

Ford Motor Company
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2004 SEP 23 A 11:06

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

OFFICE OF DEFECTS INVESTIGATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

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September 23, 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: RQ04-007:NVS-213dsy

The Ford Motor Company (Ford) response to the agency's August 4, 2004 letter concerning allegations of rim fractures in model year 2003 and later passenger vehicles manufactured with steel rims is attached.

In August 2003, Ford initiated Safety Recall 03S05 to replace certain steel wheels installed on 2003 model year Police and commercial duty (taxi) Crown Victoria vehicles. Ford's investigation determined that because of the severe duty cycles of Police and commercial duty vehicles and the unique tire and suspensions used in those vehicles, certain wheels could develop cracks. A few of the reports reviewed by Ford alleged that rapid, unexpected air loss from the tire ultimately occurred. While Ford does not understand the manner in which a wheel with this type of crack would not first exhibit a detectable slow leak prior to experiencing a crack propagation sufficient to result in the alleged rapid air loss condition, the Company conducted a safety recall to address the potential, if any, for a loss of vehicle control during a rapid air loss event during a severe duty cycle as seen in Police and taxi fleets.

At the same time we initiated the safety recall, Ford extended the warranty for certain vehicles via a customer satisfaction program (03M03). The extended warranty provides for the inspection and replacement of certain steel wheels installed on certain 2003 model year Police and fleet Crown Victoria vehicles if the wheels developed cracks, as typically evidenced by slow air loss and/or vibration. Wheels built from September 23, 2002 through April 22, 2003 installed on Police and commercial fleet vehicles were eligible for the extended warranty coverage. Ford extended the warranty for this population of vehicles because the likelihood of cracks occurring on these vehicles was low as compared to the entire wheel population.



Based upon extensive investigation and analyses, Ford has concluded that the safety recall action taken to address cracked wheels on early production Police and commercial Duty 2003 model year Crown Victoria vehicles has been largely effective in replacing the original equipment wheels with an improved design. The low rate of repairs charged to the extended warranty program (approximately five percent of vehicles) has also confirmed that those wheels exhibit increased strength and durability compared to the earlier production wheels.

Analysis of reports and claims has also confirmed Ford's belief that these cracks are almost entirely unique to Police and commercial duty fleet vehicles, and these steel wheel cracks typically occur over time and provide substantial warning through symptoms of slow, repeated air loss and/or vibration. Ford also believes, based on our analysis of parts and accident scenes, that none of the cracked steel wheel allegations has resulted in an accident or injury.

Ford is presently in the process of gathering wheels from the subject vehicle population to further understand their performance in the many types of usage to which the vehicles are subjected. While we have already addressed higher than expected service rates for wheels built from August 18, 2001 through April 22, 2003 on Police and commercial service vehicles through either our safety recall or extended warranty action, Ford will continue to monitor the performance of those wheels, as well as the performance and durability of wheels installed on retail customer vehicles, and wheels built after April 22, 2003, to determine if any service action is warranted. We will keep the agency informed of any new information that becomes available.

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

Sincerely,



Attachment

FORD MOTOR COMPANY (FORD) RESPONSE TO RQ04-007

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.

An August 10, 2004 telephone conversation with Mr. Scott Yon, of the agency, clarified that the subject wheel of the inquiry is the full face design steel wheel that was first implemented on the 2003 model year Ford Crown Victoria and Mercury Grand Marquis, and is not the drop center steel wheel used on previous model year vehicles. Mr. Yon also clarified that the reports and claims provided in response to Requests two, three, four and five are to include reports and claims previously provided to the agency in response to PE03-009.

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 August 4, 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 Lincoln Mercury 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. Date of manufacture;
- c. Date warranty coverage commenced; and
- d. 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, RQ04-007 IR Attachments, for a pre-formatted table which provides further details regarding this submission.

Answer

Ford records indicate that the approximate total number of subject Ford Crown Victoria and Mercury Grand Marquis vehicles equipped with the subject steel wheels 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 198,688.

The number of subject vehicles sold in the United States by model and model year is shown below:

Model	2003 MY	2004 MY	2005 MY
Crown Victoria	80,389	47,177	1
Grand Marquis	40,474	30,647	0

The requested data for each subject vehicle is provided electronically in Appendix A (filename: 2004-09-23 Appendix A - Production Data) on the enclosed CD.

Request 2

State 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 and which were received by Ford either before or after the announcement of recall 03V279 (Ford 03S05), Ford Customer Satisfaction Program (CSP) 03M03, or ODI investigation PE03-009. Ford may exclude items which, based on the content of record data, can be determined to relate specifically to campaign application issues (such as repair delays caused by parts shortages, or complaints regarding a CSP being conducted instead of a recall):

- 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;
- 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 "c" 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 "e" and "f", 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: 2004-09-23_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	Alleged steel wheel crack or split with alleged loss of inflation pressure
A2	Alleged steel wheel crack or split with no reported loss of inflation pressure
B1	Alleged loss of inflation pressure; replaced wheel, no allegation of a crack/split wheel*
B3	Wheel replacement with no reported loss of inflation pressure or allegation of a crack/split wheel*
03M03	Associated with Customer Satisfaction Program 03M03 by description or Warranty Claim Transaction Code
03S05	Associated with Field Service Action 03S05 by description or Warranty Claim Transaction Code

*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, in addition to owner reports previously provided to the agency in response to PE03-009, identified the following number of owner reports in accordance with the categories described above:

MORS

Category	A1	A2	03M03	03S05
Reports	20	6	2	0

Copies of these owner reports are provided in the MORS III portion(s) of the electronic database contained in Appendix C (file: 2004-09-23_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.

Legal Contacts: Ford is providing in Appendix B a description of Legal Contacts and the activity, Litigation Prevention, that is responsible for this information. 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, 2 files were located and are provided in Appendix D (file: 2004-09-23_Appendix_D).

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 fleet reports were identified.

Field Reports: The search and review of the Ford Common Quality Indicator System (CQIS) and Unified Database (UDB) records, as described in Appendix B, in addition to field reports previously provided to the agency in response to PE03-009, identified the following number of field reports, excluding duplicates, in accordance with the categories described above:

CQIS

Category	A1	A2	03M03	03S05
Reports	62	28	0	0

Copies of these field 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, 17 category A CQIS reports are duplicative of owner reports and are provided in Appendix C but 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. Nonetheless, a search of UDB, as described in Appendix B, was conducted. Copies of potentially relevant reports and

ambiguous reports, including reports previously provided to the agency in response to PE03-009 are provided in the UDB portion of the electronic database contained in Appendix C on the enclosed CD.

UDB

Category	A1	A2	03M03	03S05
Reports	0	1	2	13

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, 12 category A UDB records are duplicative of warranty reports and are provided in Appendix C but are not included in the report count above.

VOQ Data: This information request had an attachment that included nine Vehicle Owner's Questionnaires (VOQs) involving eight vehicles. Mr. Yon of the agency also provided two additional VOQ's on August 16, 2004. Ford made inquiries of its MORS database for customer contacts, and its CQIS database for field reports regarding the vehicles reflected on 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 "VOQ Dup" 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 [VIN 2FAFP71W43X[REDACTED] & 2FAHP71W53X[REDACTED] two field (CQIS) reports [VIN: 2FAFP71W53X[REDACTED] & 2FAFP71W43X[REDACTED] no warranty claims, and no lawsuits and claims, alleging an accident that may be related to the alleged defect. The four reports involve three vehicles because one of the alleged incidents is recorded as an owner report and as a field report. The owner and field reports are included in the MORS and CQIS portion of the electronic database provided in Appendix C, and are addressed in our response to Request No. 10. Lawsuit and claim information is provided as described below.

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.

Based on a reasonable and diligent search, Ford located one claim and one early notice that appear to relate to the alleged defect in the subject vehicles. We are providing the requested detailed information, where available, on the responsive claim and notice in our Log of Lawsuits and Claims, as Appendix E (file: 2004-09-23_Appendix_E) 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 also provided in Appendix E. With regard to these matters, Ford has not undertaken to contact outside law firms to obtain additional documentation.

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. 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, RQ04-007 IR Attachments, for a pre-formatted table which provides further details regarding this submission.

Answer

The requested information, to the extent available, is provided in Appendix C as discussed in response to Request 2.

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

Copies of reports and claims identified in our response to Request 2 are provided as follows:

Category	Method of Organization
Owner Reports	Appendix C
Field Reports	Appendix C
Unified Database Reports	Appendix C
VOQ Data	Appendix C
Legal Contacts	Appendix D
Non-privileged Lawsuit and Claim Information	Appendix E

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 and included the replacement of a subject wheel: 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, a customer satisfaction campaign (including 03M03), or a safety recall action (including 03S05). Include all such claims regardless of the date the claim was made. Ford may exclude claims where record detail clearly identifies that the replacement of the wheel was not related to the alleged defect (such as for a cosmetic blemish/rust, or wheel distortion, etc), however Ford should produce all claims where such a determination can not be made. Ford should identify (or otherwise explain how ODI can identify) each claim that is related to recall 03V279 (Ford 03S05) or Ford CSP 03M03.

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, RQ04-007 IR Attachments, for a pre-formatted table which 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. Claims specifying warranty transaction code 03S05 or 03M03, signifying claims relating to the safety recall or extended warranty program, were categorized accordingly. The remaining claims were then reviewed individually for allegations that may relate to the alleged defect. This search and review of the Ford AWS database records, including claims previously provided to the agency in response to PE03-009, identified the following number of non-duplicative warranty claims in accordance with the categories described above:

AWS

Category	A1	A2	03M03	03S05
Reports	495	246	1482	21,001

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. Also, 35 of the category A warranty claims are duplicative of field reports and ten category A warranty claims are duplicative of owner reports. These claims are provided in Appendix C but are not reflected in the report count above.

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 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) 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 search criteria used by Ford to identify responsive claims is described in the AWS section on Appendix B.

All 2003 model year Ford and Mercury passenger cars include the following warranty coverages:

- 36 month/36,000 mile bumper-to-bumper
- 60 month/50,000 mile safety restraint system
- 60 month/unlimited corrosion (perforation only)

Ford implemented an extended warranty program (03M03) on 2003 model year Crown Victoria Police and fleet vehicles to cover cracked wheels with manufacturing dates from September 23, 2002 through April 22, 2003 for five years or 150,000 miles. The extended warranty program affects approximately 36,864 vehicles.

Request 7

For any documents or information not provided during ODI investigation PE03-009, and excluding the documentation related to recall 03V279 (Ford 03505) and Ford CSP 03M03, 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 offices, 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 identified no additional SSMs or TSBs that may relate to the alleged defect in the subject vehicles.

Internal Service Messages: Ford has identified no ISMs that may relate to the alleged defect in the subject vehicles.

Field Review Committee: Ford has identified no field service action communications that relate to the alleged defect in the subject vehicles beyond Ford Field Service Actions 03S05 or 03M03.

Request 8

For any documents or information not provided during ODI investigation PE03-009, 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 groups)/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 steel wheel cracks. Ford has conducted a reasonable diligent search for such documents that it is producing to the agency's Office of Chief Counsel, along with a request for confidential treatment on the grounds that such items contain commercially sensitive business information and/or trade secrets. Ford will submit under separate cover a request for confidentiality to the agency's Office of Chief Counsel. Such documents are provided in Appendix G (file: 2004-09-23_Appendix_G). No other such actions are being conducted or planned to be conducted at this time.

Further, Ford is submitting voluntarily 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 H (file: 2004-09-23_Appendix_H) on the enclosed CD.

Documents for which Ford is not requesting confidentiality are included in Appendix F (file: 2004-09-23_Appendix_F) on the enclosed CD.

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 are described in a privilege log in appendix I (file: 2003-09-23_Appendix_I) on the enclosed CD).

Request 9

For any documents or information not provided during ODI investigation PE03-009, 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 J (file: 2004-09-23_Appendix_J) on the enclosed CD. Ford is continuing to investigate design and process modifications to improve the robustness of the wheels in severe customer usage applications. The agency will be notified if any changes are implemented.

Request 10

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 this inquiry.

Answer

In August 2003, Ford initiated Safety Recall 03S05 to replace certain steel wheels installed on 2003 model year Police and commercial duty (taxi) Crown Victoria vehicles. Ford's investigation determined that because of the severe duty cycles of Police and commercial duty vehicles and the unique tire and suspensions used in those vehicles, certain wheels could develop cracks. A few of the reports reviewed by Ford alleged that rapid, unexpected air loss from the tire ultimately occurred. While Ford does not understand the manner in which a wheel with this type of crack would not first exhibit a detectable slow leak prior to experiencing a crack propagation sufficient to result in the alleged rapid air loss condition, the Company conducted a safety recall to address the potential, if any, for a loss of vehicle control during a rapid air loss event during a severe duty cycle as seen in Police and taxi fleets. The recall applied only to subject wheels built before September 22, 2002, and directed service personnel to replace the wheels with an improved wheel design that became available in May 2003.

At the same time we initiated the safety recall, Ford extended the warranty of certain vehicles via a customer satisfaction program (03M03). The extended warranty provides for the inspection and replacement of certain steel wheels installed on certain 2003 model year Police

and fleet Crown Victoria vehicles if the wheels developed cracks as typically evidenced by slow air loss and/or vibration. Wheels built from September 23, 2002 through April 22, 2003 installed on Police and commercial fleet vehicles were eligible for the extended warranty coverage. Ford extended the warranty for this population of vehicles because the likelihood of cracks occurring on these vehicles was low as compared to the entire wheel population. Improved processes at the wheel supplier increased the strength of these wheels and reduced the likelihood/risk of wheel cracks. This action was supported further by the low number of reports and claims involving wheels of this population, as compared with wheels manufactured prior to September 23, 2002.

As explained to the agency in Ford's June 23, 2003 letter, Ford progressed through a series of design and process changes to improve the robustness of the steel wheel. Testing showed that the series of changes to the wheel significantly improved the robustness. These test results are confirmed by the reduced incidence of reports and claims on each successive design/process iteration. Service records indicate that less than five percent of eligible vehicles have had service performed in accordance with program 03M03, as identified by the Warranty Transaction Code.

Ford acknowledges receiving reports on the "CF" design level wheel. These reports represent a low rate of allegedly cracked wheels occurring on vehicles exposed to severe duty cycles. Further, while no reports or claims of cracked wheels have been made on "AA" level wheels as of August 4, 2004, Ford expects to receive a small number of reports and claims on that design because of the duty cycle of these vehicles.

Importantly, the reports and warranty claims provided in Appendix C can only be classified by vehicle build date, not wheel manufacture date. Ford recognizes that larger fleets often replace tire and wheel assemblies and often swap tires and wheels from car to car and from service stock. As a result, based upon a review of warranty claims, owner reports or field reports, Ford cannot identify whether a wheel on a particular vehicle is the same design level as the original equipment wheel from that vehicle, or an earlier or later design iteration. Therefore, Ford cannot accurately determine the rate of cracked wheel allegations for a specific wheel design, only for a specific population of vehicles by build date.

A search of the owner reports, field reports and warranty claims identified three incidents alleging that a cracked wheel led to rapid air loss and a subsequent accident. Although these three reports allege loss of vehicle control resulting from wheel cracks, our analysis has determined that two of the incidents resulted from a loss of tire pressure due to tire damage and did not involve wheel cracks. The third incident, originating from the Pennsylvania State Police, involved a severe impact with a guardrail after the vehicle left the road surface and crossed the median. As a result of this accident sequence, the wheel was cracked as opposed to a wheel crack leading to the accident.

VIN 2FAHP71W53X [REDACTED] – Crown Victoria Police Interceptor owned by the city of Becker, MN, vehicle build date January 2, 2003, build date of the wheel is unknown. In an owner report dated June 18, 2003, the customer alleges that the vehicle started shaking when the vehicle reached speeds near 100 mph. Reportedly, the right rear tire deflated, causing the operator to lose control of the vehicle. The vehicle rolled several times. The operator and passenger sustained non-serious injuries. After safety recall 03S05 was initiated, the insurance adjuster opined that the accident may be "related to a past rim concern." A Ford engineer inspected the vehicle and wheels and concluded that, at the time of the accident, the vehicle was equipped with non-production tires. The tires were placed on the vehicle for the winter season and were

left on the vehicle to be "run out" through the summer. The tire tread separated from the sidewalls, and resulted in a rapid tire deflation. Ford and the wheel supplier examined the right rear wheel and no cracks were found. This owner report is included in Appendix C and is categorized as an A1 report because it includes an allegation of a cracked wheel, despite Ford's subsequent analysis showing that the incident did not, in fact, involve a cracked wheel.

Documents associated with this incident (including photos) are included in Appendix K.

VIN 2FAFP71W43X - Crown Victoria Police Interceptor owned by the city of Kissimmee FL, vehicle build date June 26, 2002, build dates of the right side wheels are June 21, 2002 and December 4, 2002. In an owner report dated October 2, 2003, the customer alleges that both right side tires "blew", and the vehicle hit a curb. The incident occurred on September 22, 2003, and the customer opines that it is "related to recall 03S05." A Ford engineer inspected the vehicle, tires and wheels on October 13, 2003, and concluded that the right side rims were within build dates for the 03S05 and 03M03 programs. The right front tire had a large hole in the inside sidewall, and the rim was damaged on the outside, which was likely caused by the vehicle hitting the curb. Neither of the rims was cracked. The Ford engineer inspection report is documented as a field report in Appendix C and is categorized as an A1 report because it could be interpreted to include an allegation of a cracked wheel. The report is classified as an A1 despite Ford's subsequent analysis showing that the incident is unrelated to the alleged defect. This vehicle was serviced after the incident in accordance with Ford recall action 03S05 on September 29, 2003, which is also included in Appendix C as a responsive warranty report, category 03S05.

Documents associated with this incident (including photos) are included in Appendix L.

VIN 2FAFP71W53X - Crown Victoria Police Interceptor owned by the State of Pennsylvania. In a field report dated July 19, 2004, the customer alleges that the operator experienced sudden deflation of the left front tire during a high-speed pursuit, causing loss of control and a crash of the vehicle. The owner reports that the wheels previously were replaced in accordance with Ford recall action 03S05. A Ford engineer inspected the vehicle, wheels, tires and the accident scene on July 16, 2004.

Ford's engineer concluded that the vehicle left the highway, crossed the median, crossed the lanes of opposing traffic, and the left front of the vehicle impacted a guardrail. Further, the Ford engineer concluded that none of the tires were deflated when the vehicle crossed the oncoming lanes of traffic and impacted the guardrail, as evidenced by the tire marks in the median and on the opposing lanes, and a lack of signs of scuffing on the rim that would be evident if the tire were deflated when the vehicle crossed the opposing lanes. The analysis further concluded that the large crack in the wheel occurred as a result of severe impact, likely with the guardrail on the opposite highway. The engineer observed a severe gouging in the inner surface of the rim located in an area of the rim consistent with the large crack, indicating the gouge and crack occurred at the same instant. The analysis also concluded that the gouge occurred while the wheel was rotating in a reverse rotation, which indicates that sometime during the event, the wheel stopped rotating in a forward direction, the wheel was subjected to a severe impact which likely caused the crack to form and split apart, allowing tire deflation, and the vehicle moved, or was moved, rearward. The impact to the wheel also caused significant deformation of the rim, allowing the inside of the rim to contact the ball stud. The gouge likely occurred after the impact and deformation, while the wheel was rotating rearward until the vehicle came to rest.

The owner report, and warranty report (for replacement of five wheels per 03S05, dated

August 7, 2003) are included in Appendix C. Documents associated with this incident (including photos) are included in Appendix M. An accident scene videotape recorded by a Ford engineer during his analysis of this incident is provided in Appendix G.

Upon review of these three incidents, as well as other low mileage allegations and actual warranty return part analysis conducted by the supplier, it is apparent that some service personnel and customers have submitted claims and reports referencing the SSM or FSA's, or have alleged cracked wheels when the issue is clearly not related to the alleged defect. This is further evidenced by an analysis of returned wheels from vehicles eligible for the extended warranty program. Of 93 wheels analyzed, all alleging cracks, wheel leaks, or structural defects, 23, or 25 percent, were determined to have no cracks in the wheels. Additionally, an analysis of 28 returned wheels built after May 1, 2003 ("CF" design) where air loss or cracking was alleged, ten, or 36 percent, were determined to have no cracks in the wheels.

Ford also conducted key word searches of reports and claims in the process of preparing this response, to determine if customers have alleged rapid or sudden air loss. In addition to the three reports addressed above, the following claims include allegations of rapid or sudden loss of pressure.

VIN 2FAFP71W73X [REDACTED] – Crown Victoria Police Interceptor serviced in Paris, TN. The customer brought the vehicle to the dealership on March 1, 2004 for service for "rapid loss of air". Contact was made with the dealership service personnel familiar with this repair that clarified the tire took two to three days to loose air. We do not consider this incident a rapid air loss that could cause an unexpected loss of control, but is more typical of the obvious indication a driver normally gets when tire or wheel service is required. This report is included as a warranty claim in Appendix C.

VIN 2FAFP71W93X [REDACTED] – Crown Victoria Police Interceptor serviced in Fayetteville, GA. The customer brought the vehicle to the dealership on September 4, 2003 requesting replacement of a tire "due to wheel failure". Contact was made with the dealership personnel familiar with the repair, who stated that the tire was "torn up" because the officer drove the car while the tire was flat for some unknown distance. The service personnel stated that he did not examine the wheel, but assumed it was cracked because he was familiar with safety recall 03S05 and the extended warranty program. The warranty claim lists an odometer reading of 1,456 miles, which makes a wheel fatigue crack very unlikely due to the low mileage on the vehicle. This report is included as a warranty claim in Appendix C.

VIN 2FAHP70WX3X [REDACTED] – Crown Victoria, extended wheelbase fleet vehicle owned by Viacom Corp. to transport reporters, camera crew and equipment. The customer was upset because the tire was "loosing air rapidly" and Ford warranty would not cover the cost of tire replacement. The service personnel that Ford contacted described a slow leak that allowed the tire to go flat over night. The wheel was built within the extended warranty build dates, so the wheel was replaced without verification that it was cracked. The service technician stated that he didn't look at the rim, but assumed it was cracked. We do not consider this incident a "rapid" air loss that could cause an unexpected loss of control, but is more typical of the obvious indication a driver normally gets when wheel service is required. This report is included as a warranty claim in Appendix C.

VIN 2MEFM74W93X [REDACTED] – Grand Marquis vehicle serviced at Napleton's Park Ridge Lincoln Mercury dealership in Illinois. Service personnel familiar with this repair recall that air deflated

rapidly, but stated that it was not an instantaneous loss of air such as that experienced from a tire blow out. This incident is included in Appendix C as both a field report and a warranty claim.

Ford also conducted a search of all the responsive claims and reports to determine if any allegations involve retail customer vehicles. Appendix C includes 12 claims involving allegations of cracked wheels on subject vehicles not specified by VIN as Police or commercial fleet vehicles. Three of the vehicles were sold to fleet operators. These vehicles are expected to experience usage similar to other commercial (Police or taxi) vehicles. Three of the remaining vehicles accumulated less than 10,000 miles, which indicates that fatigue cracking of the wheel is very unlikely. The remaining six claims (including the Grand Marquis rapid deflation allegation above) involve retail specified vehicles that appear to be used in private customer applications, though Ford has not been able to verify if any of these allegations are related to the alleged defect.

Ford is presently in the process of gathering wheels from the subject vehicle population to further understand their performance in the many types of usage to which the vehicles are subjected. While we have already addressed higher than expected service rates for wheels built from August 18, 2001 through April 22, 2003 on Police and commercial service vehicles through either our safety recall or extended warranty action, Ford will continue to monitor the performance of those wheels, as well as the performance and durability of wheels installed on retail customer vehicles, and wheels built after April 22, 2003, to determine if any service action is warranted. We will keep the agency informed of any new information that becomes available.

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