



GENERAL MOTORS CORPORATION

Vehicle Structure & Safety Integration

12/10/08

Date 12 Nov 08

Thomas Z. Cooper, Chief
Vehicle Integrity Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Ave., S. E., Room W46-409
Washington, D.C. 20590

N080317

NVS-212am
PE08-054

Dear Mr. Cooper:

This letter is General Motors' (GM) response to your information request (IR), dated 19 Sept 08, regarding allegations of stop lamp malfunction in MY 2005-2007 Pontiac G6 vehicles manufactured by General Motors Corporation (GM).

Your questions and our corresponding replies are as follows:

1. **State, by model and model year, the number of subject vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by GM, state the following:**
 - a. Vehicle identification number (VIN);
 - b. Make;
 - c. Model;
 - d. Model Year;
 - e. Date of manufacture;
 - f. Date warranty coverage commenced; and
 - g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA."

General Motors is providing the number of subject vehicles produced for sale or lease in the United States by make, model and model year in Table 1 below:

MAKE/ MODEL	2005 MY	2006 MY	2007 MY	TOTAL
Pontiac G6	62,481	170,394	164,307	397,182

TABLE 1 VEHICLE PRODUCTION

The production information requested in 1a-1g is provided on the ATT_1_GM disk; folder labeled "Q_01:" refer to the Microsoft Access 2000 file labeled "Q_01_PRODUCTION DATA".

2. **State the number of each of the following, received by GM, or of which GM 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

Product Investigations

Mail Code: 480-210-G11 • 30001 Van Dyke • Warren, MI 48090

PE08-054_N080317 Response.docx

- alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d. Property damage claims; and
 - e. Third-party arbitration proceedings where GM is or was a party to the arbitration; and
 - f. Lawsuits, both pending and closed, in which GM 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" and "d," provide a summary description of the alleged problem and causal and contributing factors and GM'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.

Table 2-1 below summarizes records that may relate to the alleged defect. GM has organized the records by the GM file number within each attachment.

TYPE OF REPORT	GM REPORTS	SUBCATEGORIES				
		CORRESPONDING TO NHTSA REPORTS	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	NUMBER WITH INJURIES/FATALITIES	NUMBER WITH FIRES
Owner Reports	42	4	0	0	0	0
Field Reports	380	3	0	0	0	0
Not-In-Suit Claims	1	0	0	0	0	0
Subrogation Claims	0	0	0	0	0	0
Third Party Arbitration Proceedings	0	0	0	0	0	0
Product Liability Lawsuits	0	0	0	0	0	0
Total Reports (Including Duplicates)	423	7	0	0	0	0
Total Vehicles with Reports (Unique VIN)	398	4	0	0	0	0

TABLE 2-1: REPORT CLASSIFICATION - ALLEGATIONS OF STOP LAMP MALFUNCTION

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

SOURCE SYSTEM	LAST DATE GATHERED
Customer Assistance Center	25 Sept 08
Technical Assistance Center	25 Sept 08
Field Information Network Database (FIND)	24 Sept 08
Field Product Report Database (FPRD)	24 Sept 08
Company Vehicle Evaluation Program (CVEP)	23 Sept 08
Captured Test Fleet (CTF)	23 Sept 08
Early Quality Feedback (EQF)	23 Sept 08
Legal / Employee Self Insured Services (ESIS)/Product Liability Claims/ Lawsuits	2 Oct 08

TABLE 2-2: DATA SOURCES

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. 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 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."

The requested information is provided on the ATT_1_GM disk; folder labeled "Q_03:" refer to the Microsoft Access 2000 file labeled "Q_03_REQUEST NUMBER TWO DATA."

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 GM used for organizing the documents.

Copies of the records summarized in Table 2-1 are embedded in the file provided in ATT_1_GM disk; folder labeled "Q_03:" refer to the Microsoft Access file labeled "Q_03_REQUEST NUMBER TWO DATA." GM has organized the records by the GM file number within each attachment.

To date, GM's investigation of the alleged defect has not included an assessment of the cause(s) of each incident responsive to Request No. 2. Some incident reports may not contain sufficient reliable information to accurately assess cause. Assessments of other incidents (from lawsuits and claims) may be attorney work product and/or privileged. Therefore,

information and documents provided in this response, if any, consist only of non-attorney work product and/or non-privileged material for incidents that have been investigated and assessed.

5. 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."

For the subject vehicles, the regular warranty, goodwill warranty, and MIC service contract claims with stop lamp malfunction are summarized by model and model year in Table 5-1. For the subject vehicles the UWC service contract claims with indication of stop lamp malfunction are summarized by model and model year in Table 5-2. A summary of the warranty claims, including the information requested in 5(a-k), is provided on the ATT_1_GM disk; folder labeled "Q_05:" refer to the Microsoft Access 2000 file labeled "Q_05_WARRANTY DATA." A list of the labor codes, customer complaint codes and trouble codes used to collect the warranty data is provided in response to item No. 6.

MAKE/ MODEL	Type	2005 MY	2006 MY	2007 MY	TOTAL
Pontiac G6	Regular	579	754	232	1,565
Pontiac G6	MIC	43	25	2	70

TABLE 5-1: REGULAR WARRANTY AND MIC SERVICE CONTRACT CLAIMS WITH STOP LAMP MALFUNCTION

MAKE/ MODEL	Type	2005 MY	2006 MY	2007 MY	TOTAL
Pontiac G6	UWC	0	3	0	3

TABLE 5-2: UWC SERVICE CONTRACT CLAIMS

SOURCE SYSTEM	LAST DATE GATHERED
GART - regular warranty	13 Oct 08
MIC - service contract claims	14 Oct 08
UWC - service contract claims	23 Sept 08

TABLE 5-3: DATES PULLED

GM searched the GM Global Analysis and Reporting Tool (GART-regular warranty), the Motors Insurance Corporation (MIC- service contract claims), and the Universal Warranty Corporation (UWC- service contract claims) databases to collect the warranty data for this response.

GM's warranty database does not contain the following information: vehicle owner's name, telephone number, or customer concern statement. GM is providing a field labeled "Verbatim Text" in response to request 5K (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 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.

A summary of warranty claims that may relate to the subject condition is provided on the ATT_1_GM disk; folder labeled "Q_05:" refer to the Microsoft Access 2000 file labeled "Q5_WARRANTY DATA."

6. **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 Global Analysis and Reporting Tool (GART-regular warranty) regular warranty database and the Motors Insurance Corp (MIC) service contract claims database were searched using the labor codes that may be related to the alleged defect, listed in Table 6-1. Universal Warranty Corporation (UWC) does not use labor codes or trouble codes.

The following process was used to sort these claims:

- All claims with customer codes shown in Table 6-2 were determined to be responsive unless the verbatim indicated that the claim was unrelated.
- Warranty under labor codes H2642 (Sensor, Brake Pedal Position – Replace) and H2643 (Brake and Accelerator Pedal Adjuster Switch Replacement) with the trouble codes in Table 6-3 and customer codes in Table 6-4 were determined to be responsive unless the verbatim indicated that the claim was unrelated.
- The verbatims of the remaining claims were then read and the claim was determined to be responsive if the verbatim related to the alleged defect.

LABOR CODE	DESCRIPTION:
H2642	Sensor, Brake Pedal Position - Replace
H2643	Brake and Accelerator Pedal Adjuster Switch Replacement
N4800	Body Control Module Replacement
H2640	Pedal And/Or Bushing, Brake - R&R Or Replace
H9991	Customer Concern Not Duplicated
N2700	Switch, Stop Lamp - Adjust
Z1241	Personal Property Damage
Z1242	RPR/Reimbursement-Product Allegation
Z1243	Inspection-Product Allegation Resolution

TABLE 6-1 LABOR CODES USED IN WARRANTY AND MIC SEARCH

CUSTOMER CODE	DESCRIPTION:
O8	OPERATION: WON'T TURN OFF
WB	WARNING LIGHTS: BRAKE LIGHT

TABLE 6-2 CUSTOMER CODES USED IN WARRANTY AND MIC SORTING

TROUBLE CODE	DESCRIPTION:
1D	BROKEN
6C	COMPONENT-INOPERATIVE
6D	COMPONENT -INTERMITTENT
6F	COMPONENT -OPEN
3A	MISADJUSTED
9Z	NO TROUBLE FOUND
3L	OUT OF CALIBRATION
3X	REGISTERS INCORRECTLY
6N	CONNECTOR - PARTIAL CONNECTED

TABLE 6-3 TROUBLE CODES USED IN LABOR CODE H2642 AND H2643 WARRANTY AND MIC SORTING

CUSTOMER CODE	DESCRIPTION:
OG	OPERATION: EXCESS EFF (EXCESS PLAY)
OJ	OPERATION: INOPERATIVE (HARSH)
OF	OPERATION: ENGAGE/DIS(EXCESS EFF)
O7	OPERATION: NO MAINTAIN ADJ

TABLE 6-4 CUSTOMER CODES USED IN LABOR CODE H2642 AND H2643 WARRANTY AND MIC SORTING

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM 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 GM is planning to issue within the next 120 days.

There is one Preliminary Information (PI) document that may relate to the subject condition and that has been issued to dealers, regional or zone offices, field offices, fleet purchasers or other entities.

GM is planning to issue a Technical Service Bulletin (TSB) that relates to the subject condition within the next 120 days. The PI document and a draft of the bulletin are included in the

ATT_1_GM disk; folder labeled "Q_07." The preceding information was collected from GM Service Operations and was completed on 11 Nov 08.

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, GM. 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.

The information listed in Table 8-1 below is a summary of actions that have been conducted, are being conducted, are planned, or are being planned by or for GM regarding the subject condition on the subject vehicles as of 13 Oct 08. Documents and additional supporting information are included in the Attachments as noted in the table.

Action 8-1: Design, Development, and Validation of the Brake Apply Sensing System (BASS) Start Date: May 02 End Date: Sept 08 Engineering Group: GM Engineering Attachments: ATT_2_GM_Conf disk; folder labeled "Q_08 GM Validation" Description: GM's engineering documents Summary: The BASS for the subject vehicles passed all validation tests.
Action 8-2: Design, Development, and Validation of the Brake Apply Sensing System (BASS) Start Date: Sept 04 End Date: Oct 08 Engineering Group: Delphi Engineering Attachments: ATT_3_SPLR_Conf disk; folder labeled "Q_08 Supplier Validation" Description: Delphi's engineering documents Summary: The BASS for the subject vehicles passed all validation tests.
Action 8-3: Design, Development, and Validation of the Brake Apply Sensing System (BASS) Start Date: Sept 08 End Date: Nov 08 Engineering Group: Delphi Engineering Attachments: ATT_3_SPLR_Conf disk; folder labeled "Q_08 Supplier Continuous Improvement" Description: Delphi's continuous improvement of the BASS on the subject vehicles. Summary: The BASS for the subject vehicles passed all validation tests.
Action 8-4: Engineering changes Start Date: Jul 02 End Date: Jan 06 Engineering Group: GM Engineering Attachment: ATT_2_GM_Conf disk; folder labeled "Q_08 GM Engineering changes" Description: GM's engineering changes of the BASS on the subject vehicles. Summary: GM released information and engineering changes to address customer concerns regarding the functionality and operation of the BASS.

Action 8-5: GM Investigation
Start Date: 17 Sept 08
End Date: Nov 08
Engineering Group: GM Engineering
Attachment: ATT_2_GM_Conf disk; folder labeled "Q_08 GM Investigation"
Description: Management reviews of the BASS and its operation.
Summary: GM's BASS investigation is continuing

TABLE 8-1 SUMMARY OF ACTIONS THAT HAVE BEEN CONDUCTED

9. Describe all modifications or changes made by, or on behalf of, GM 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 GM is aware of which may be incorporated into vehicle production within the next 120 days.

GM is providing a summary table of the changes and associated Engineering Work Orders (EWOs) that occurred to the subject vehicle's BASS in the ATT_2_GM_Conf disk; folder labeled "Q_09."

10. 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*):
- a. Subject component; and
 - b. 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 is provided on the ATT_1_GM disk; folder labeled "Q_10:" refer to the Microsoft Excel file labeled "Q_10_Part Sales." GM does not offer any kits for use in service repairs specifically related to the alleged defect.

These sales numbers represent sales to dealers in the US and Canada. 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 the 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.

11. Provide the following:

- a. One sample of the original subject component,**
- b. One sample each of all modified subject components as identified in response to request number 9 above, and**
- c. Two samples of failed field returned subject components.**

Enclosure 11 contains a sample of the latest service part for the subject component. The sample of the latest service part is representative of parts that GM has used in the replacement of the subject component. Some of the design versions installed in the subject vehicles are no longer produced for production or service. Refer to question 10 for a list of design versions of the subject component. Enclosure 11 also contains a field returned BCM.

12. State how the BPPS sensor and the subject vehicles Body Control Module (BCM) work together to illuminate the stop lamps. Also describe the process that dealership technicians would use to calibrate both components for proper stop lamp operation.

The Brake Apply Sensing System (BASS) is designed to sense, process, and communicate the brake pedal position to the vehicle subsystems. The BASS consists of a Brake Apply Sensor (BAS) and a portion of the Body Controller Module (BCM). The BAS is a potentiometer (variable resistor) that references the position of the brake pedal. The BCM provides a 5-volt reference signal to the BAS and the BAS outputs a signal voltage that varies in proportion to pedal position. The BAS signal voltage is monitored when the vehicle ignition key is in the ACCESORY, RUN, and CRANK positions. A portion of the BCM processes the BAS signal voltage and communicates actions to various vehicle subsystems. The BCM stores a "learned home position" of the BAS signal voltage for each specific vehicle that indicates the rest position of the brake pedal for that vehicle. The BCM will activate or deactivate the brake lamps based on changes to the pedal position (i.e. change in the signal voltage) with respect to the at-rest (learned-home) position.

A BCM that is installed at the vehicle assembly plant or in service has an unlearned BAS home position. Both the vehicle assembly and service instructions require a programming /diagnostic tool to command the BCM to learn a home position. This position is learned while the brake pedal is at rest. For the learn sequence to be valid, the BAS must output a signal voltage between 0.88V and 2.11V for 2005 and 2006 MY G6s and between 0.73V and 1.47V for 2007 MY G6s. If the signal voltage is within the learn window the learned home position will be stored in the BCM.

In service, the Tech 2 Diagnostic Tool is used to initiate the process to store the learned home position. It first prompts the technician to have the shift mechanism in the PARK position and to turn the ignition key to the RUN position. Secondly, it instructs the technician to apply the

vehicle park brake. Thirdly, it prompts the technician to make sure the brake pedal is not depressed. When the technician presses the OK button on the Tech 2 Diagnostic Tool, it sends a command to the BCM. It then stores the learned home position which has a design nominal value of 1.2 V, but varies from vehicle to vehicle. When a particular vehicle stores the learned home position, the learned home position for that vehicle will not change.

Once the home position is learned, the BCM uses an "offset-brake-on" value of 0.25 V to activate the brake lamps. This offset-brake-on position indicates that the BCM senses the brake pedal is depressed relative to the learned home position. As the brake pedal is depressed to the offset-brake-on position, the BCM activates the brake lamps, deactivates the cruise control, disengages the Transmission Clutch Converter (TCC), and, while in PARK, energizes the Brake Transmission Shift Interlock (BTSI) solenoid so that the shift mechanism can be removed from the PARK position. When the pedal returns to the "offset-brake-off" position, 0.13 V below the offset-brake-on position, the BCM deactivates the brake lamps, allows the cruise control to be activated and the TCC to engage, and, while in PARK, de-energizes the BTSI solenoid so that the shift mechanism cannot be removed from the PARK position.

13. Furnish 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.**

General Motors is continuing its investigation of the alleged defect. GM has no reports of crashes, injuries or fatalities as a result of the alleged defect.

The suspected failure mechanism and the associated failure modes are described in the following summary:

As described in response to question 12, the Body Control Module (BCM) receives a Brake Apply Sensor (BAS) signal voltage and uses that signal to activate or deactivate the brake lamps. The suspected failure mechanism is fretting corrosion at the terminal interface between the BCM and the instrument panel harness of the BAS circuits. Fretting corrosion causes an increase in resistance that results in a lower BAS signal voltage to the BCM.

As shown in Figure 13-1, when the signal voltage drops into a range that is above 0.49 volts, but below 0.13 volts below the learned home position, the BCM activates the brake lamps after five seconds. They remain activated while the signal voltage is in this range. When the brake pedal is depressed, the brake lamps are deactivated once the signal voltage rises above 0.13 volts below the learned home position. Depressing the brake pedal farther will activate the brake lamps once the signal voltage rises above 0.25 volts past the learned home position. Operators whose vehicles have this condition may notice that the cruise control will not engage and the brake pedal requires additional travel to remove the gear shift mechanism from PARK. Additionally, the transmission converter clutch will not engage.

The BCM control of the brake lamps goes into a different mode if the signal voltage drops below 0.49 volts. This condition indicates an "open circuit" and the BCM sets a diagnostic trouble code. In this mode, the BCM activates the brake lamps once the vehicle is shifted from PARK. The brake lamps will be deactivated anytime the vehicle speed is above 2 kph, is accelerating, and the throttle is engaged at least 20%. In this mode, the transmission converter clutch will not engage and operators may notice that the cruise control will also not engage. While in PARK, with the key in the ACCESSORY or RUN positions and the shifter button depressed, the BCM energizes the Brake Transmission Shift Interlock solenoid so that the shift mechanism can be moved from the PARK position.

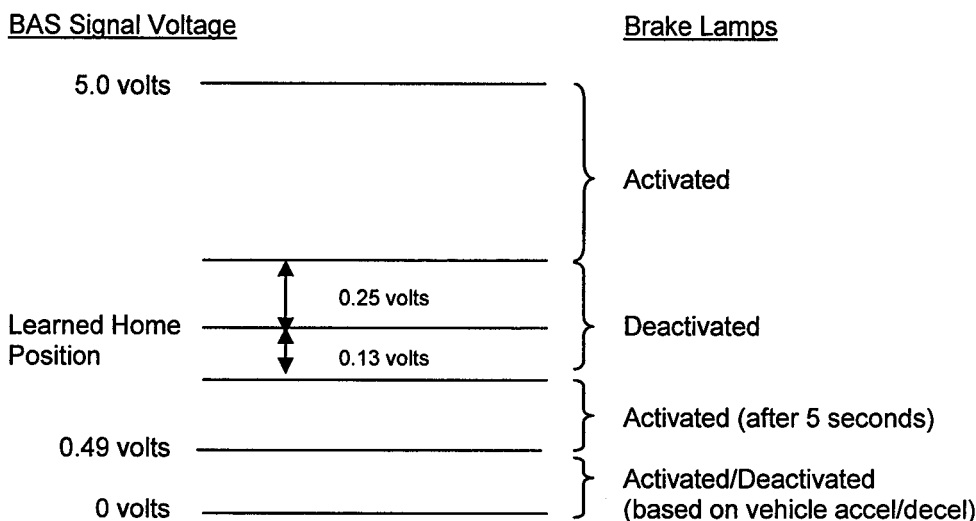


Figure 13-1 Brake Lamp function with respect to BAS signal voltage

* * *

General Motors requested assistance and documents from suppliers in responding to items 8, 9, and 11 and this response includes those documents received from suppliers.

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 2000, 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.

Please contact me if you require further information about this response or the nature or scope of our searches.

Sincerely,



Gay P. Kent
Director
Product Investigations

Attachments

**N080317
PE08-054**

GM CONFIDENTIALITY LETTER

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

**N080317
PE08-054**

SUPPLIER CONFIDENTIAL LETTER

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

N080317
PE08-054

ATTACHMENT “1”

GM NON-CONFIDENTIAL MATERIAL

**N080317
PE08-054**

ATTACHMENT "2"

GM CONFIDENTIAL MATERIAL

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

**N080317
PE08-054**

ATTACHMENT "3"
DELPHI CORPORATION
CONFIDENTIAL MATERIAL

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