



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**

1200 New Jersey Avenue SE.  
Washington, DC 20590

DEC 14 2010

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Ms. Carmen Benavides  
Director- Product Investigations,  
Safety Regulations & Certification,  
Field Performance  
General Motors Corporation  
30001 Van Dyke Rd. – Mail Code 480-210-2V1  
Warren, MI 48090

NVS-214tb  
PE10-049

Dear Ms. Benavides:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE10-049) to investigate reports of fractured engine cooling fan blades that are alleged to have occurred in certain model year 2006 General Motor GMT-560 series vehicles consisting of Chevrolet, GMC and Isuzu 4500 and 5000 model vehicles.

ODI is concerned that a fractured fan blade may be ejected forcibly from the engine compartment when the hood is open and the engine running for purposes such as vehicle servicing and that the ejected fragments of the fractured fan blade assembly may injure persons in proximity of the vehicle.

ODI has received four VOQ complaints pertaining to the alleged defective fan blade assemblies as summarized in Table 1 below:

Table 1 – VOQs Alleging Engine Cooling Fan Blade Breakage  
(reports listed by incident date)

Incident Number	VOQ	VIN (Final 6 digits redacted)	Incident Date	Vehicle Designation	Estimated Mileage
1	10355740 9/15/2010	1GBG5U12 66FXXXXXX	9/5/2009	2006 Jayco Seneca 34SS	23,300
2	10355082 9/12/2010  Owner has shipped fan blade to ODI	1GBG5U12 96FXXXXXX	7/12/2010	2007 Four Winds Fun Mover (built on Chevrolet C5500 chassis)	17,700
3	10355916 9/16/2010	1GBE4E12 66FXXXXXX	8/1/10	Chevrolet C4500	62,000
4	10354812 9/10/2010	1GBG5U12 86FXXXXXX	8/19/10	2006 Jayco Seneca	24,500

Shaded cells indicate those VOQs which report hood damage indicating that the pieces of the fractured fan blade had not been contained within the fan containment-enshrouding area but rather had been ejected from that area with a force sufficient to damage the hood.

In order for my staff to evaluate this issue, ODI is requesting certain information pertinent to the issue of cooling fan breakage.

Note: ODI is requesting production and complaint information (Request Nos. 1, 5, and 6) for model years 2005 and 2007 in addition to model year 2006 data (those vehicles within the direct scope of this investigation), for its prospective use in developing statistical comparisons with model year 2006 data and to determine whether the presently-defined scope of affected vehicles is appropriate.

**Information Requested –**

Unless otherwise stated in the text, the following definitions apply to these information requests:

**Subject vehicle(s):** All model year 2006 GMT- 560 series vehicles consisting of Chevrolet, GMC, and Isuzu 4500 and 5000 model vehicles manufactured by General Motors Corporation and sold or leased for use in the North America.

**Subject components:** The engine cooling fan assembly and engine cooling system.

**General Motors Corporation (“General Motors”):** All of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated 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 to a consultant) by or under the control of General Motors Corporation (including all business units and persons previously referred to), who are or, in or after 2005 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.

**Alleged defect:** Fracture of one or more of the engine cooling fan blades.

**Document:** “Document(s)” is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders,

pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by General Motors, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, "document(s)" also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by the manufacturer or not. If a document is not in the English language, provide both the original document and an English translation of the document.

**Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "dealer field report," "field report," "fire," "fleet," "good will," "make," "model," "model year," "notice," "property damage," "property damage claim," "rollover," "type," "warranty," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response.

After General Motors' response to each request, identify the source of the information and indicate the last date the information was gathered.

To the extent possible, provide the requested information in Microsoft 2000 Access or Excel electronic format.

\*\*\*\*\*

Production Data -

1. Provide a table that identifies the quantity (number) of model year (a) 2005; (b) 2006; and (c) 2007 GMT-560 Series vehicles consisting of Chevrolet, GMC and Isuzu 4500 and 5000 model vehicles manufactured that General Motors has built and sold or leased, intended for use in North America
  - (a) By month of production;
  - (b) By vehicle model year;
  - (c) By vehicle make; and
  - (d) By vehicle model.

Provide the table in Microsoft Access 2000, Excel 2000, or a compatible format, entitled "Request Number One – PE10-049, Production Data."

If GM installed more than one type of fan blade assembly or installed cooling system components that differ significantly from other cooling systems installed in the "subject vehicles," describe the principle differences and provide above-requested vehicle production information for each of the identified sub-populations of variations / versions / differences in the vehicles' cooling fan assemblies and cooling systems.

#### Design and Function -

2. Provide a representative engineering drawing or sketch that depicts the engine cooling fan assembly, fan driving mechanism(s), and cooling fan blade enshroudment-containment system installed in the "subject vehicles."
3. Describe the function of the cooling fan system(s) installed in the "subject vehicles" including, but not limited to:
  - (a) The mechanism(s) for driving, actuating and de-actuating the fan;
  - (b) A summary of the expected (or designed-for) fan operating duty cycle including, but not limited to, operating speeds (in normal use; to achieve maximum cooling; when the vehicle is being operated through various maneuvers such as downshifting [ODI note: Certain VOQ describe t fan blade separations occurring during abrupt changes in engine speed.], etc.; and other functional parameters, if any;
  - (c) The design logic for the activation-deactivation system that dictates the sensing devices and parameters that determine when the fan is activated and deactivated in response to changes in cooling requirements and temperature, operating speed, etc. ; and
  - (d) The threshold values for the measured operating parameters that dictate fan activation and deactivation.
4. Identify all protections intended to prevent fan blade fracture and/or fractured blade ejection including, but not limited to:
  - (a) Cooling fan system operating limits intended to detect and compensate for potential pre-fracture conditions such as excessive imbalance, excessive rotating speed, or

other indicator that could indicate an imminent malfunction of the cooling fan system ; and

- (b) Enshroument-containment strategies intended to mitigate risks of fan blade ejection if a rotating fan blade were to fracture in service.

**Complaint Information -**

5. Provide a table that lists for model year (a) 2005; (b) 2006; and (c) 2007; the quantity (number) of each of the following, whether or not confirmed, received by General Motors, or of which General Motors is otherwise aware, which relate to, or may relate to, the alleged defect in the GMT-560 Series vehicles consisting of Chevrolet, GMC and Isuzu 4500 and 5000 model vehicles.

- (a) Field reports, including dealer field reports;
- (b) Reports involving an injury or a 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;
- (c) Property damage claims;
- (d) Third-party arbitration proceedings where General Motors is, or was, a party to the arbitration; and,
- (e) Lawsuits, both pending and closed, in which General Motors is, or was, a party;
- (f) Warranty claims, whether or not reimbursed, including requests for special policy adjustment, extended warranty, and/or other similar consumer considerations such as "good will" and/or any and all other reimbursement request programs.

State the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple reports of the same incident are to be counted separately (i.e., a consumer complaint and a field report involving the same incident are to be counted as a field report and a consumer complaint, etc.).

In addition, for items "c" through "e," provide a summary description of the alleged problem and causal and contributing factors and General Motors' assessment of the problem, with a summary of the significant underlying facts and evidence.

For item "e," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other documents initiating the action was filed.

Provide the table in Microsoft Access or Excel 2003, or a compatible format, entitled "PE10-049, Request Number Five - Complaint Information Summary."

**Complaint Details -**

6. For each complaint, warranty claim, etal., identified in response to Request No. 5. above, received by General Motors, or of which General Motors is otherwise aware, whether or

not confirmed, that alleges, or may reasonably be inferred to describe the alleged defect in the GMT-560 Series vehicles consisting of Chevrolet, GMC and Isuzu 4500 and 5000 model vehicles, identify:

- a. General Motors' file number or other claim identifier used;
- b. The category of the incident as identified in response to Request No. 5 (i.e., consumer complaint, field report, etc.);
- c. The owner's name;
- d. The owner's address;
- e. The owner's phone number;
- f. The incident date;
- g. The incident location;
- h. The report or claim date;
- i. The complete vehicle 17 digit VIN;
- j. The GM vehicle make;
- k. The GM vehicle model;
- l. The GM vehicle model year;
- m. The manufacturing site (assembly site) at which the vehicle chassis was assembled;
- n. The date that the vehicle chassis was assembled
- o. The final vehicle finisher vehicle make (if known);
- p. The final vehicle finisher vehicle model (if known);
- q. The final vehicle finisher model year (if known);
- r. A brief description of the incident;
- s. Whether property damage is alleged;
- t. The number of alleged injuries, if any;
- u. The number of alleged fatalities, if any.

Provide this information in Microsoft Access or Excel 2003, or a compatible format, entitled "PE10-049, Request Number Six - Complaint Details."

Engine Cooling Fan Blade Design / Changes -

7. Provide the General Motors' part number(s) that identify the fan blade assembly installed in the model year 2006 "subject vehicles" and provide an engineering drawing depicting the fan blade assembly for each part number listed.
8. Describe all modifications or changes made by, or on behalf of, General Motors in the design, material composition, manufacture, quality control, supply, or installation of the subject components from the initial production date of the model year 2005 vehicles to date, which relate to, or may relate to, the alleged defect in the subject vehicles including, but not limited to:
  - (a) Engine cooling fan blade assembly, including but not limited to changes which may affect the physical size, rigidity-stiffness, etc. of the fan blade assembly and/or components mounted in close proximity to the fan blade ;

- (b) The engine cooling fan blade use and/or operating environment including changes to the enshroudment-containment design, installation and attachment, operating clearances, exposure to extraneous vibration-harshness environment, etc.;
- (c) The cooling fan operating parameters (activation speeds, control logic, operating clearances, operating temperatures, etc.).

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.
9. Describe all requested deviations from conformance to specifications received from all sources, from the initial production date of the model year 2005 vehicles to date, which relate to, or may relate to, the alleged defect in the subject vehicles and provide a summary of the disposition for each of the requested deviations for the:
- (a) Engine cooling fan blade assembly, including but not limited to changes which may affect the physical size, rigidity-stiffness, etc. of the fan blade assembly and/or components mounted in close proximity to the fan blade ;
  - (b) The engine cooling fan blade use and/or operating environment including changes to the enshroudment-containment design, installation and attachment, operating clearances, exposure to extraneous vibration-harshness environment, etc.;
  - (c) The cooling fan operating parameters (activation speeds, control logic, operating clearances, operating temperatures, etc.).

**Field Return Information -**

10. Provide a list that identifies by VIN each of the following associated with reported fan blade breakage incidents:
- (a) A description of the returned parts;
  - (b) A copy of the inspection report / observations conducted by General Motors, General Motors' suppliers, and/or sub-contractors;
  - (c) The current location of the retained returned components (if known). State if the inspected components have been scrapped.



11. 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, General Motors. 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.

Manufacturer's Assessment -

12. Furnish General Motor's detailed opinion of the alleged defect in the subject vehicles. Include an assessment of the following:
- (a) the causal or contributing factors;
  - (b) the failure mode;
  - (c) the risk to motor vehicle safety that it poses;
  - (d) what warnings, if any, are provided to the operator and other persons.

Notices -

13. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that General Motors has issued to any owners, 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 General Motors is planning to issue within the next 120 days.

This letter is being sent to General Motors pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information. General Motors' failure to respond promptly and fully to this letter could subject General Motors to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) Please note that maximum civil penalties under 49 U.S.C. § 30165 have increased as a result of the recent enactment of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Public Law No. 106-414 (signed November 1, 2000). Section 5(a) of the TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties

of up to \$5,000 per day, with a maximum of \$15 million for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. This includes failing to respond to ODI information requests.

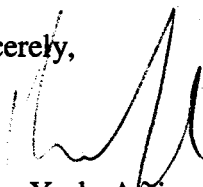
If General Motors cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, General Motors does not submit one or more requested documents or items of information in response to this information request, General Motors must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

General Motors' response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by **January 27, 2011**. Please refer to PE10-049 in General Motors' response to this letter. If General Motors finds that it is unable to provide all of the information requested within the time allotted, General Motors must request an extension from me at (202) 366-6938 no later than five business days before the response due date. If General Motors is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information General Motors then has available, even if an extension has been granted.

If General Motors claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, General Motors must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, to the Office of Chief Counsel (NCC-113), National Highway Traffic Safety Administration, Room W41-227, 1200 New Jersey Ave., S.E., Washington, D.C. 20590. General Motors is required to submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.

If you have any technical questions concerning this matter, please call Mr. Tom Bowman of my staff at (202) 366-2583.

Sincerely,



Bruce York, Acting Chief  
Medium and Heavy Truck Division  
Office of Defects Investigation