



May 19, 2010

VIA FEDERAL EXPRESS

Kathleen C. DeMeter, Director
 Office of Defects Investigation
 U.S. Department of Transportation
 National Highway Traffic Safety Administration
 1200 New Jersey Avenue, S.E.
 Washington D.C. 20590

Re: **Engineering Analysis Investigation (EA09-017)**
Passenger Air Bag System (MY) 2007-2008 Kia Sorento

Dear Ms. DeMeter:

This letter is submitted in response to your letter dated March 29, 2010 sent to Hyundai America Technical Center, Inc. ("HATCI") (Reference NVS-212.pco/EA09-017). That letter requested additional and updated information regarding the allegations of improper operation of the passenger airbag occupant classification system in the 2007-2008 MY Kia Sorento vehicles. That letter also requested the same information regarding Kia's 2007-2008 MY peer vehicles. Although HATCI is an organization independent of both Kia Motors Corp. ("KMC") and Kia Motors America, Inc. ("KMA"), it has been designated by those organizations to act as their communication liaison with the National Highway Traffic Safety Administration ("NHTSA"). This response is submitted to NHTSA by HATCI in that limited role.

REQUEST NO. 1:

State within the body of the response letter a table summary, by model and model year, the number of subject and peer vehicles Kia has manufactured for sale or lease in the United States. Separately, for each subject and peer vehicle manufactured to date by Kia, state the following:

- a. Vehicle Identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Date of manufacture (in "yyyy/mm/dd" date format);
- f. Date warranty coverage commenced (in "yyyy/mm/dd" date format); and
- g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

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Provide the detailed information in Microsoft Access 2007, or a compatible format, entitled "Q1_PRODATA" or "Q1_PRODDATA_MMY" as appropriate. The "MMY" portion of the title should be created to clearly identify each data set as necessary.

RESPONSE TO REQUEST NO. 1:

Kia previously provided the production information for the 2007-2008 MY Sorento in its response to Request No. 1 of PE09-034 dated September 25, 2009. The 2007-2008 MY Kia peer vehicles include the Spectra, Rio, Amanti, Sedona, Sportage, Rondo and Optima. Below is a table identifying the total number of these vehicles manufactured for sale in the United States.

Model Year	Vehicles Produced
Spectra	
2007	65,299
2008	60,387
TOTAL	125,686
Rio	
2007	31,304
2008	35,069
TOTAL	66,373
Amanti	
2007	4,506
2008	6,070
TOTAL	10,576
Optima	
2007	42,192
2008	47,337
TOTAL	89,529
Sedona	
2007	33,015
2008	34,158
TOTAL	67,173
Sportage	
2007	46,252
2008	40,799
TOTAL	87,051
Rondo	
2007	29,201
2008	24,590
TOTAL	53,791

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A listing of all 2007-2008 Kia peer vehicles is provided on a Data Collection Disc under the category "Q1_PRODDATA" and submitted contemporaneously with this response.

REQUEST NO. 2:

State the number of each of the following owner report (OR), received by Kia, or of which Kia is otherwise aware, which relate to, or may relate to, the alleged defect in subject vehicles and, separately, in peer vehicles:

- a. Consumer complaints, including those from fleet operators;
- b. Field reports, including dealer field reports;
- c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer 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 Kia is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which Kia is or was a defendant or codefendant.

For subparts "a" through "d" state within the body of the response letter a summary table containing the total number of each item (e.g., consumer complaints, field reports, etc.) separately and by model and model year. 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 Kia'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.

RESPONSE TO REQUEST NO. 2:

The table below provides a comprehensive summary of information previously and currently submitted for the 2007-2008 Kia Sorento. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

CATEGORY	PE09-034	EA09-017	TOTAL
Consumer Complaints	470	58	528
Field Reports	237	0	237

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Technical Assistance Case Center Reports	492	47	539
Reports involving crash, injury or fatality	1	0	1
Property Damage Claims	0	0	0
Third Party Arbitrations	35	3	38
Lawsuits	8	2	10

Kia's search included all files which included the words "OCS", "passenger", "airbag" and "light". The results were then reviewed to identify those items which relate, or may relate to the alleged defect as described in your letter.

REQUEST NO. 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. Kia'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 ("yyyy/mm/dd" date format);
- h. Report or claim date (in "yyyy/mm/dd" date format);
- i. Whether a crash is alleged;
- j. Whether property damage is alleged;
- k. Number of alleged injuries, if any; and
- l. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2007, or a compatible format, entitled "Q3_ORDATA" or "Q3_ORDATA_MMY" as appropriate.

RESPONSE TO REQUEST NO. 3:

A listing of the responsive communications applicable to the 2007-2008 Kia Sorento is provided on a Data Collection Disc under the category "Q3_ORDATA" and submitted contemporaneously with this response. For purposes of supplementing Kia's previous response, a gap search was conducted to include consumer communications from August 26, 2009 to April 10, 2010. A gap search was also conducted from September 1, 2009 to April 10, 2010 to obtain the remaining requested information. See response to Request No. 3 of PE09-034 dated September 25, 2009 for the information contained on the Data Collection Disc previously submitted. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

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REQUEST NO. 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 Kia used for organizing the documents.

RESPONSE TO REQUEST NO. 4:

Copies of the additional documents identified in response to Request No. 2 for the 2007-2008 Kia Sorento are submitted with this letter. They are organized by the following categories.

- Consumer Affairs Department files from KMA's department database (58)
- Field Reports (0)
- Technical Assistance Case Center Reports (47)
- Arbitrations (3)
- Lawsuits (2)

See **Tab 1**. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

REQUEST NO. 5:

State within the body of the response letter a summary table, by model and model year, a total count for each of the following categories of claims, that have been paid by Kia to date that relate to, or may relate to, the alleged defect in subject vehicles and, separately in peer 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 should be identified within each claim.

Separately, for each such claim, state the following information:

- a. Kia's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Vehicle's model and model year;
- e. Repair date (in "yyyy/mm/dd" date format);
- f. Vehicle's 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

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- i. Problem code;
- j. Replacement part number(s) and description(s);
- k. Concern stated by customer; and
- l. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide the detailed information in Microsoft Access 2007, or a compatible format, entitled "Q5_WRNTDATA" or "Q5_WRNTYDATA_MMY" as appropriate.

RESPONSE TO REQUEST NO. 5:

A supplemental listing of the responsive warranty claims for the 2007-2008 Kia Sorento is provided on a Data Collection Disc under the category "Q5_WRNTDATA". The warranty data submitted includes claims received from September 22, 2009 to April 10, 2010. The table below provides a comprehensive summary of information previously and currently submitted for the 2007-2008 Kia Sorento.

CATEGORY	PE09-034 As of 9/21/09	EA09-017 As of 4/10/10	TOTAL
Seat Cushion & Seat Assembly Replacement Claims	736	191	927
Claims related to Service Campaign (SC076)	27,074	11,688	38,762 ¹
Reflash claims performed by KMA field staff and dealers from 12/07 to 05/09	514	N/A	514

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

REQUEST NO. 6:

Describe in detail the search criteria used by Kia 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 and peer vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Kia on the subject and peer 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 Kia offered for the subject and peer vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

¹ The data identified with this response was obtained as of April 10, 2010. However, as of May 17, 2010, the service campaign completion rate (SC076) was 69.89%.

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RESPONSE TO REQUEST NO. 6:

The submitted warranty claim data includes 1) all seat cushion and seat assembly replacement claims and 2) claim related to the service campaign SC076 mailed to customers on May 12, 2009. A listing of the codes was previously submitted under Tab 3 of its PE09-034 response dated September 25, 2009. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

REQUEST NO. 7:

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

RESPONSE TO REQUEST NO. 7:

As to the 2007-2008 Kia Sorento, a copy of the customer re-notification letter, dated November 12, 2009 is attached. See Tab 2. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

REQUEST NO. 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 or peer vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Kia. 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 interim, draft, or final form. Organize the documents chronologically by action.

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RESPONSE TO REQUEST NO. 8:

See Kia's response to Request No. 8 of PE09-034, dated October 21, 2009 as it relates to the 2007-2008 Kia Sorento. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

REQUEST NO. 9:

Describe all modifications or changes made by, or on behalf of, Kia 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 or peer 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 number(s) (service and engineering) of the original component;
- e. The part number(s) (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;
- h. Whether the modified component can be interchanged with earlier production components;
- i. The model and model year of the vehicles affected by the modification or change.

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

RESPONSE TO REQUEST NO. 9:

See Kia's response to Request No. 9 of PE09-034, dated October 21, 2009 as it relates to the 2007-2008 Kia Sorento. Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

REQUEST NO. 10:

State the name of the Tier 1 front seat supplier, Tier 1 restraint system supplier, OCS seat mat sensor software/electronic module supplier and the OCS set mat supplier for subject vehicles and peer vehicles and identify by name, title, address and telephone a point of contact for each supplier provided. Please provide a complete street address, contact name, and telephone number for each supplier identified. Also identify which supplier is responsible for the performance and testing of the OCS system and its ability to detect occupants.

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RESPONSE TO REQUEST NO. 10:

The following Tier 1 supplier information applies to the 2007-2008 Kia Sorento. Pursuant to the extension granted KMA by Scott Yon on May 12, 2010, the requested information as it relates to Kia's peer vehicles will be provided on June 25, 2010.

- The supplier of the front seat is Dae Won San Up Co., located at No 98-2 Koreum-Ri, Chungbuk-Myun, Pyungtaek City Kyunggi-Do, Korea. The point of contact is Sung Gi Kim (Quality Control Department), 82-31-683-2301.
- The supplier of the Occupant Classification System is Autoliv, located at 436-1, Song-Ri, Dongtan-Myun, Hwasung City, Gyeonggi-Do, 445-812, Korea. The point of contact is Jae-Hee Weon (Engineering Department), 82-31-379-6600.
- The supplier of the front seatbelt system is Takata Korea, located at Jangan-1 High-tech Regional Industry Complex Geumui-ri, Jangan-myeon, Hwaseong-si, Gyeonggi-do, Korea. The point of contact is Jae-Hyun Lee (Quality Group), 82-31-831-1311.

Kia is not a party to the contract between IEE and Autoliv and thus cannot address their contractual responsibilities. IEE has advised KMA that IEE supplied the OCS to Autoliv, and tested it in accordance with design verification (DV) and production validation (PV) procedures and a DV and Plan Report which it indicates it created and which were approved by Autoliv, and in accordance with Kia's specifications and FMVSS 208. Autoliv has advised KMA that IEE developed and validated the OCS and its ability to detect occupants pursuant to IEE developed OCS specifications and in accordance with KMC specifications. Autoliv further identified that it compiled the compliance and verification data submitted by IEE as part of Autoliv's overall PV reporting.

REQUEST NO. 11:

Furnish copies of all communications sent from and received by Kia that relate to or may relate to the alleged defect in subject vehicles; including but not limited to such communications between Kia, its Tier 1 restraint supplier and the seat sensor supplier and between employees and/or entities within Kia.

RESPONSE TO REQUEST NO. 11:

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information will be provided on June 25, 2010.

REQUEST NO. 12:

For each action identified in Kia's response to PE 09-034 request no. 8, identify by name, title, address and telephone number each individual involved in the action and each individual to whom the findings, conclusions or summary were communicated or provided. In addition, provide copies of all internal and

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external communications or documents sent from and received by Kia that relate to each action identified in Kia's PE09-034 response to request no. 8.

RESPONSE TO REQUEST NO. 12:

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information will be provided on June 25, 2010.

REQUEST NO. 13:

Describe in detail Kia's process or procedure to determine whether and how the OCS logic in the subject vehicles needed to be changed to Version 026_field_fix (low DPV eliminated) on July 26, 2007. Identify by name, title, address and telephone number each individual involved in the decision and approval process for the July 26, 2007 logic change and provide a summary or his or her actions. In addition, provide copies of all internal and external communications or documents sent from and received by Kia that relate to Kia's decision to change the subject vehicles OCS logic to Version 026_field_fix(low DPV eliminated).

RESPONSE TO REQUEST NO. 13:

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information will be provided on June 25, 2010.

REQUEST NO. 14:

Describe in detail Kia's process or procedure to determine whether and how the OCS logic in the subject vehicles needed to be changed to Version 027_field_fix (CA4 and CA5 revised; new CS added) on November 27, 2007. Identify by name, title, address and telephone number each individual involved in the decision and approval process for the November 27, 2007 logic change and provide a summary of his or her actions. In addition, provide copies of all internal and external communications or documents sent from and received by Kia that relate to Kia's decision to change the subject vehicles OCS logic to Version 027_field_fix(CA4 and CA5 revised; new CS added).

RESPONSE TO REQUEST NO. 14:

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information will be provided on June 25, 2010.

REQUEST NO. 15:

Describe in detail all information available to Kia when it decided to conduct the May 12, 2009 service campaign to apply the November 27, 2007 reflash to all subject vehicles manufactured before November 27, 2007. State all bases for Kia's decision to conduct the May 12, 2009 service campaign. In your response, explain in detail why Kia decided to conduct a service campaign instead of continuing

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individual field fixes on a customer by customer basis. Identify the name, title address and telephone number of each individual involved in the decision and approval process for the May 12, 2009 service campaign and provide a summary of his or her actions. In addition, produce copies of all internal and external communications or documents sent from and received by Kia that relate to Kia's decision to conduct the May 12, 2009 service campaign.

RESPONSE TO REQUEST NO. 15:

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information will be provided on June 25, 2010.

REQUEST NO. 16:

Identify each seating position outside Kia's Engineering Standard as identified in Request Number 8 of Kia's October 21, 2009 supplemental response, but within the scope of the subject vehicles occupant classification system. In addition, describe in detail all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, seating positions other than those required by Kia Engineering Standard, that have been conducted, are being conducted, are planned, or are being planned by, or for, Kia. 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, the location of the seating position and objective of the action;
- e. Engineering group(s)/which supplier(s) is responsible for designing and for conducting the action; and
- f. A brief summary of the findings and/or conclusions resulting from the action.

RESPONSE TO REQUEST NO. 16:

- a. Sorento "OCS OFF" Warning Lamp On Incident Study Report, dated March 16, 2007. See **Tab 3.**
- b. March 15, 2007
- c. March 16, 2007
- d. The 12 seating positions evaluated in March 2007 are identified in the attached report. Kia believes that the 18 positions contained in Kia's Engineering Standard properly supplemented the OCS FMVSS 208 compliance testing. The objective of the March evaluation was to see if variations in the 18 positions would lead to misclassifications which had not previously been identified. For example, seating postures 8-12 are multiple variations of the reclined position (Position No. 18) contained in Kia's Engineering Standard. See **Tab 3.**

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- e. IEE's "BL FL Field Issue Investigation Report" dated March 27, 2007 indicates that these positions were suggested by KMA. KMA has determined that it provided the 20 subjects who were evaluated, and that the positions were provided by the R&D Center from pre-existing documents to the North America Quality Center (NAQC) of HATCI. Hyun Sul Kim of NAQC supervised the conduct of the evaluation of the 20 subjects, and IEE prepared the analysis and report of the results.
- f. The evaluation of the additional 12 seating positions using 20 different body types did not result in any occupant misclassification issues. IEE concluded that the evaluation subjects were applying pressure in an area which was close to NHTSA's Britax Expressway CRS requirement. It was additionally noted that one person caused a misclassification when he assumed a reclined position and spread his legs to mimick the Britax Expressway. However, this misclassification could not again be replicated. See Tab 3 provided by Kia in its PE09-034 response to Request No. 8 dated October 21, 2009.

REQUEST NO. 17:

Furnish Kia's assessment of the alleged defect in the subject vehicles, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports include with this inquiry.

RESPONSE TO REQUEST NO. 17:

Pursuant to the extension granted to HATCI for Kia by NHTSA on May 12, 2010, the requested information will be provided on June 25, 2010.

Sincerely,



Robert Babcock

Senior Manager, Regulation and Certification Department