



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

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

JUN - 8 2012

Mr. Jay Joseph, Senior Manager  
Product Regulatory Office  
American Honda Motor Company  
1919 Torrance Boulevard  
Mail Stop 500-2C-10A  
Torrance, CA 90501-2746

NVS-213smch  
DP12-002

Dear Mr. Joseph:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) is evaluating a Defects Petition (DP12-002) regarding allegations of Vehicle Stability Assist (VSA) system malfunctions in model year (MY) 2005 Honda Pilot vehicles manufactured by Honda Motor Company, and to request certain information.

This office has received a defect petition requesting that ODI open an investigation of stability control system malfunctions in MY 2005 Honda Pilot vehicles. The petitioner alleges experiencing an incident of inappropriate autonomous brake application due to a VSA system malfunction. The incident occurred while the petitioner was driving approximately 30 miles per hour and caused the vehicle to come to a complete stop.

ODI has identified 34 additional complaints alleging VSA system malfunction in MY 2005 Honda Pilot vehicles. These complaints allege that the malfunctions result in inappropriate brake application while driving, resulting in uncommanded vehicle deceleration in traffic and/or steering difficulty. A Defect Petition investigation has been opened to assess the scope, frequency and potential safety consequences associated with the alleged defect. A copy of each of the complaints is enclosed for your information.

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

- **Subject vehicles:** All MY 2005 Honda Pilot vehicles manufactured for sale or lease in the United States and federalized territories.
- **Subject system:** Vehicle Stability Assist (VSA) system and all associated sensors, control modules, software, actuators, wiring and other components.

- **Honda:** American Honda Motor Company, Inc., and its parent, Honda Motor Company, Ltd., 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 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 Honda (including all business units and persons previously referred to), who are or, in or after January 1, 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.
  
- **Alleged defect:** any one or more of the following symptoms or conditions:
  1. Allegations of inappropriate/uncommanded autonomous brake application and/or undesired vehicle deceleration;
  2. Allegations of steering difficulty (e.g., steering pull or difficulty maintaining direction) associated with VSA system malfunction; or
  3. Other VSA system malfunction resulting in VSA system indicator lamp illumination and/or VSA diagnostic trouble codes.
  
- **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 Honda, 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 Honda 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. Insofar as Honda has previously provided a document to ODI, Honda may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. 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 Honda's response to each request, identify the source of the information and indicate the last date the information was gathered.

1. State, by model and model year, the number of subject vehicles Honda has manufactured for sale or lease in the United States and federalized territories. Separately, for each subject vehicle manufactured to date by Honda, state the following:
  - a. Vehicle identification number (VIN);
  - b. Model;
  - c. Model Year;
  - d. Date of manufacture;
  - e. Date warranty coverage commenced;

- f. If the vehicle is equipped with VSA; and
- g. The State in the United States, or the federalized territory, where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2003, 2007, 2010, or a compatible format, entitled "PRODUCTION DATA."

2. State, by model and model year, the number of subject vehicles Honda has manufactured for sale or lease in the United States and federalized territories for which Honda has sold an extended service plan. For vehicles with more than one extended service plan, list the vehicle separately for each plan. Separately, for each vehicle, state the following:
  - a. Vehicle Identification number (VIN);
  - b. Model;
  - c. Model Year;
  - d. Name of extended service plan;
  - e. Mileage at which the extended service plan expires; and
  - f. The number of months from the warranty start date at which the extended service plan expires.

Provide the table in Microsoft Access 2003, 2007, 2010, or a compatible format, entitled "SERVICE PLAN DATA."

3. State the number of each of the following, received by Honda, or of which Honda 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 Honda involving a death or injury, notices received by the Honda 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 Honda is or was a party to the arbitration; and
  - f. Lawsuits, both pending and closed, in which Honda 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 Honda'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.

4. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 3, state the following information:
  - a. Honda's file number or other identifier used;
  - b. The category of the item, as identified in Request No. 3 (i.e., consumer complaint, field report, etc.);
  - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
  - d. Vehicle's VIN;
  - e. Vehicle's model and model year;
  - f. Vehicle's mileage at time of incident;
  - g. Incident date;
  - h. Report or claim date;
  - i. Whether a road or lane departure is alleged;
  - j. Whether a crash 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 2003 or 2007, 2010, or a compatible format, entitled "COMPLAINT DATA."

5. Produce copies of all documents related to each item within the scope of Request No. 3. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Honda used for organizing the documents.
6. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Honda 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. Honda's claim number and total cost per claim;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. Vehicle's VIN;
- d. Vehicle's model and model year;
- e. Repair date;
- f. Vehicle mileage at time of repair;
- g. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- h. Labor operation number;
- i. Problem code;
- j. Replacement part number(s) and description(s);
- k. Whether parts were returned for analysis by Honda,
- l. Concern stated by customer;
- m. Diagnostic trouble code(s) identified during the repair;
- n. Cause and Correction stated by dealer/technician; and

o. Additional comments, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2003 or 2007, 2010, or a compatible format, entitled "WARRANTY DATA."

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 Honda 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, news or tech tips, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that Honda is planning to issue within the next 120 days.
8. Describe in detail the search criteria used by Honda to identify the claims identified in response to Request No. 6, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Honda 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 Honda 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. Indicate which extended service plans would cover components listed in the subject system.
9. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to the alleged defect that have been conducted, are being conducted, are planned, or are being planned by, or for, Honda. 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.

The response to this request should include a detailed description of all past, present and future actions by any and all engineering working groups (e.g., vehicle dynamics control task force) of which Honda is an active member or is otherwise aware. This includes, at a minimum, all of the information requested in items "a" through "f."

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.

10. Describe all modifications or changes made by, or on behalf of, Honda in the design, material composition, manufacture, quality control, supply, software, or installation of the subject system, 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:
- The date or approximate date on which the modification or change was incorporated into vehicle production;
  - A detailed description of the modification or change;
  - The reason(s) for the modification or change;
  - The part number(s) (service and engineering) of the original component;
  - The part number(s) (service and engineering) of the modified component;
  - Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
  - When the modified component was made available as a service component; and

Also, provide the above information for any modification or change that Honda is aware of which may be incorporated into vehicle production within the next 120 days.

11. State the number of the following components that Honda has sold for use 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).
- VSA control modules; and
  - VSA system sensors.

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 Honda is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

12. Produce one sample of each of the following:
- VSA control module with pin connector;
  - Yaw rate sensor; and
  - Representative samples of each VSA system component returned from the field for analysis, which may be related to the alleged defect.
13. Provide the following information regarding the operation and diagnostics associated with the subject system:
- A description of system operation, including the following diagrams:
    - Vehicle diagram showing the location of all VSA components;
    - Wiring diagram(s);
    - Brake system hydraulic diagrams for each mode of system operation;
    - Block diagram of the system including communication buses;

- b. A detailed description of the how the system controls vehicle braking and throttle, including:
  - i) A detailed explanation of how throttle command is calculated, communicated and controlled;
  - ii) The maximum braking that can be commanded by the system and a detailed explanation of how braking forces are calculated, communicated and controlled;
  - iii) The maximum vehicle deceleration that can result from VSA intervention;
  - iv) The maximum duration of a VSA activation;
- c. Describe all visual and audible indicators available to the vehicle operator to signal VSA activation or a fault in the VSA;
- d. Provide a listing of all diagnostic trouble codes by code, description, a detailed description of the conditions that will set the code, and the effect of the code on system operation/mode;
- e. A detailed description of all design countermeasures intended to prevent, or reduce the possibility of, VSA activation caused by a system fault; and
- f. Describe the difference between the subject vehicle VSA and the VSA for immediately preceding and following model years for the Honda Pilot.

14. Provide the following design, development and test information related to the subject system:

- a. Honda or supplier specification requirements document;
- b. Honda or supplier vehicle-level test requirements document;
- c. System DRBFM, D-FMEA, or fault tree in IQ-FMEA, Excel or PDF;
- d. System design verification (DV) and product validation (PV) test matrix, test plan and final reports;
- e. List and briefly describe all system elements and interfaces-ABS, TC (traction control), IMU (inertial measurement unit)...etc;
- f. Complete PCB (printed circuit board) assembly drawings including stencil, layout, assembly, and electrical schematic PDF files. If function is integrated into another control module such as airbags, ABS, or IMU, then provide drawings for the complete PCB;
- g. All software diagnostic routines and test cycles performed at runtime and power-up, include controller and sensors;
- h. A list for all system sensors (Yaw, XY, speed...etc.) in the system, include part numbers and suppliers. Provide yaw sensor datasheet and specifications;
- i. Bill of Material (BOM) including part numbers, component description, component quantity in system, and supplier names for each and every component in the system;
- j. Controller test-mode CAN/USB/RS-232 executable file, load-box if any, manual, and appropriate cable; and
- k. System (software and hardware) verification strategies including any online (real-time)/offline (algorithm) hardware-in-the-loop (HIL) simulations and list any model interoperability across different platforms. Include all system or ASIC state diagrams.

15. Furnish Honda'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, including:
  - i) The maximum deceleration that may result from a VSA activation;
  - ii) Whether VSA braking provides warning to trailing traffic (e.g., brake lamp illumination);
  - iii) The amount of steering compensation (steering wheel rim force and steering angle) required to maintain the vehicle in a straight path during a worst-case VSA false-activation event; and
- 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.

This letter is being sent to Honda 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. Honda's failure to respond promptly and fully to this letter could subject Honda 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.) Section 5(a) of the TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties of up to \$6,000 per day, with a maximum of \$16,375,000 for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. See 49 CFR 578.6 (as amended by 71 Fed. Reg. 28279 (May 16, 2006)). This includes failing to respond to ODI information requests.

If Honda 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, Honda does not submit one or more requested documents or items of information in response to this information request, Honda 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.

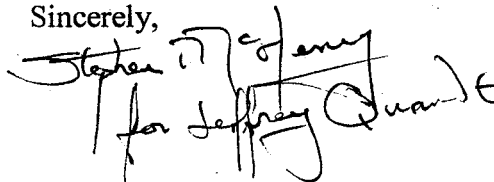
Honda's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by August 3, 2012. **All business confidential information must be submitted directly to the Office of Chief Counsel as described in the following paragraph and should not be sent to this office.** In addition, do not submit any business confidential information in the body of the letter submitted to this office. Please refer to DP12-002 in Honda's response to this letter and in any confidentiality request submitted to the Office of Chief Counsel. If Honda finds that it is unable to provide all of the information requested within the time allotted, Honda must request an extension from me at (202) 366-5207 no later than five business days before the response due date. If Honda 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 Honda then has available, even if an extension has been granted.

If Honda 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, Honda must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, as amended, to the Office of Chief Counsel (NCC-111), National Highway Traffic Safety Administration, Room W41-227, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. Honda 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.** Please remember that the word "CONFIDENTIAL BUSINESS INFORMATION" must appear at the top of each page containing information claimed to be confidential, and the information must be clearly identified in accordance with 5 U.S.C. § 512.6. If you submit a request for confidentiality for all or part of your response to this IR, that is in an electronic format (e.g., CD-ROM), your request and associated submission must conform to the new requirements in NHTSA's Confidential Business Information Rule regarding submissions in electronic formats (49 CFR 512.6(c)). See Federal Register, volume 72, page 59434 (October 19, 2007).

Please send email notification to Stephen McHenry (stephen.mchenry@dot.gov) and to ODI\_IRresponse@dot.gov when Honda sends its response to this office and indicate whether there is confidential information as part of Honda response. Also provide tracking numbers for the submissions.

If you have any technical questions concerning this matter, please call Stephen McHenry of my staff at (202) 366-4883.

Sincerely,

A handwritten signature in black ink that reads "Stephen McHenry" on the top line and "for Jeffrey Quandt" on the bottom line. The signature is written in a cursive style.

Jeffrey L. Quandt, Chief  
Vehicle Control Division  
Office of Defects Investigation

Enclosure: (1) one CD ROM titled Data Collection Disc containing five files