact is clear evidence that there is no defect in the non-recall population of vehicle and, certainly, no unreasonable risk to motor vehicle safety posed by these vehicles.

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