



GENERAL MOTORS NORTH AMERICA
Structure & Safety Integration

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Jeffrey L. Quandt, Chief
Vehicle Control Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Ave., S. E., Room W48-307
Washington, D.C. 20590

N080292

NVS-213kmb
PE08-051

Dear Mr. Quandt:

This letter is General Motors (GM) response to your information request (IR), dated September 26, 2008, to investigate allegations of front suspension coil spring fracture in certain model year (MY) 2003 through 2006 Saab 9-3 vehicles manufactured by General Motors Corporation.

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." See Enclosure 1, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

General Motors is providing the number of subject vehicles in Table 1-1 produced for sale or lease in the United States by model and model year.

MAKE	MODEL	2003	2004	2005	2006	TOTAL
Saab	9-3	25,840	29,321	21,471	26,821	103,453

TABLE 1-1 SUBJECT VEHICLES

The production information requested in 1a-1g is provided on the disk in Attachment 1, in the folder labeled Q_01; refer to the Microsoft Access 2000 file labeled "Q_01PRODUCTION DATA." The GM database that contains Vehicle Identification Number (VIN) information does not include information on the state where an individual vehicle was sold. GM is providing the state where the vehicle was shipped in response to request 1g. For some of the subject vehicles, which have incomplete warranty files, the GM warranty system does not contain a warranty start date or state where the vehicle was shipped and therefore these fields are blank in the Microsoft Access 2000 file.

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:**

Product Investigations

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- 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 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" through "f," 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 could relate to the subject condition. 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
Owner Reports	37	2	0	0	0
Field Reports	10	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)	47	2	0	0	0
Total Vehicles with Reports (Unique VIN)	45	2	0	0	0

TABLE 2-1: REPORT BREAKDOWN FOR SUBJECT VEHICLES

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.

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	10/11/2008
Technical Assistance Center	10/9/2008
Field Information Network Database (FIND)	9/30/2008
Company Vehicle Evaluation Program (CVEP)	9/30/2008
Field Product Report Database (FPRD)	10/7/2008
Legal / Employee Self Insured Services (ESIS)	10/6/2008

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 coil spring/ tire contact is alleged;
- j. Whether a tire puncture is alleged;
- 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 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

The requested information is provided on the Att_1_GM disk in the 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 on the Att_1_GM disk embedded in the folder labeled Q_03; refer to the Microsoft Access 2000 file labeled, "Q_03_REQUEST NUMBER TWO DATA". GM has organized the records by the GM file number within each attachment.

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;
- k. Comment, if any, by dealer/technician relating to claim and/or repair;
- l. Whether coil spring/ tire contact is alleged; and
- m. Whether a tire puncture is alleged.

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

Tables 5-1 and 5-2 summarize the regular warranty and MIC and UWC Service Contract Claims for the subject vehicles that were collected by searching the labor codes that are related to the alleged defect. A summary of the warranty claims, including the information requested in 5(a-k), is provided on the Att_1_GM disk in the folder labeled Q_05; refer to the Microsoft Access 2000 file labeled, "Q_05_WARRANTY DATA."

MAKE	MODEL	2003	2004	2005	2006	TOTAL
Saab	9-3	523	460	180	59	1222

TABLE 5-1 REGULAR WARRANTY CLAIMS

MAKE	MODEL	2003	2004	2005	2006	TOTAL
Saab	9-3	26	9	0	0	35

TABLE 5-2 MIC AND UWC SERVICE CONTRACT CLAIMS

The sources of the requested information and the last date the searches were conducted are tabulated in Table 5-3 below.

SOURCE SYSTEM	LAST DATE GATHERED
Saab Cars USA - regular warranty	10/14/2008
Motors Insurance Corporation (MIC) - Service Contract Claims	10/17/2008
Universal Warranty Corporation (UWC) - Service Contract Claims	10/2/2008

TABLE 5-3: DATA SOURCES

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 Saab Cars USA, Inc 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 5K (dealer/technician comment) when included in the warranty claim.

The Motors Insurance Corp (MIC) Service Contract Claim system does not contain the vehicle owner information. The Universal Warranty Corporation (UWC) Service Contract-Claim 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.

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.

GM searched the Saab Cars USA database and the MIC Service Contract Claims database using the labor codes listed in table 6-1. The Saab Cars USA database includes verbatims for each claim. GM reviewed the verbatim for the claims that included the labor code and included those claims that stated the coil spring fractured. GM did not use trouble codes or customer codes to search for claims that may be related to the alleged condition. UWC does not use labor codes or trouble codes.

LABOR CODE	DESCRIPTION:
73111	SPRING, FRONT
E3020	Springs, Front Coil - Right - Replace
E3021	Springs, Front Coil - Left - Replace
E3027	Springs, Front Coil - Both - Replace
Z1241	Product Liability/Investigation REP PR (Goodwill)
Z1242	PAR - Repairs/Reimbursement (Goodwill)

TABLE 6-1 LABOR CODES USED IN WARRANTY SEARCH

The subject vehicles are covered by a bumper-to-bumper new vehicle warranty for four years or 50,000 miles whichever occurs first. Many different extended service coverage options are available through GM/Saab 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 number of extended service contracts on the subject vehicles that have been sold by MIC and UWC regardless of status (in-force, expired, cancelled) as of October 17, 2008 is contained in Tables 6-3 and 6-4.

MAKE	MODEL	2003	2004	2005	2006	TOTAL
Saab	9-3	1251	1220	561	750	3782

TABLE 6-2: MIC EXTENDED SERVICE COVERAGE CONTRACTS SOLD

MAKE	MODEL	2003	2004	2005	2006	TOTAL
Saab	9-3	668	469	178	258	1573

TABLE 6-3: UWC EXTENDED SERVICE COVERAGE CONTRACTS SOLD

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.

GM has not created any service bulletins related to the subject condition in the subject vehicles.

The data collection was completed on October 17, 2008.

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:

- Action title or identifier;
- The actual or planned start date;
- The actual or expected end date;
- Brief summary of the subject and objective of the action;
- Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
- 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.

Action 8-1: Specifications and Validation

Start Date: December 1998

End Date: January 2005

Engineering Group: GM Europe Engineering, Supplier MUBEA, Supplier Mannesman Sachs

Attachments: Att_2_GM_CONF Disk in the Response to Questions 8 - Q_08 Specs & Valid folder,

Att_3_SUPPLR_Mubea_CONF Disk in the Response to Questions 8 - Q_08 Specs & Valid folder.

Att_4_SUPPLR_SACHS_CONF Disk in the Response to Questions 8 - Q_08 Specs & Valid folder

Description: GM's suppliers and GMs test and validation processes, procedures and reports for the Saab 9-3 front suspension testing at the component, system and vehicle testing.

Summary: The information includes test results for the various tests and analysis of front suspension performance during the testing.

Action 8-2: Engineering Changes

Start Date: January 2003

End Date: April 2008

Engineering Group: GM Europe Engineering

Attachment: Att_2_GM_CONF Disk in the Response to Questions 8 - Q_08 Eng Changes folder.

Description: GMs engineering changes and continuous improvements to the front suspension system on the subject vehicles.

Summary: GM released information and engineering changes to address customer concerns regarding the functionality and operation of the front suspension system. The changes address customer concerns regarding front suspension noises and coil spring fracture.

Action 8-3: GM Investigation Start Date: February 2008 End Date: May 2008 Engineering Group: GM Engineering Attachment: Att_2_GM_CONF Disk in the Response to Questions 8 – Q_08 GM Investigation folder. Description: Evaluation reports, risk assessments, warranty analysis and management reviews of the front suspension system including product improvements to the front suspension system.
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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 spreadsheet and summary of the process changes that occurred to the front coil spring in the Att_2_GM_CONF Disk, in the folder labeled "Q_08 Engineering Changes", in a folder labeled: "Q_08Engineering Work Orders."

GM is not planning to incorporate any modifications or changes into production of the subject vehicles that relate to the alleged defect within the next 120 days.

10. Produce the following parts and kits:

- a. An exemplar sample of each design version of the subject component;
- b. Three field return samples of subject components that fractured and punctured a tire;
- c. Three field return samples of subject components that fractured but did not puncture a tire; and
- d. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

Enclosure 10a contains a service kit (1 exemplar pair) of the front suspension coil springs for the subject vehicles.

Enclosure 10b contains 3 field return components replaced by dealers and returned to GM that fractured and damaged a tire in a subject vehicle.

Enclosure 10c contains 3 field return components replaced by dealers and returned to GM that fractured and did not damage a tire in a subject vehicle.

11. 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 component is provided on the Att_1_GM disk; refer to the Microsoft Excel file in the folder labeled "Q_11A_PART SALES." GM does not record the state where the individual components are sold. Additionally, when the subject components are sent to the distribution center, GM is unaware of the final retail destination.

12. Provide the following information concerning the alleged defect in the subject vehicles:

- a. Identify and describe all design differences amongst the subject vehicles that could affect:**
 - (1) the likelihood of front coil spring fracture; (2) the location of coil spring fracture;**
 - or**
 - (3) the potential for tire damage resulting from coil spring fracture;**
- b. Provide GM's assessment of the predominant location(s) of front coil spring fracture, referenced in degrees revolution from the end of the bottom coil, in the subject vehicles;**
- c. State the conditions for which a fracture coil spring is most likely to contact and puncture a tire (e.g., vehicle speed, coil spring fracture location, steering angle); and**
- d. Describe, and provide copies of all documents relating to, all owner surveys, crash database analyses and vehicle testing conducted by, or on behalf of, GM to assess the safety consequences associated with the alleged defect in the subject vehicles.**

The front suspension coil spring is compressed and mounted to the strut cartridge between the upper and lower coil spring seats. The lower coil spring seat is designed such that it has an index channel for locating the bottom end of the coil spring (diagram included in response to Question 8 Engineering Changes) on either side of the vehicle. The design of the lower coil spring seat is such that it has a raised vertical flange that encompasses 270 deg of the outer edge of the coil spring seat. The remaining non-flanged 90 deg of the spring seat is located opposite the tire and wheel assembly on the inboard side of the strut. The non-flanged portion of the coil spring seat includes a 0.625 in. wide horizontal base that can reduce the potential for the spring to move below the seat after coil spring fracture. When the coil spring initially fractures, the ride height of the vehicle lowers 0.4 – 0.8 inches. This is accompanied with changes to vehicle steering and handling characteristics and most likely causes front end suspension noises. GM reviewed the verbatims for 1222 Saab regular warranty claims for vehicles that experienced front coil spring fracture and found that 704 of the claims noted front suspension noises with no tire damage.

GM has found that more than 94% of the coil spring fractures have occurred in corrosion states.

In the rare event that the fractured coil spring moves past the spring seat, the stabilizer bracket may prevent the coil spring from rotating further and contacting the tire. GM believes that fractured coil springs that rotate past the lower spring seat may be due to steering maneuvers and suspension dynamics that are caused by road inputs.

GM has evaluated 14 fractured coil springs and found the fracture location to be on the bottom coil of the spring at a position between 180 and 270 degrees, measured from the end of the bottom coil.

Recently, GM has retrieved coil spring field returns from ten additional vehicles through the warranty part return system. Seven of the parts were returned for front suspension noises such as clunk and rattle. Of the seven parts, five fractured coil springs were found and no trouble was found with two others. The remaining three of the warranty field return parts were fractured coil springs that deflated tires. Upon inspection, GM found that the fractured coil spring outer edge (see exemplar parts provided in response to Question 10c) rubbed against the tire. This caused damage to the tire and the coil spring corrosion protection coating to wear. This tire wear should be accompanied by a pungent hot rubber odor and possible smoke. If the condition is not addressed, the tire may deflate.

GM performed vehicle testing of a Saab 9-3 vehicle, with 17" wheels, Electronic Stability Program (ESP)/Stabilitrak system active and loaded with 2 passengers. The test was performed to evaluate changes in handling performance of the vehicle when a front tire loses tire pressure rapidly. The test criteria included speeds up to 50 mph, lateral accelerations up to 0.8g and decelerations up to 0.8g. The tires were punctured via a remote controlled knife mounted on the McPherson strut. The tire pressure was lost within tenths of a second after the knife was activated.

Typically, under normal driving conditions, lateral acceleration and deceleration rates are less than 0.4g.

The cornering tests were performed in a curve with 164 ft. radius. The vehicle speed was varied to achieve the targeted lateral acceleration levels. At a steady state condition the front outer tire was punctured.

GM also performed braking tests that began at 50 mph. The tires were punctured, braking initiated and corrective steer applied.

Testing was performed at normal operating conditions with lateral acceleration and deceleration levels near 0.2g. In all three tests, the vehicle was easy to control, maintained the intended driving direction and remained in the driving lane. ESP/Stabilitrak was not activated.

Additional testing was performed at higher than normal levels of lateral acceleration and deceleration between 0.4 - 0.6g. Upon activation of the tire deflation device, a correctional steering input was required to mainly maintain the intended driving direction and keep the vehicle in the driving lane. If the correctional steer input is large enough, the ESP/Stabilitrak system will aid the driver in maintaining the intended driving direction and keeping the vehicle in the driving lane.

Testing also included lateral accelerations (0.8g) that are rarely experienced by drivers. However, the rapid loss of lateral acceleration capability, due to the punctured tire, requires fast response from the driver to potentially maintain the intended driving direction and stay in lane. The ESP/Stabilitrak system is triggered and aids the driver further.

At even higher levels of deceleration the ESP/StabiliTrak system aids the driver substantially in maintaining the intended driving direction. The summary document of the vehicle testing is included in the Response to Q8 GM Investigation folder.

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 actual or projected rate of front suspension coil spring fracture in the subject vehicles at intervals of 3, 6, and 10 years in service;
- e. The actual or projected rate of front suspension coil spring fracture in the subject vehicles resulting in tire puncture;
- f. The frequency distribution of vehicle speeds at time t1, defined as the moment a subject vehicle experienced a tire puncture due to the alleged defect;
- g. 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;
- h. The risk to motor vehicle safety that it poses; and
- i. The reports included with this inquiry

GM has found that the mechanism for coil spring fracture is abrasion of the paint exposing the spring steel to the environment. Large particles of gravel or stones with a diameter of up to 4 mm may be caught between the coil spring and the lower spring seat. High forces will destroy the paint layer starting corrosion pitting on the metal that will accelerate in a corrosive environment. This corrosion may weaken a spring and in some cases may cause the component to break under high stress at the exposed location.

When the front coil spring fracture occurs, the following may be noticed by the driver:

- A loud clunk/bang noise when the fracture occurs.
- The car will be lower (approximately 0.4 – 0.8 inches) at the wheel.
- Operating the vehicle with a broken spring may cause a clunking/knocking noise.
- The vehicle may experience some side pull in the steering wheel.
- Loss of ride comfort may also be noticeable

In most instances, any one of these will likely serve as warning for the driver to have the vehicle serviced prior to potential tire air loss.

If the coil spring fractures and rotates below the spring seat, the vehicle will be 1.5 – 2 inches lower at the front corner. In the rare case that the fractured coil spring rotates below the spring seat, there may be some additional understeer that occurs during turns. If the understeer is significantly increased, it will be counteracted by the ESP/StabiliTrak system, which is standard on all the subject vehicles. If the spring rotates below the spring seat and contacts the tire sidewall, the resulting friction wear might lead to loss of tire inflation pressure. As seen on the exemplar samples provided with this letter, the failed coil spring may rub a hole in the tire which eventually may cause tire deflation.

GM reviewed GM reports and warranty claims for coil spring fractures that caused air loss and found the rates to be as follows for the corrosion states:

	36 MIS/3 years	72 MIS/6 years
Front Coil Spring Fractures with tire air loss	1.2 IPTV	5.5 IPTV

TABLE 12-1 ACTUAL RATE OF SPRING FRACTURES WITH AIR LOSS

GM found 1234 GM reports, regular warranty claims and extended service contract claims for front coil spring fractures in the 2003 - 2006 MY Saab 9-3 vehicles operated in the corrosion states. Of those, 83 experienced some type of air loss to the tire which required replacement. The overall rate for fractured coil springs for the 2003 - 2006 MY Saab 9-3 vehicles that cause air loss is 1.34 IPTV for the corrosion state population of subject vehicles.

GM reviewed GM reports, warranty claims and extended service contract claims for all states and found many verbatims stated that the vehicle ride height changed and/or front suspension noises occurred which indicated to the customer that the alleged condition was present. In many incidents, the fractured coil spring reseated itself on the lower spring seat. Of the 1,302 vehicles that experienced the alleged condition, 85% had no tire damage.

GM does not believe the subject condition presents an unreasonable risk to motor vehicle safety for the following reasons:

- The driver will likely have warning that service is required because:
 - The vehicle ride height may be lower from 0.4 - 2 inches.
 - The likelihood for suspension noises associated with the alleged condition.
 - Vehicle steering and handling characteristics including ride comfort may change
- Low rate for tire air loss related to coil spring fracture.
- Based on GM test results under a variety of conditions, vehicle control was maintained during rapid tire air loss.
- All subject vehicles are equipped with the ESP/Stabilitrak system as standard equipment.
- To date, GM has found no crashes or injuries related to the alleged condition.

GM is including a 10 year projection for front coil spring fracture with tire air loss in Response to Question 8 GM Investigation.

GM reviewed the 9 incident reports (VOQs) included with this inquiry and has concluded that these incident reports may be related to the subject condition.

* * *

General Motors is providing test reports and documents from suppliers in response to the items in Question 8, this response includes those documents and a request for confidentiality letter received from the supplier.

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 January 1, 2002, 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