

Table 1-1 below summarizes additional records that may relate to the subject condition. GM has organized the records by the GM file number within each attachment. Previously, GM provided 31 field reports in response to PE07-0013. GM determined that 26 of the 31 reports may be related to corrosion of the MRA feed and return pipes.

TYPE OF REPORT	GM REPORTS	SUBCATEGORIES			
		CORRESPONDING TO NHTSA REPORTS	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	NUMBER WITH INJURIES/FATALITIES
Owner Reports	6	1	0	0	0
Field Reports	0	0	0	0	0
Not-In-Suit Claims	0	0	0	0	0
Subrogation Claims	0	0	0	0	0
Third Party Arbitration Proceedings	0	0	0	0	0
Product Liability Lawsuits	1	0	0	0	0
Total Reports (Including Duplicates)	7	1	0	0	0
Total Vehicles with Reports (Unique VIN)	7	1	0	0	0

TABLE 1-1: REPORT BREAKDOWN FOR SUBJECT VEHICLES FOR ANY FUEL PUMP LEAKAGE

TYPE OF REPORT	GM REPORTS	SUBCATEGORIES			
		CORRESPONDING TO NHTSA REPORTS	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	NUMBER WITH INJURIES/FATALITIES
Owner Reports	6	1	0	0	0
Field Reports	0	0	0	0	0
Not-In-Suit Claims	0	0	0	0	0
Subrogation Claims	0	0	0	0	0
Third Party Arbitration Proceedings	0	0	0	0	0
Product Liability Lawsuits	0	0	0	0	0
Total Reports (Including Duplicates)	6	1	0	0	0
Total Vehicles with Reports (Unique VIN)	6	1	0	0	0

TABLE 1-1: REPORT BREAKDOWN FOR SUBJECT VEHICLES WITH FUEL PUMP LEAKS DUE TO PERFORATION CAUSED BY CORROSION

The sources of the requested information and the last date the searches were conducted are tabulated in Table 1-2 below.

Source System	Last Date Conducted
Customer Assistance Center	9/24/2007
Technical Assistance Center	10/9/2007
Field Information Network Database (FIND)	10/11/2007
Company Vehicle Evaluation Program (CVEP)	9/24/2007
Field Product Report Database (PRD)	10/11/2007
Legal Employee Self Insured Services (ESIS)	10/2/2007

TABLE 1-2: DATA SOURCES

2. 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. GM'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 a fire is alleged;
 - k. Whether property damage is alleged;
 - l. Number of alleged injuries, if any; and
 - m. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

The requested information is provided on the Att_1_GM disc in the folder labeled Q_02 refer to the Microsoft Access 2000 file labeled, "Q_02_REQUEST NUMBER TWO DATA".

3. 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 GM used for organizing the documents.

Copies of the records summarized in Table 1-1 are on the Att_1_GM disc embedded in the folder labeled Q_02; refer to the Microsoft Access 2000 file labeled, "Q_02_REQUEST NUMBER TWO DATA". GM has organized the records by the GM file number within each attachment.

4. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and

reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

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

- a. GM'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."

Tables 4-1 thru 4-4 summarize the regular and extended warranty claims for the subject vehicles that were collected since GM's response to PE07-013 on May 21, 2007. GM identified 60 claims that may be related to the alleged condition as shown in Tables 4-1 and 4-3. GM determined that 26 warranty claims may be related to perforation of the MRA feed and return pipes caused by corrosion as shown in Tables 4-2 and 4-4. A summary of the warranty claims, including the information requested in 4(a-k), is provided on the Att_1_GM disc in the folder labeled Q_04; refer to the Microsoft Access 2000 file labeled, "Q_04_WARRANTY DATA."

MAKE	MODEL	2002	2003	TOTAL
Chevrolet	2WD TrailBlazer	0	0	0
Chevrolet	2WD TrailBlazer EXT	0	0	0
Chevrolet	4WD TrailBlazer	5	7	12
Chevrolet	4WD TrailBlazer EXT	2	9	11
GMC	2WD Envoy	0	0	0
GMC	2WD Envoy XL	0	0	0
GMC	4WD Envoy	1	3	4
GMC	4WD Envoy XL	0	0	0
Total		8	19	27

TABLE 4-1 REGULAR WARRANTY CLAIMS FOR ANY FUEL PUMP LEAKAGE

MAKE	MODEL	2002	2003	TOTAL
Chevrolet	2WD TrailBlazer	0	0	0
Chevrolet	2WD TrailBlazer EXT	0	0	0
Chevrolet	4WD TrailBlazer	2	2	4
Chevrolet	4WD TrailBlazer EXT	0	8	8
GMC	2WD Envoy	0	0	0
GMC	2WD Envoy XL	0	0	0
GMC	4WD Envoy	1	3	4
GMC	4WD Envoy XL	0	0	0
Total		3	13	16

TABLE 4-2 REGULAR WARRANTY CLAIMS FOR FUEL PUMP LEAKS DUE TO PERFORATION CAUSED BY CORROSION

MAKE	MODEL	2002	2003	TOTAL
Chevrolet	2WD TrailBlazer	0	0	0
Chevrolet	2WD TrailBlazer EXT	0	0	0
Chevrolet	4WD TrailBlazer	8	10	18
Chevrolet	4WD TrailBlazer EXT	2	5	7
GMC	2WD Envoy	0	0	0
GMC	2WD Envoy XL	0	0	0
GMC	4WD Envoy	2	3	5
GMC	4WD Envoy XL	1	2	3
Total		13	20	33

TABLE 4-3 EXTENDED WARRANTY CLAIMS FOR ANY FUEL PUMP LEAKAGE

MAKE	MODEL	2002	2003	TOTAL
Chevrolet	2WD TrailBlazer	0	0	0
Chevrolet	2WD TrailBlazer EXT	0	0	0
Chevrolet	4WD TrailBlazer	3	3	6
Chevrolet	4WD TrailBlazer EXT	0	1	1
GMC	2WD Envoy	0	0	0
GMC	2WD Envoy XL	0	0	0
GMC	4WD Envoy	1	1	2
GMC	4WD Envoy XL	0	1	1
Total		4	6	10

TABLE 4-4 EXTENDED WARRANTY CLAIMS FOR FUEL PUMP LEAKS DUE TO PERFORATION CAUSED BY CORROSION

The sources of the requested information and the last date the searches were conducted are shown in Table 4-5 below.

SOURCE SYSTEM	LAST DATE GATHERED
GM CARD - regular warranty	9/26/2007
Motors Insurance Corporation (MIC) - extended warranty	10/5/2007
Universal Warranty Corporation (UWC) - extended warranty	9/20/2007

TABLE 4-5: DATA SOURCES

On May 21, 2007, GM provided 1106 MIC extended warranty claims in response to the NHTSA information request PE07-013. While reviewing claims for this information update, GM found additional information for the MIC extended warranty claims and has determined that only 150 claims are related to the alleged condition. A summary of the claims is provided in Table 4-6 below. Of the 150 extended warranty claims, GM has found 46 claims that may be related to corrosion of the MRA feed and return pipes as shown in Table 4-7. With this response, GM is providing two extended warranty files that include the MIC and UWC warranty claims that are responsive to the NHTSA's request.

MAKE	MODEL	2002	2003	TOTAL
Chevrolet	2WD TrailBlazer	2	4	6
Chevrolet	2WD TrailBlazer EXT	0	3	3
Chevrolet	4WD TrailBlazer	69	19	88
Chevrolet	4WD TrailBlazer EXT	7	18	25
GMC	2WD Envoy	1	1	2
GMC	2WD Envoy XL	0	0	0
GMC	4WD Envoy	14	5	19
GMC	4WD Envoy XL	3	4	7
Total		96	54	150

TABLE 4-6 EXTENDED WARRANTY CLAIMS FOR ANY FUEL PUMP LEAKAGE (PE07-013)

MAKE	MODEL	2002	2003	TOTAL
Chevrolet	2WD TrailBlazer	0	0	0
Chevrolet	2WD TrailBlazer EXT	0	0	0
Chevrolet	4WD TrailBlazer	25	5	30
Chevrolet	4WD TrailBlazer EXT	4	5	9
GMC	2WD Envoy	0	0	0
GMC	2WD Envoy XL	0	0	0
GMC	4WD Envoy	3	1	4
GMC	4WD Envoy XL	2	1	3
Total		34	12	46

TABLE 4-7 EXTENDED WARRANTY CLAIMS FOR FUEL PUMP LEAKS DUE TO PERFORATION CAUSED BY CORROSION (PE07-013)

The warranty data provided has limited analytical value in analyzing the field performance of a motor vehicle component. The warranty records do not contain sufficient information to establish the condition of the part at the time of the warranty correction; and service personnel may not consistently use the appropriate labor and trouble codes. Warranty numbers represent claims by our dealers for reimbursement for parts and labor costs incurred in performing warranty service for our customers. Consequently, some of these warranty claims are not related to the alleged defect.

GM's warranty database does not contain the following information: vehicle owner's name or telephone number, replacement part number description, or customer concern statement. GM is providing a field labeled "Verbatim Text" in response to request 4K (dealer/technician comment). The verbatim text is an optional field in the GM warranty system for the dealer to enter any additional comments that may be applicable to the warranty claim. The verbatim text field is not required to be completed for every warranty claim.

The GM Warranty databases do not contain vehicle owner names and telephone numbers. The UWC extended warranty system does not use the GM labor code or labor code description and it does not contain the repairing dealer code, trouble code or trouble code description.

- Describe in detail the search criteria used by GM 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 GM 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 GM 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.

The GM regular warranty and MIC claims that may relate to the subject condition were collected by searching for the labor codes listed in Table 5-1 below.

LABOR CODE	DESCRIPTION
L1200	SENDER/PUMP-FUEL TANK UNIT-REPLACE
L1225	SENDER/PUMP-LFT TNK UNIT-REPLACE
L1228	SENDER/PUMP-RR TNK UNIT-REPLACE
Z1241	PRODUCT LIABILITY/INVESTIGATION REP PR (GOODWILL)
Z1242	PAR - REPAIRS/REIMBURSEMENT (GOODWILL)

TABLE 5-1 LABOR CODES USED IN WARRANTY SEARCH

The labor codes Z1241 and Z1242 can be used by dealers for reimbursement for goodwill warranty repairs. They are not specific to replacement of the subject components. Labor codes L1200, L1225 and L1228 are used by dealers for reimbursement for warranty repairs related to replacement of the subject component.

GM reviewed the regular warranty claims that included the labor and customer codes listed in Tables 5-1 and 5-2.

CUSTOMER CODE	DESCRIPTION:
VN	VISUAL: LEAK/LEAKS(MISSING)
OP	OPERATION: ODOR

TABLE 5-2 CUSTOMER CODES USED IN WARRANTY SEARCH

The MIC and UWC extended warranty data was collected using a search of the labor codes listed in Table 5-1. GM reviewed the MIC warranty and included claims that included the customer codes listed in Table 5-2. The UWC extended warranty claims do not contain trouble codes. GM reviewed the UWC claims and included claims that stated the fuel pump module leaked fuel.

The warranty data provided has limited analytical value in analyzing the field performance of a motor vehicle component. The warranty records do not contain sufficient information to establish the condition of the part at the time of the warranty correction; and service personnel may not consistently use the appropriate labor and trouble codes. Warranty numbers represent claims by our dealers for reimbursement for parts and labor costs incurred in performing warranty service for our customers.

The subject vehicles are covered by a bumper-to-bumper new vehicle warranty for three years or 36,000 miles whichever occurs first. Many different extended warranty options are available through GM dealerships. They are offered at different prices and for varying lengths of time, based on customer's preference, up to 7 years from the date of purchase or up to a total of 100,000 vehicle miles. The General Motor's warranty system does not contain information on the number of vehicles that have extended warranty coverage. The current number of

extended warranty coverage contracts on the subject vehicles that have been sold by MIC regardless of status (in-force, expired, cancelled) as of October 5, 2007 is contained in Table 5-3.

MAKE	MODEL	2002	2003	TOTAL
CHEVROLET	TRAILBLAZER	80,500	54,027	134,527
CHEVROLET	TRAILBLAZER EXT	8,037	26,170	34,207
GMC	ENVOY	37,714	23,791	61,505
GMC	ENVOY XL	4,367	17,536	21,903
TOTAL		132,620	123,527	252,142

TABLE 5-3: MIC EXTENDED WARRANTY COVERAGE CONTRACTS SOLD

6. State the number of each of the following that GM has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):
- Subject component; and
 - Any kits that have been released, or developed, by GM 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 GM is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

An electronic summary table of the requested service part information for the subject components sold by GM through October 9, 2007 is included in the Attachment 1 CD, in a folder named Response to Q6.

These sales numbers represent the total MRA part sales to dealers in the US and Canada for the subject vehicles. This data has limited analytical value in analyzing the field performance of a motor vehicle component because the records do not contain sufficient information to establish the reason for the part sale. It is not possible from this data to determine the number of these parts that have been installed in the subject vehicles or the number remaining in dealer or replacement part supplier inventory.

This table contains service part numbers, part description, part usage information including other GM vehicles that contain the identical component, part sales figures by month and calendar year and the supplier's name and address, contact name and phone number.

7. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations including, but not limited to, product and design development tests (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, GM. For each such action, provide the following information:
- 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.

<p>Action 7-A: MRA Field Return Component Analysis Start Date: 03/2007 End Date: 11/2007 Engineering Group: GM Engineering Attachments: Documents can be found on the Att_2_GM confidential disk in the folder labeled Q_07, refer to the file labeled, Q_07_A Component Analysis. Description: GM is obtaining several field samples of MRA units to determine the long term durability of the MRA flange when exposed to different environments. Summary of Action: Field samples were being collected and analyzed. Some MRA units exposed to higher corrosion environments exhibited corrosion of the flange assembly at a different rate than those exposed to a low or non-corrosion environment.</p>
<p>Action 7-B: GM Management Reviews Start Date: 7/2007 End Date: 10/2007 Engineering Group: GM Engineering Attachments: Documents can be found on the Att_2_GM confidential disk in the folder labeled Q_07, refer to the file labeled, Q_07_MRA Presentations. Description: Ongoing management reviews of the MRA field component study. The reviews include data from the field study, review of GM field reports and warranty claims to determine future incident rates of corrosion of the MRA flange. Summary of Action: GM has determined that current incident rates based on extended warranty and field reports of MRA leaks caused by corrosion differ significantly from the projected field return analysis of corrosion progression on the MRA flange</p>
<p>Action 7-C: GM Warranty Analysis Start Date: 10/2007 End Date: 10/2007 Engineering Group: GM Engineering Attachments: Documents can be found on the Att_2_GM confidential disk in the folder labeled Q_07, refer to the file labeled, Q_07_MRA Warranty Analysis. Description: GM regular and extended warranty claim analysis. Summary of Action: GM reviewed regular and extended warranty claims for MRA feed and return pipe leaks due to corrosion and predicted incident rates.</p>

8. In consideration of any additional information accumulated and evaluated in preparation of GM's response to this letter, furnish an update to GM'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.

The failure mechanism is a leak in the fuel feed and return pipes of the MRA flange resulting from perforation caused by corrosion, on vehicles operated in a corrosive environment. As perforation develops, a small amount of fuel may seep out of the MRA and accumulate on the top of the fuel tank in the recessed cavity. Under certain driving maneuvers, the accumulated fuel may drip down the sides of the fuel tank to the ground.

The fuel system design incorporates a check valve that limits the amount of fuel in the supply pipe to approximately 7 ounces. This is the maximum amount of fuel that can drain from the fuel line if the fuel supply or return pipe is perforated and the vehicle ignition is off.

As stated in GM's PE response, early indication of a fuel leak may include odors that are related to fuel vapors that could pass through openings as small as 0.005". Accordingly, GM believes owners are alerted of the condition prior to any significant amount of fuel leakage. In fact, GM reports and warranty records indicate that customers have noticed fuel vapor odors associated with the alleged condition prior to any noticeable liquid fuel leakage.

Several factors in the vehicle design minimize the potential for fuel contact with ignition sources:

- The exhaust system is located on the passenger side of the vehicle approximately 185 mm from the fuel tank heat shield that is mounted to the fuel tank.
- The fuel tank heat shield is designed such that it extends above the height of the fuel tank and into the prop shaft tunnel.
- The fuel tank is designed such that the MRA is installed in a depression on the top middle surface of the fuel tank.

GM has obtained over 41 U.S. and Canadian MRA field samples from subject vehicles operated in the 0-99 percentile corrosion areas. The MRA flanges and pipes were analyzed for plating thickness, nickel content and corrosion growth on the flange at various locations. The component exposure environments were organized into 4 severity categories including: 0-25%, 25-50%, 50-80% and 80-99% (Canada only) corrosion regions. GM attempted to use this field study data to determine metal perforation from corrosion growth. However, the analysis does not correlate with the Weibull projections based on warranty and extended warranty claims for fuel leaks of the MRA feed and return pipes caused by corrosion.

It was noted during the analysis process that field samples with pinhole perforation did not exhibit fuel leakage while in service, indicating that MRA feed and return pipes may not experience leakage at the initial stage of tube perforation due to corrosion alone.

GM reviewed regular and extended warranty claims for MRA feed and return pipe leaks due to corrosion and found the incident rate to be approximately 0.6 IPTV for 5 years of exposure. The Weibull analysis based on regular and extended warranty claims, predicts an incident rate of 8.5 IPTV at 7 years exposure.

Additionally, GM reviewed field reports, VOQs, regular and extended warranty claims for MRA feed and return pipe leaks due to corrosion. The highest leak rate for any of the 25-80 percentile corrosion states is less than 1.8 IPTV at approximately 5 years exposure.

GM reviewed the reports included with this inquiry and has found that of the 47 Vehicle Owner Questionnaires (VOQs) sent in response to this information request, that 36 may be related to

leaks of the MRA feed and return pipes caused by corrosion. The remaining 11 claims are not related to the corrosion issue.

GM does not believe that this condition poses an unreasonable risk to motor vehicle safety because:

- Owners may notice fuel odors from leaks in the MRA feed and return.
- The vehicle design minimizes the potential for fuel contact with ignition sources.
- The incident leak rate for MRA feed and return pipes caused by corrosion is approximately 0.6 IPTV for 5 years of exposure.
- To date, GM is not aware of any fires related to this condition.

* * *

GM claims that certain information, in documents that are part of lawsuit and claims files maintained by the GM Legal Staff, is attorney work product and/or privileged. That information includes notes, memos, reports, photographs, and evaluations by attorneys (and by consultants, claims analysts, investigators, and engineers working at the request of attorneys). GM is producing responsive documents from claims files that are neither attorney work product nor privileged, and withholding those that are attorney work product and/or privileged.

This response is based on searches of General Motors Corporation (GM) locations where documents determined to be responsive to your request would ordinarily be found. As a result, the scope of this search did not include, nor could it reasonably include, "all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 1998, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

- a. Design, engineering, analysis, modification or production (e.g. quality control);
- b. Testing, assessment or evaluation;
- c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
- d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers."

This response was compiled and prepared by this office upon review of the documents produced by various GM locations, and does not include documents generated or received at those GM locations subsequent to their searches.

Letter to Kathleen C. DeMeter
EA07-009 / N070076A Response
October 24, 2007
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Please contact me if you require further information about this response or the nature or scope of our searches.

Sincerely,

A handwritten signature in black ink, appearing to read "G. P. Kent", with a long horizontal flourish extending to the right.

Gay P. Kent
Director
Product Investigations

Attachments

**N070076A
EA07-009**

ATTACHMENT "1"

GM NON-CONFIDENTIAL MATERIAL

**N070076A
EA07-009**

ATTACHMENT "2"

GM CONFIDENTIAL MATERIAL

**GM CONFIDENTIAL MATERIAL
HAS BEEN REMOVED FROM THIS
ATTACHMENT AND SUPPLIED TO
THE OFFICE OF THE CHIEF COUNSEL**