



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

FEB 16 2010

1200 New Jersey Avenue SE.
Washington, DC 20590

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Richard W. Paige
Designated Agent for IEE S.A.
Bush Seyferth & Paige PLLC
3001 Big Beaver Rd., Suite 600
Troy, MI 48084

NVS-212pco
EA09-017

Dear Mr. Paige:

The Office of Defects Investigation (ODI) is conducting an investigation (EA09-017) of passenger air bag occupant classification system (OCS) misclassification in certain model year (MY) 2007 through 2008 Kia Sorento vehicles. To assist us at this stage of the investigation, we are requesting certain information concerning the OCS sensor system supplied to Kia by IEE Sensing Inc., IEE S.A., or both for use in these vehicles and any other make or model vehicles sold in the United States.

ODI conducts investigations of potential safety defects in motor vehicles and items of motor vehicle equipment under the authority of the National Traffic and Motor Vehicle Safety Act of 1966, as amended, 49 U.S.C. Chapter 301 (49 U.S.C. § 30166). The purpose of these investigations is to determine whether manufacturers, suppliers or both should conduct defect notification and recall campaigns to reduce the potential for crashes, injuries and deaths, in accordance with 49 U.S.C. §§ 30118, 30120.

Unless otherwise stated in the text, the following definitions apply to this information request:

- **Subject component**: Pattern based occupant classification systems supplied by IEE for any MY 2004 through MY 2010 vehicles sold in the United States.
- **IEE**: IEE Sensing Inc., or IEE S.A., or both (whichever is more inclusive), all of their past and present officers and employees, whether assigned to their principal offices or any other locations, including 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 IEE (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 problem condition in the subject component:
 - 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.
- **Problem condition**: Misclassification of an adult passenger seated in the front passenger seat resulting in the deactivation of the passenger side frontal airbag.
 - **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 IEE, 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 IEE 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 subject condition, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as IEE has previously provided a document to ODI, IEE 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 the response. After IEE’s response to the request, identify the source of the information and indicate the last date the information was gathered.

In responding to all of the below requests, please furnish in electronic form any tabular/data response or responses that contain more than five records. Such responses should be submitted in an editable spreadsheet/database format compatible with Microsoft Office 2007 components. Please display any date information in the following long date code format: day-month-year; Example: 01-Dec-1998.

1. Identify by make, model and model year, each motor vehicle sold in the United States since 2004 that had a pattern based occupant classification system supplied by IEE.
2. Separately, for each make, model and model year motor vehicle sold in the United States since 2004 that had a pattern based occupant classification system supplied by IEE, identify in tabular form, each subject component by:
 - a. sensor mat part name;
 - b. sensor mat part number;
 - c. OCS electronics/software/algorithm supplier name (if applicable);
 - d. OCS electronics/software/algorithm version(s) used at start of each model year vehicle (if applicable);
 - e. Tier 1 restraint supplier name (if IEE is not the Tier 1 restraint supplier); and
 - f. role of Tier 1 supplier (i.e., electronics/software designer, overall seat system integrator, etc.).

3. Describe in detail the pattern recognition identification process for the subject component in MY 2007 or MY 2008 Kia Sorento vehicles. In your response, identify the shapes that each pattern represents, including the logic to detect:
 - a. A seat not occupied or occupied by a child seat;
 - b. A child up to 6 years of age or occupied by a child seat; and
 - c. A 5th percentile adult female (103 to 120 pounds);
 - d. An adult weighing between 120-175 pounds; and
 - e. An adult weighing between 175 and 250 pounds.
4. For each make, model and model year vehicle identified by IEE in response to Request No. 1, excluding the MY 2007 and MY 2008 Kia Sorento vehicles, describe in detail the pattern recognition identification process for the subject component. In your response, identify the shapes that each pattern represents, including the logic to detect:
 - a. A seat not occupied or occupied by a child seat;
 - b. A child up to 6 years of age or occupied by a child seat; and
 - c. A 5th percentile adult female (103 to 120 pounds);
 - d. An adult weighing between 120-175 pounds; and
 - e. An adult weighing between 175 and 250 pounds.
5. Identify and describe in detail the logic/sub-algorithm (e.g., "Low Digitized Pressure Value" or Cross Analysis logics) that was used (or not used) in the subject components to distinguish the Britax Expressway ISOFIX child restraint system from the pattern as projected by an adult occupant in MY 2007 and MY 2008 Kia Sorento vehicles.
6. Identify and describe in detail the logic/sub-algorithm (e.g., "Low Digitized Pressure Value") that was used (or not used) in the subject components to distinguish the Britax Expressway ISOFIX child restraint system from the pattern as projected by an adult occupant in each make, model and model year design identified by IEE in response to Request No. 1, excluding MY 2007 and MY 2008 Kia Sorento vehicles.
7. State the similarities and differences between the subject component's Britax Expressway ISOFIX logic/sub-algorithm used in the MY 2007 and MY 2008 Kia Sorento vehicles and the subject component's Britax Expressway ISOFIX logic/sub-algorithm used in each make, model and model year identified by IEE in response to Request No. 1.
8. Identify and describe all hardware/software/algorithm modifications or changes made by IEE on the subject component for the MY 2007 and MY 2008 Kia Sorento vehicles, from the start of production to date. For each such modification or change, provide the following information:
 - a. the date, or approximate date on which the modification or change was available to the Tier 1/OEM manufacturer;
 - b. a description of the modification or change;
 - c. the reason for and/or the system parameter affected by the modification or change; and
 - d. the part number and/or software version and version name.

9. Identify and describe all hardware/software/algorithm modifications or changes made by IEE of the subject component for each make, model and model year identified by IEE in response to Request No. 1, excluding the MY 2007 and MY 2008 Kia Sorento vehicles, from the start of production to date. For each such modification or change, provide the following information:
 - a. the date, or approximate date on which the modification or change was available to the Tier 1/OEM manufacturer;
 - b. a description of the modification or change;
 - c. the reason for and/or the system parameter affected by the modification or change; and
 - d. the part number and/or software version and version name.
10. Identify and provide copies of all documents reflecting any assessment, analyses, tests, test results, studies, survey, simulations, investigations inquiries and/or evaluations that relate or may relate to the problem condition with the subject components.

This letter is being sent to IEE 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. IEE's failure to respond promptly and fully to this letter could subject IEE 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, 2007)). This includes failing to respond to ODI information requests.

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

IEE's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by March 25, 2010. **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 EA09-017 in IEE's response to this letter and in any confidentiality request submitted to the Office of Chief Counsel. If IEE finds that it is unable to provide all of the information requested within the time allotted, IEE must request an extension from me at (202) 366-6761 no later than five

business days before the response due date. If IEE 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 IEE then has available, even if an extension has been granted.

If IEE 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, IEE 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. IEE 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 Peter Ong (peter.ong@dot.gov) and to ODI_IRresponse@dot.gov when IEE sends its response to this office and indicate whether there is confidential information as part of IEE's response.

Sincerely,



Kathleen C. DeMeter, Director
Office of Defects Investigation
Enforcement