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7

December 22, 2010

Mr. Richard P. Boyd, Acting Director
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Avenue SE, Room W45-302
Washington, DC 20590

Dear Mr. Boyd:

Subject: PE10-033:NVS-213 SWM

The Ford Motor Company (Ford) response to the agency's November 15, 2010, letter concerning reports of alleged loss of, or reduction of, motive power due to water entering the powertrain control module (PCM), the PCM connector, and/or the transaxle vent in 2004 through 2007 Ford Freestar and Mercury Monterey vehicles is attached.

Ford's review of information pertaining to this subject is consistent with Ford's previous analysis that was provided to the agency on August 14, 2009, in response to DP09-004. Water entry into the PCM may result in a variety of symptoms depending on which PCM circuits are affected, including engine no start, rough idle, engine misfire, transmission performance degradation and lack of gear engagement, engine stall (while driving or parked), or simply illumination of the check engine light. Reports of engine stall are often accompanied with reported driveability symptoms preceding the alleged stall. Reports relating to water entry into the transaxle through the vent tube are few, and also result in a variety of symptoms. Yet, the overall complaint rate specifically for engine related reports of loss of motive power due to the subject of this information request continues to be low, and comparable to rates in other similar stalling related investigations that the agency has recently closed.

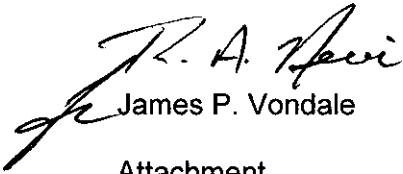
Ford believes the information provided in this response continues to support the conclusion that water entry into the PCM, PCM connector and/or the transaxle vent tube is a customer satisfaction issue. Customer complaints continue to be low and are primarily related to inconvenience with the repair process, primarily for vehicles that had not yet had the PCM sealed, or overall vehicle dissatisfaction. Ford has taken actions to address this subject, including improved vehicle diagnostic and repair procedures, and design improvements for both production and service. In the event of a stall, the vehicles remain readily controllable, and can be safely maneuvered and stopped. Consideration of all of



the factors relating to this subject continues to support a conclusion that this does not present an unreasonable risk to safety in these vehicles.

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

Sincerely,



James P. Vondale

Attachment

FORD MOTOR COMPANY (FORD) RESPONSE TO PE10-033

Ford's response to this Preliminary Evaluation (PE) information request (IR) 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 substantial effort to provide thorough and accurate information, and we would be pleased to meet with agency personnel to discuss any aspect of this Preliminary Evaluation.

The scope of Ford's investigation conducted to locate responsive information focused on Ford employees most likely to be knowledgeable about the subject matter of this inquiry and on review of Ford files in which responsive information ordinarily would be expected to be found and to which Ford ordinarily would refer. 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 November 22, 2010, telephone conversation, Mr. Stephen McHenry of the agency informed Ford that, for purposes of identifying records that allege a reduction of motive power, only allegations that indicate that there was a "substantial" speed reduction, such as from 70 mph down to 20 mph, are considered responsive.

In a November 24, 2010, telephone conversation, Mr. Stephen McHenry of the agency informed Ford that the definition of subject vehicles for this information request also includes all 2004 through 2007 model year Mercury Monterey vehicles manufactured for sale or lease in the United States and federalized territories.

In a December 2, 2010, telephone conversation, Mr. Stephen McHenry of the agency informed Ford that, for purposes of identifying records that are responsive to this information request, only allegations of loss of, or reduction of, motive power during a driving cycle due to the alleged defect are responsive, but reports that allege no motive power in a driveway, for example, are not responsive.

Ford notes that some of the information being produced pursuant to this inquiry may contain personal information such as customer names, addresses, telephone numbers, and complete Vehicle Identification Numbers (VINs). Ford is producing such personal information in an unredacted form to facilitate the agency's investigation with the understanding that the agency will not make such personal information available to the public under FOIA Exemption 6, 5 U.S.C. 552(b)(6).

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 November 15, 2010, the date of your inquiry. Ford has searched within the following offices for responsive documents: Sustainability, Environment and Safety Engineering, Ford Customer Service Division, Marketing and Sales Operations, Quality, Global Core Engineering, Office of the General Counsel, Vehicle Operations, and North American 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 and federalized territories. Separately, for each subject vehicle manufactured to date by Ford, state the following:

- a. Vehicle identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Date of manufacture;
- f. Date warranty coverage commenced; and
- g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2003, or a compatible format, entitled "PRODUCTION DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

Answer

Ford records indicate that the approximate total number of 2004 through 2007 model year Ford Freestar and Mercury Monterey 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 280,000.

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

Model	2004 MY	2005 MY	2006 MY	2007 MY
Ford Freestar	105,230	72,653	51,118	18,586
Mercury Monterey	20,635	6,700	4,013	1,553

The requested data for each subject vehicle is provided in Appendix A.

Request 2

State, by model and model year, the number of subject vehicles Ford has manufactured for sale or lease in the United States and federalized territories for which Ford sold an extended service plan. For vehicles with more than one extended service plan list the vehicle separately for each plan. Separately, for each vehicle, state the following:

- a. Vehicle Identification number (VIN);
- b. Make;

- c. Model;
- d. Model Year;
- e. Name of extended service plan;
- f. Mileage at which the extended service plan expires; and
- g. Number of months from the warranty start date at which the extended service plan expires.

Answer

Ford records indicate that the approximate total number of 2004 through 2007 model year Ford Freestar and Mercury Monterey vehicles manufactured for sale or lease 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) for which Ford sold an extended service plan is 57,000.

The number of subject vehicles manufactured for sale or lease in the United States and its protectorates and territories for which Ford sold an extended service plan by model and model year is shown below:

Model	2004 MY	2005 MY	2006 MY	2007 MY
Ford Freestar	23,374	13,254	9,657	3,103
Mercury Monterey	5,007	1,546	739	402

The requested data for each subject vehicle is provided in Appendix A.

Request 3

State, by model, model year and alleged causal system/component, 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. 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

Ford notes that the definition of the alleged defect, as well as the information requested by the agency in this request, are changed from the agency's previous information request associated with this subject (DP09-004). For this reason, in addition to an updated search for reports and claims responsive to this PE request, we have also re-read and re-categorized all of the reports and claims that were provided to the agency in Ford's August 14, 2009, response to Request 3 of DP09-004. Because of these changes made by the agency, some of the reports and claims that were previously provided to the agency on August 14, 2009, in response to Request 3 of DP09-004 are not responsive to this request and, accordingly, are not included in this response. Similarly, other reports and claims that were not responsive to the IR for DP09-004 are responsive to this PE IR, and accordingly, are being provided in response to this request.

For purposes of identifying reports of incidents that may be related to the alleged defect, as modified by Mr. McHenry as noted above, and any related documents, Ford has gathered "owner reports" and "field reports" maintained by Ford Customer Service Division (FCSD), and claim and lawsuit information maintained by Ford's Office of the General Counsel (OGC). Ford notes that the available information for the type of reports requested by the agency does not always include information pertaining to the alleged causal system or component. To the extent information sought regarding alleged causal system or component is available it is provided in the databases and appendices referenced below.

Descriptions of the FCSD owner and field report systems and the criteria used to search each of these are provided in Appendix B.

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

Category	Allegation
A	Alleged engine related loss of motive power (stall) during a driving cycle due to water intrusion in the PCM or PCM connector
B1	Alleged transmission related loss of motive power during a driving cycle due to water intrusion in the PCM, PCM connector, or transaxle vent tube
B2	Alleged reduction of motive power during a driving cycle due to water intrusion in the PCM, PCM connector, or transaxle vent tube
B3	Alleged loss of, or reduction of, motive power during a driving cycle that is ambiguous if due to water intrusion in the PCM, PCM connector, or transaxle vent tube
B4	Ambiguous allegations of loss of, or reduction of, motive power during driving cycle

We are providing electronic copies of reports categorized as "B3" and "B4" 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: Records identified in a search of the Master Owner Relations Systems (MORS) database, as described in Appendix B, were reviewed for relevance and sorted in accordance with the categories described above. The number and copies of relevant owner reports identified in this search that may relate to the agency's investigation are provided in the MORS III portion of the 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 owner reports for an alleged incident were received, each of these duplicate reports was marked accordingly, and the group 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 that is responsible for this information. Ford notes that no responsive (i.e., not ambiguous) owner reports that indicated that they were Legal Contacts were identified.

Field Reports: Records identified in a search of the Common Quality Indicator System (CQIS) database, as described in Appendix B, were reviewed for relevance and sorted in accordance with the categories described above. The number and copies of relevant field reports identified in this search that may relate to the agency's investigation are provided in the CQIS portion of the database contained in Appendix C. The categorization of each report is identified in the "Category" field.

When we were able to identify that responsive duplicate field reports for an alleged incident were received, each of these duplicate reports was marked accordingly, and the group 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, field reports that are duplicative of owner reports are provided in Appendix C but are not included in the field report count.

VOQ Data: This information request had an attachment that included 27 Vehicle Owner Questionnaires (VOQs), 14 of which were duplicative of reports identified in a search of Ford's data systems. Ford made inquiries of its MORS database for customer contacts, and its CQIS database for field reports regarding the vehicles identified on 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 database provided in Appendix C. Ford notes that two VOQs that were provided with this information request were also provided to Ford in association with EA09-016 (Freestar Torque Converter).

Crash/Injury Incident Claims: For purposes of identifying allegations of accidents or injuries that may have resulted from the alleged defect, Ford has reviewed responsive owner and field reports, and lawsuits and claims. No new allegations of accidents or injuries relating to the alleged defect were identified, nor had any been identified at the time of Ford's response to DP09-004. In addition, Ford did not identify any new reports of accidents that are ambiguous as to whether they relate to the alleged defect. In its response to DP09-004, Ford had identified three reports of accidents related to loss of motive power in vehicles that are the subject of this information request, but that were ambiguous whether they related to this subject. Only one of these three alleged incidents has occurred within the past five years. The most recent report involved an incident that occurred in April 2009 on a 2006 Ford

Freestar (VIN: 2FMZA51626BA21374) in which the customer alleges that the engine shut down, that they had no gas, brakes or steering, and that they hit a guardrail because they could not steer the vehicle. However, as the agency is aware, this description is inconsistent with the vehicle design. Steering assist is maintained even following engine stall until vehicle speed reaches approximately 25 miles per hour, and then steering effort will increase as vehicle speed decreases due to diminished power assist, but is still readily manageable. Similarly, power assisted braking is also maintained for a few brake pedal applications before vacuum assist is depleted from the system.

Two additional incidents were reported to have occurred in 2005 with minimal available details. One, involving a 2005 Ford Freestar (VIN: 2FMZA50615BA10284), states only that the vehicle was sideswiped following an engine stall. The other, involving a 2006 Ford Freestar (VIN: 2FMZA516X6BA02295), mentions only that the vehicle "appeared" to stall, that the steering, brakes, gas, and electrical systems did not function properly and that there was a collision with another vehicle.

Copies of reports corresponding to these alleged incidents are provided in the MORS, CQIS, and OGC Log portions of the database provided in Appendix C and, to the extent available, copies of complaints or first notices relating to the one matter shown on the OGC Log are provided in Appendix D.

Two ambiguous accident allegations on vehicles that are not within the scope of this information request were previously provided in our August 14, 2009, response to DP09-004. Because these incidents pertained to peer vehicles and are not subject vehicles for this investigation, they are not included in our response to this information request.

One of the VOQs provided by the agency alleges an accident (VOQ #10311522) pertaining to a 2005 Ford Freestar (VIN: 2FMZA52265BA15176) in February 2010, although the information provided in the VOQ is not clear whether this incident even relates to the subject of this investigation. A search of Ford's data systems did not locate any contact with Ford regarding the alleged accident.

Claims, Lawsuits, and Arbitrations: For purposes of identifying incidents that may relate 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.

Lawsuits and claims gathered in this manner were reviewed for relevance and sorted in accordance with the categories described above. No new responsive lawsuits or claims were identified. Ford located 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, provided in Appendix C in the Legal Claim/Lawsuits tab. The number of relevant lawsuits and claims identified is also provided in this log. To the extent available, copies of complaints, first notices, or MORS reports relating to matters shown on the log are provided in Appendix D. With regard to these lawsuits and claims, Ford has not undertaken to contact outside law firms to obtain additional documentation.

Request 4

Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 3, state the following information:

- a. Ford's file number or other identifier used;
- b. The category of the item, as identified in Request No. 3 (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;
- f. Vehicle model;
- g. Vehicle model year;
- h. Vehicle's mileage at time of incident;
- i. Incident date;
- j. Report or claim date;
- k. Whether a crash is alleged;
- l. Whether property damage is alleged;
- m. Number of alleged injuries, if any; and
- n. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2003, or a compatible format, entitled "REQUEST NUMBER TWO DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

Answer

Ford is providing owner and field reports in the database contained in Appendix C in response to Request 3. To the extent information sought in Request 4 is available for owner and field reports, it is provided in the database. To the extent information sought in Request 4 is available for lawsuits and claims, it is provided in the Log of Lawsuits and Claims provided in Appendix C in the Legal Claim/Lawsuits tab.

Request 5

Produce copies of all documents related to each item within the scope of Request No. 3. 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 owner and field reports in the database contained in Appendix C in response to Request 3. Copies of complaints, first notices, or MORS reports relating to matters shown on the Log of Lawsuits and Claims provided in Appendix C in the Legal Claim/Lawsuits tab are provided in Appendix D. To the extent information sought in Request 5 is available, it is provided in the referenced appendices.

Request 6

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

December 22, 2010

relate to, the condition described in the subject bulletin (include all claims related to the symptoms and components identified in the bulletin, regardless of whether the bulletin labor operation was performed) in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

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

- a. Ford's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. Vehicle's VIN;
- d. Vehicle's make;
- e. Vehicle model;
- f. Vehicle model year;
- g. Repair date;
- h. Vehicle mileage at time of repair;
- i. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- j. Labor operation number;
- k. Problem code;
- l. Replacement part number(s) and description(s);
- m. Concern stated by customer;
- n. Cause and Correction stated by dealer/technician;
- o. Additional comments, if any, by dealer/technician relating to claim and/or repair; and
- p. Indicate the type of coverage under which Ford paid the claim (e.g., base warranty, goodwill, extended warranty, etc.).

Provide this information in Microsoft Access 2003, or a compatible format, entitled "WARRANTY DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

Answer

The following categories were used in the review of reports located in a search of the AWS database:

Category	Allegation
A	Alleged engine related loss of motive power (stall) during a driving cycle due to water intrusion in the PCM or PCM connector
B1	Alleged transaxle related loss of motive power during a driving cycle due to water intrusion in the PCM, PCM connector, or transaxle vent tube
B5	Allegation of other symptoms addressed in Technical Service Bulletin 06-14-10 due to water intrusion in the PCM, PCM connector, or transaxle vent tube
B6	Ambiguous allegation of water intrusion in the PCM, PCM connector, or transaxle vent tube

We are providing electronic copies of reports categorized as "B6" 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 this request.

Records identified in a search of the AWS database, as described in Appendix B, were reviewed for relevance and sorted in accordance with the categories described above. The number and copies of relevant warranty claims identified in this search that may relate to the agency's investigation are provided in the AWS portion of the database contained in Appendix C. The categorization of each report is identified in the "Category" field. Ford notes that, as a result of our efforts to provide a response to the agency's request for service part sales in Request 11, additional service part base part numbers were identified and included in our search that were not included in our August 14, 2009, response to DP09-004.

When we were able to identify that duplicate claims for an alleged incident were received, each of these duplicate claims was marked accordingly and the group 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. Warranty claims that are duplicative of owner and field reports are provided in Appendix C but are not included in the report count above.

Requests for "goodwill, field, or zone adjustments" received by Ford to date that relate to the alleged defect that were not honored, if any, would be included in the MORS reports identified above in response to Request 3. Such claims that were honored are included in the warranty data provided.

A list of transaction codes is provided in Appendix B to assist the agency in identifying under which type of warranty coverage each claim was paid.

Request 7

Describe in detail the search criteria used by Ford to identify the claims identified in response to Request No. 6, 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.

Answer

Detailed descriptions of the search criteria, including all pertinent parameters, used to identify the claims provided in response to Request 6 are described in Appendix B.

For 2004 through 2007 model year Ford Freestar and Mercury Monterey vehicles, the New Vehicle Limited Warranty, Bumper-to-Bumper Coverage begins at the warranty start date and lasts for three years or 36,000 miles, whichever occurs first. For 2007 model year Ford Freestar and Mercury Monterey vehicles, the New Vehicle Limited Warranty, Powertrain Coverage begins at the warranty start date and lasts for five years or 60,000 miles, whichever occurs first, and provides additional coverage beyond the bumper-to-bumper warranty period for certain engine, transmission and driveline components, among which include the powertrain control module (PCM), all transmission internal parts, clutch cover, transmission

seals and gaskets, torque converter, transmission case, and transmission mounts. Additionally, the PCM is covered by Ford's eight year, 80,000 mile Emission Defect and Emission Performance Warranties. Optional Extended Service Plans (ESPs) are available to cover various vehicle systems, and are available in various time-in-service and mileage increments. The details of the various plans are provided in Appendix E.

Request 8

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 loss of, or reduction of, motive power due to water entering the PCM, PCM connector, and/or the transaxle vent, 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 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, ISMs, and the Field Review Committee files and the search criteria used are provided in Appendix B.

OASIS Messages: Ford has identified no SSMs and four TSBs, three that were previously provided to the agency in our August 14, 2009, response to DP09-004, and one that was published in February 2010, that may relate to the agency's request and is providing copies of them in Appendix F1. Additionally, although not related to the alleged defect, Ford identified one TSB regarding possible transaxle leaks that specifically references TSB 06-14-10, the subject of this information request, in the bulletin. Ford is providing a copy of this TSB for the agency's review in Appendix F2.

Internal Service Messages: Ford has identified one ISM that may relate to the agency's request and is providing a copy of it in Appendix F1.

Field Review Committee: Ford has identified no field service action communications that may relate to the agency's request.

Ford is not aware of any forthcoming communications related to the alleged defect in the subject vehicles.

Request 9

Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may

relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Ford. For each such action, provide the following information:

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

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

Answer

Ford is construing this request broadly and is providing not only studies, surveys, and investigations related to the alleged defect, but also notes, correspondence, and other communications that were located pursuant to a diligent search for the requested information. Ford is providing the responsive non-confidential Ford documentation in Appendix G.

To the extent that the information requested is available, it is included in the documents provided. If the agency should have questions concerning any of the documents, please advise.

Ford is submitting additional responsive documentation in Appendix H with a request for confidentiality under separate cover to the agency's Office of the Chief Counsel pursuant to 49 CFR, Part 512. Additionally, Ford is providing a privilege log in Appendix I identifying one responsive document that is being provided in redacted format in Appendix H on the grounds that it is protected by attorney-client privilege.

In the interest of ensuring a timely and meaningful submission, Ford is not producing non-responsive materials or items containing little substantive information. Examples of the types of materials not being produced are meeting notices, raw data lists (such as part numbers or VINs) without any analytical content, duplicate copies, non-responsive elements of responsive materials, and draft electronic files for which later versions of the materials are being submitted. Through this method, Ford is seeking to provide the agency with substantive responsive materials in our possession in the timing set forth for our response. We believe our response meets this goal. Should the agency request additional materials, Ford will cooperate with the request.

Request 10

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 number(s) (service and engineering) of the original component;
- e. The part number(s) (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 in Appendix J.

Request 11

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

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

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

Answer

As the agency is aware, Ford service parts are sold in the U.S. to authorized Ford and Lincoln-Mercury dealers. Ford has no means to determine how many of the parts were actually installed on vehicles, the vehicle model or model year on which a particular part was installed, the reason for any given installation, or the purchaser's intended use of the components sold.

Ford is providing the total number of Ford service replacement PCMs, engine wiring harnesses (PCM connector), transaxles, and transaxle repair kits by part number (both service and engineering) and month and year of sale, where available, in Appendix K. Information pertaining to production and service usage for each part number, and supplier point of contact information, is also included in Appendix K. The identical subject components are not used on any other make, model, or model year vehicles manufactured by Ford. Ford notes that the PCM connector is integral to the engine wiring harness assembly on the subject vehicles, and the identical wire harness assemblies are not used on any other vehicles

manufactured by Ford. The PCM connector, a standard 104-pin connector that is an integral component of the engine wiring harness assembly, has been used on a variety of Ford vehicles.

Request 12

Regarding the subject bulletin:

- a. Explain under what circumstances the PCM may need to be serviced, as indicated in the bulletin;
- b. Explain whether or not the PCM electrical connector would need to be serviced if water intruded into the connector, and whether the connector is serviced separately or if it is integral to a wiring harness (and indicate the amount of labor time allowed to replace that harness);
- c. Describe the consequences that could occur if the PCM was serviced due to water intrusion but a corroded connector was not replaced at the same time; and
- d. Summarize any reports or indications Ford may have received indicating that 1) the service procedure described in the bulletin did not correct the problem on the first repair attempt, and 2) that the conditions described in the Issue section of the bulletin reoccurred because of a corroded PCM connector that was not serviced at the time the bulletin repair procedure was performed.

Answer

The PCM and/or PCM electrical connector may need to be serviced for a variety of symptoms, including engine and transmission driveability concerns, malfunction indicator lights, etc. The Powertrain Control/Emissions Diagnosis (PCED) manual is used by technicians to determine what type of service may be required. The subject bulletin was published to provide additional diagnostic and repair guidance for those symptoms that are listed in the "Issue" section of that bulletin, primarily sealing of the cowl panel grille area when evidence of water is present at the PCM and/or PCM connector.

The PCM connector is integral to the engine wiring harness assembly. There is no standard labor time allowance to replace the engine wiring harness assembly on the subject vehicles. Based on an audit of a small number of warranty claims that included labor charges for replacement of the engine wiring harness assembly on the subject vehicles, the typical time charged by technicians to replace the engine wiring harness assembly on the subject vehicles is approximately three to three and one-half hours.

If the PCM were to be serviced due to water intrusion, but symptoms or Diagnostic Trouble Codes were still present, the symptom charts in the PCED manual would direct the technician back to complete the PCED pin point tests.

Ford believes that completion of both a cowl sealing TSB (05-23-07 or 06-14-10) and a PCM sealing TSB (07-14-1 or 10-3-3) provides a robust service repair for vehicles that are subject to water intrusion into the PCM, PCM connector or transaxle vent tube. In fact, a review of available information identified no repeat repairs for water in the PCM for vehicles that have had either the PCM sealing bulletin, or both the cowl sealing and PCM sealing bulletins completed. A similar review of available information shows an extremely low rate of repeat repairs, less than two percent, for vehicles that were diagnosed with corrosion in the PCM connector after any of the above referenced bulletins had been performed.

Request 13

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

Ford's review of information pertaining to this subject is consistent with Ford's previous analysis that was provided to the agency on August 14, 2009, in response to DP09-004. The complaint rate for engine stall/vehicle disablement reports due to this subject remains low. The reports continue to show that water entry into the PCM results in a variety of symptoms, including engine no start, rough idle, engine misfire, transmission performance degradation, engine stall (while driving or while parked), or simply illumination of the check engine light. Most of the field reports pertain to technicians seeking assistance with diagnostics and repairs, and most of the customer complaints convey either customer frustration concerning the repair process, or are requests or claims for financial assistance or compensation. Further, in the sixteen months of vehicle service following Ford's response to the Defect Petition, involving over 280,000 vehicles, there remain no responsive accident allegations, and no additional lawsuits or claims that relate to the alleged defect were identified.

Engineering Studies

In August 2005, Ford initiated an engineering study to investigate reports concerning water intrusion into the PCM on 1999 through 2006 model year Ford Windstar, Ford Freestar and Mercury Monterey vehicles. In November 2005, Technical Service Bulletin 05-23-7 was issued, which instructed technicians to inspect for evidence of water damage at the PCM and, if present, to seal the water leak paths in the cowl grille area. Also, a more robust foam gasket under the cowl clips was incorporated into production and released for service in May 2006. In July 2006, TSB 05-23-7 was superseded by TSB 06-14-10 to include inspection for excess body sealant that may interfere with proper sealing of the PCM cover, and to also include 2007 model year Ford Freestar and Mercury Monterey vehicles.

In March 2007 another engineering study was initiated to investigate reports of engine detonation concerns on 2006 and 2007 model year Ford Freestar and Mercury Monterey vehicles. Based on the results of this engineering study, TSB 07-14-1 was issued in June 2007 instructing technicians to apply sealer directly to the PCM to prevent water intrusion into the PCM. In February 2010, TSB 07-14-1 was superseded by TSB 10-3-3 to include 2004 and 2005 model year Ford Freestar and Mercury Monterey vehicles.

Ford believes that completion of both a cowl sealing TSB (05-23-07 or 06-14-10) and a PCM sealing TSB (07-14-1 or 10-3-3) provides a robust service repair for vehicles that are subject to water intrusion into the PCM, PCM connector or Transaxle vent tube. In fact, a review of available information identified no repeat repairs for water in the PCM for vehicles that have

had either the PCM sealing bulletin, or both the cowl sealing and PCM sealing bulletins completed.

Analysis of Reports

Similar to our analysis provided in Ford's August 14, 2009, response to DP09-004, this review found that most field reports relate to technicians seeking assistance with diagnostics and repairs. Also similar to our previous analysis, review of the customer complaints found that most convey customer frustration relating to the repair process, primarily for vehicles that had not yet had the PCM sealed, or are requests or claims for financial assistance or compensation. Very few of the customer complaints responsive to this request express any safety related concerns with their vehicles. Consistent with this assessment, Ford continues to find no allegations of accidents alleged to result from water in the PCM, PCM connector or transaxle vent tube in the subject vehicles. Though three reports were found that allege some type of "accident" resulting from vehicle stall, each is ambiguous whether they even relate to this subject. In addition, two of these "accidents" are alleged to have resulted from inability to control the vehicle, e.g., "...everything shut down, had no gas, brake or steering." This is inconsistent with vehicle operation in the event of an engine stall. Steering assist is maintained even following engine stall until vehicle speed reaches approximately 25 miles per hour, and then steering effort will increase as vehicle speed decreases due to diminished power assist, but is still readily manageable. Similarly, power assisted braking is also maintained for a few brake pedal applications before vacuum assist is depleted from the system. Nevertheless, these few ambiguous allegations are from a population of over 280,000 vehicles, some of which have been on the road for over seven years. Further, only one of these allegations concerns an alleged incident that has occurred within the past five years – certainly not indicative of an ongoing or notable risk to safety. One of the VOQs provided by the agency alleges an accident (VOQ #10311522) regarding a 2005 Ford Freestar (VIN: 2FMDA52265BA15176) in February 2010, although the information provided in the VOQ is not clear whether this incident even relates to the subject of this investigation. A search of Ford's data systems did not locate any contact with Ford regarding the alleged accident.

The complaint rate in the subject vehicles remains low and is comparable to those of other stalling related investigations the agency has recently closed. The complaint rate for all engine related loss of motive power while driving complaints due to water intrusion in the PCM or PCM connector is approximately 1.3 complaints per 1,000 vehicles (1.3/K) for 2004 model year subject vehicles, 2.0/K for 2005 model year subject vehicles, and substantially lower for 2006 and 2007 model year subject vehicles. In comparison, the complaint rate for the subject vehicles in PE08-061, which the agency closed in April 2009 with no action, was reported in the agency's closing resume as 3.7 complaints per thousand vehicles (3.7/K). The agency's closing resume for PE08-061 states "... the SWD [stalls while driving] complaint and warranty rates for the subject vehicles are similar to rates observed in prior investigations involving similar categories of engine stall consequences that were closed with no action." Similarly, the agency also closed EA07-018 based on "relatively low rates ... when compared with prior investigations." The vehicles that were the subject of that investigation had complaint rates averaging 5.3/K for 2002 through 2005 model year vehicles.

Furthermore, a review of the stalling related complaints due to water in the PCM or PCM connector included in this response found that customers also often reported symptoms such as running rough, bucking, jerking, or transaxle related shifting concerns associated with the alleged loss of motive power while driving events, and that relatively few reports allege that they lost motive power without warning.

Transaxle Vent

The agency again requested information and reports pertaining to water entry into the transaxle through the vent tube. As previously stated in our August 14, 2009, response to DP09-004, although the potential for water entry into the transaxle through the vent tube was identified in Ford's TSB 06-14-10, our review of reports continues to find very few that make any reference to water in the transaxle. Water in the transaxle will typically cause the fluid to turn to an unmistakable milky pink color. The lack of technician reference to milky pink colored transaxle fluid in the warranty claims and field reports indicates that this condition, though possible, is uncommon. Likewise, this indicates that the ambiguous transmission related records that are being provided to the agency are most likely also not related to water entry into the transaxle through the vent tube.

Conclusion

Ford began monitoring this subject in 2005 and has issued service bulletin communications to technicians to improve vehicle diagnostic and repair procedures (the most recent in February 2010), and also incorporated design improvements for both production and service. Water entry into the PCM may result in a variety of symptoms depending on which PCM circuits are affected, including engine no start, rough idle, engine misfire, transmission performance degradation and lack of gear engagement, engine stall (while driving or parked), or simply illumination of the check engine light. Reports of engine stall are often accompanied with reported driveability symptoms preceding the alleged stall. Reports relating to water entry into the transaxle through the vent tube are few, and also result in a variety of symptoms. Customer complaints are primarily related to inconvenience with the repair process or overall vehicle dissatisfaction. In the event of a stall, the vehicles remain readily controllable, and can be safely maneuvered and stopped. The overall complaint rate specifically for engine related reports due to the subject of this information request continues to be low, and comparable to rates in other similar stalling related investigations that the agency has recently closed. Ford believes consideration of all of the factors relating to this subject continues to support the conclusion that water entry into the PCM, PCM connector or transaxle vent tube is a customer satisfaction issue and that it does not present an unreasonable risk to safety in these vehicles.

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