Kia Motors America, Inc.
Corporate Headquarters
111 Peters Canyon Road, Irvine, CA 92606-1790 USA
T 1 949 468 4800 F 1 949 468 4905

August 24, 2020

VIA ELECTRONIC SUBMISSION

Paul Simmons, Chief
Vehicle Defects Division C
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: **Preliminary Evaluation (PE20-008)**
Headlight Failures (MY) 2014-2015 Kia Soul and
(MY) 2011-2019 Kia Sorento

Dear Mr. Simmons:

Pursuant to the extensions you previously granted, this letter contains Kia's supplemental responses to various requests identified in your letter dated June 25, 2020 to Kia Motors America, Inc. ("Kia") (Reference NEF-103ej/PE20-008).

REQUEST NO. 1:

State, by model and model year, the number of subject vehicles Kia has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Kia, state the following:

a. Vehicle identification number (VIN);
b. Make;
c. Model;
d. Model Year;
e. Subject component part number and design version installed as original equipment;
f. Date of manufacture;
g. Date warranty coverage commenced; and
h. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

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

RESPONSE TO REQUEST NO. 1:

A chart summarizing the total number of subject vehicles broken down by model and model year is provided. **TAB 1.** A list of these vehicles is provided in Microsoft Access with the title "PRODUCTION DATA" and is submitted contemporaneously with this response.

SUPPLMENTAL RESPONSE TO REQUEST NO. 1:

An updated summary chart that includes the total number of subject vehicles in the U.S. Territories is provided. **TAB 1.1**. A list of the subject vehicles sold in the U.S. Territories is provided in Microsoft Access with the title PRODUCTION DATA_U.S. Territories" and is submitted with this response.

REQUEST NO. 2:

State the number of each of the following, received by Kia, or of which Kia 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;
d. Reports involving a fire;
e. Property damage claims; and
f. Third-party arbitration proceedings where Kia is or was a party to the arbitration; and
g. Lawsuits, both pending and closed, in which Kia is or was a defendant or codefendant.

For subparts "a" through "g," 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 "g," 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 "f" and "g," 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:

Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 2:

A chart summarizing the total of each of the items requested in 2(a) through (g) is submitted contemporaneously with this response. **TAB 23**. Kia notes that the term "fire" as defined by 49 CFR Part 579.4 includes all thermal events regardless of whether they result in an actual fire or not. This overinclusive definition includes the appearance of smoke or reports of melting, overheating, etc. As a result, the total fire counts include such thermal events alleged to have occurred in the headlights but which did not result in a fire as that term is understood by the public. Kia did not include assessments for those cases where solely thermal events and not fires were alleged.

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), street address, email address and telephone number;
d. Vehicle's VIN;
e. Vehicle's make, model and model year;
f. Vehicle's mileage at time of incident;
g. Incident date;
h. Report or claim date;
i. Whether a crash is alleged;
j. Whether a fire 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 2010, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

RESPONSE TO REQUEST NO. 3:

A list of responsive communications for the 2014-2015MY Soul is provided in Microsoft Access with the title "REQUEST NUMBER TWO DATA" and is submitted with this response.

Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request as it relates to the 2011-2019MY Sorento will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 3:

A list of responsive communications for the 2011-2019MY Sorento is provided in Microsoft Access with the title "REQUEST NUMBER TWO DATA" and is submitted with this response. A corrected list of the responsive Soul Techline and Consumer Complaint cases is also being submitted under the title "REQUEST NUMBER TWO DATA TECHLINES SOUL CORRECTED" and "REQUEST NUMBER TWO DATA CONSUMER COMPLAINTS SOUL CORRECTED".

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. Describe in detail the search methods and search criteria used by Kia to identify the items in response to Request No. 2.

RESPONSE TO REQUEST NO. 4:

Copies of the documents responsive to Request No. 2 for the 2014-2015 Kia Soul are organized electronically in folders titled Consumer Assistance Center Case Reports (CA's), Technical Assistance Center Case Reports, Field Reports, Lawsuits & Arbitrations. Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request as it relates to the 2011-2019MY Sorento will be provided on August 24, 2020.

KMA's search included all CA's, Field Reports and Techline Reports generated through May 31, 2020 using the words "headlight" and "headlamp". Those cases were then reviewed for responsiveness regarding issues relating to loss of illumination of one or both of the front headlamps. With respect to CA reports, KMA is not always able to extract incident date information in an automated manner from the source system. KMA will include the incident date if available. As to lawsuits and arbitrations, KMA's search included all Complaints and Arbitrations involving an allegation of a loss of illumination of one or both front headlamps in the subject vehicles of which KMA received notice of on or before May 31, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 4

Copies of the documents responsive to Request No. 2 for the 2011-2019 Kia Sorento are organized electronically in folders titled Consumer Assistance Center Case Reports (CA's), Technical Assistance Center Case Reports, Field Reports, Lawsuits & Arbitrations. The search parameters identified in Kia's initial response also applies to the Sorento. In addition, a corrected set of Consumer Assistance Center Case Reports and Technical Assistance Center Case Reports is also being provided for the Soul.

REQUEST NO. 5:

State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Kia 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. Kia's claim number;
b. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
c. VIN;
d. Repair date;
e. Vehicle mileage at time of repair;
f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
g. Labor operation number(s);
h. Problem code(s);
i. Diagnostic trouble code(s);
j. Replacement part number(s) and description(s);
k. Concern stated by customer;
l. Cause as stated on the repair order;
m. Correction as stated on the repair order; and
n. Additional comments, if any, by dealer/technician relating to claim and/or repair.

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

RESPONSE TO REQUEST NO. 5:

A list of the warranty claims identified as a result of the search specified in Kia's response to Request No. 6 is provided in Microsoft Access under the category "WARRANTY DATA". In

addition, Kia is also providing a list of goodwill claims approved by KMA's Consumer Affairs Department under the category "WARRANTY DATA 2".

REQUEST NO. 6:

Describe in detail the search methods and search criteria used by Kia to identify the claims in response to Request No. 5, including the labor operations, problem codes, diagnostic trouble 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, diagnostic trouble codes and diagnostic trouble code descriptions applicable to the alleged defect in the subject vehicles. State whether the diagnostic trouble codes are automatically reported to the warranty database electronically or manually entered into the warranty database by a claims administrator.

State, by make and model year, the terms of the new vehicle warranty coverage offered by Kia 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 Kia 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.

RESPONSE TO REQUEST NO. 6:

The 2014-2015MY Soul and 2011-2019MY Sorento vehicles have a 5-year, 60,000 mile New Vehicle Limited Warranty.

KMA extended the warranty coverage on the multi-function switch in the 2014 Soul to 15 years, unlimited mileage from the date of first service to all owners for intermittent flickering of the headlamps.

KMA extended the warranty coverage for the halogen headlamp low beam connector wiring to 10 years, unlimited mileage, starting from the date of first service to all owners. The headlamp connectors may lose electrical contact with a low beam bulb in one the headlamp assemblies.

Pursuant to the extension granted by Paul Simmons on July 31, 2020, the remaining information responsive to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 6:

For further clarification, Kia notes that the warranty for the halogen headlamp low beam connector was extended to certain 2011-2012MY Kia Sorento vehicles.

Kia searched for all repair/replacement warranty claims for the headlamp assembly, smart junction box, multi-function switch and connector through May 31, 2020 applicable to the subject vehicles. The warranty claims were then reviewed to identify claims responsive to the loss of illumination of one or both of the front headlamps.

Codes Used. In your letter you requested that Kia provides its "problem code" information. Kia refers to the "problem code" as the "cause code" and reflects the technician's evaluation of the cause of the problem. You also requested that Kia provide information regarding the "concerns stated by the customer." These are commonly referred to as "nature codes". These reflect the service writer's or technician's understanding of the customer's concern. A description of the problem and labor operation codes used for a specific claim are listed in the WARRANTY DATA. In addition, DTC codes are automatically transmitted to the warranty database. A list of the DTCs identified in the warranty claim data and their description is provided separately. **TAB 24**.

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, 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:

Copies of the documents responsive to this request are provided. **TABS 2-22.**

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 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 in interim, draft, or final form. Organize the documents chronologically by action.

RESPONSE TO REQUEST NO. 8:

Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 8:

A summary chart of the actions in response to this request is being submitted. **TAB 25**.

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. 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; and
h. Whether the modified component can be interchanged with earlier production components.

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:

Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 9:

A chart identifying the information responsive to this request is being submitted. **TAB 26**.

REQUEST NO. 10:

Produce one of each of the following:

a. Exemplar samples of each design version of the subject component;
b. Field return samples of the subject component exhibiting the subject failure mode; and
c. Any kits that have been released, or developed, by Kia for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

RESPONSE TO REQUEST NO. 10:

Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 10:

It is Kia's understanding that Request 10(a) is seeking exemplar parts for each design version related to the subject failure mode. Kits responsive to request 10(c) are also being submitted with this response. Kia is still in the process of collecting field return samples and will send to the Agency upon receipt.

REQUEST NO. 11:

State the number of each of the following that Kia has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cutoff date for sales, if applicable):

a. Subject component; and
b. Add any similar or substantially similar components; and
c. Any kits that have been released, or developed, by Kia for use in service repairs to the subject component/assembly.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also, identify by make, model and model year, any other vehicles of which Kia is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

RESPONSE TO REQUEST NO. 11:

Pursuant to the extension granted by Paul Simmons on July 31, 2020, the response to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 11:

A chart summarizing the requested part sales data and supplier information is being submitted. **TABS 27-28.**

REQUEST NO. 12:

Furnish Kia'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; 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; and
f. The reports included with this inquiry.

RESPONSE TO REQUEST NO. 12:

Pursuant to the extension granted by Paul Simmons on July 27, 2020, the response to this Request will be provided on August 24, 2020.

SUPPLEMENTAL RESPONSE TO REQUEST NO. 12 (a)-(f):

1. Overview

This investigation involves two vehicle models and three vehicle platforms which contain different headlamp components and designs. Prior to this investigation, Kia engaged in a diligent evaluation of its field data for the 2011-2015MY (XMa) and 2016-2019MY (UMa) Sorento vehicles as well as the 2014-2015MY (PS) Soul vehicles. The current defect investigation has provided Kia with the opportunity to revisit its evaluation and confirm the accuracy of its assessment of the potential safety risks associated with this issue. This renewed inquiry has reaffirmed the conclusion that Kia had previously reached—that no simultaneous loss of headlamp illumination nor fire-related safety defect trends exist in the subject vehicles. While some quality issues related to the headlamp components and multi-function switches were previously identified, Kia testing confirmed that there was no possibility of a safety defect within those vehicles. Moreover, all the residual illumination issues identified have been addressed by production improvements at the manufacturer level and/or actions in the field. As such, Kia believes this investigation should be closed since there is no evidence of a safety defect trend in either of the subject vehicles.

2. Kia Prior Evaluations/Investigations

Soul PS Multi-Function Switch Issue

In 2013, KMA investigated customer reports of one or both headlamps becoming inoperative in the 2014 MY Soul vehicles. As part of that investigation, it was determined that the internal connector in the headlamp was becoming deformed showing signs of overheating. In December 2013, NAQC evaluated deformed headlamp connectors and concluded that both the low and high beam bulb filaments would illuminate during high beam operation causing higher than normal current flow through the connector. This occurred only when the high beams were activated for extended periods using the multi-function switch. In mid-December 2013, KMC upgraded the BCM logic so the high and low beam filaments would not both activate when the high beams were activated. In late December 2013, KMC also made an incremental improvement changing the grease application method in the multi-function switch to improve the accuracy of the grease applied to the contact surface.

In late summer of 2014, KMA identified that it had received 14 claims involving deformed internal headlamp connectors subsequent to the December 2013 countermeasure. Those damaged components were sent to KMC for testing. KMC evaluated the damaged components and identified that the connector internal temperature rise was related to poor contact between the headlamp bulb and connector terminals resulting from poor assembly. This evaluation also showed that the difference in current draw after the new logic was applied was minimal suggesting that the concern was related (to a greater degree) to inconsistencies in the connector to headlamp bulb pin coupling rather than the BCM logic.

In February 2015, KMC changed the raw material of the headlamp connector to improve connector connectivity. In March 2015, KMC incorporated an aligning jig to better align the bulb terminals and prevent poor contact with the connector terminals. In May 2015, KMC changed the material of the connector retainer to improve heat resistance and changed the connector terminal plating specification from tin to silver to improve durability.

In August 2016, KMA identified customer complaints of flickering headlamps due to issues with the multi-function and requested that KMC investigate the issue. To address the intermittent flickering condition, KMC applied a silver-plating to the contact point and changed its shape from one contact to two contact points to prevent poor contact due to wear in December 2016.

After the improvements were implemented into production, Kia continued to monitor its field data and noticed customer complaints and warranty claims substantially dropped for the 2015MY. In September 2018, Kia launched a warranty extension program with customer notification applicable to the 2014MY Soul vehicles. The action extended the warranty for the multi-function switch from 5 years/60,000 miles to 15 years/unlimited mileage starting from the date of first service to address intermittent flickering of the headlamps.

Sorento (XMa) Headlamp Illumination Issue

In 2011, as part of its routine field monitoring, Kia identified reports of headlamp illumination issues in certain 2011 and 2012MY Sorento vehicles. Evaluation of parts from the field identified an issue related to the low beam connector resulting in poor surface contact between the female headlamp connector and the male low beam bulb terminals. Poor electrical contact resulting from reduced terminal contact area increases resistance and creates localized heating at the terminal contact point which can eventually deform (melt) the plastic connector. Over time, this deformation can create a slight gap between the terminals which, when jounced by road inputs, can cause intermittent arcing, flickering and eventually an open circuit. The increased thermal cycling caused by flickering also causes accelerated wear of the headlamp filament and reduced low beam bulb life. This can also cause voltage spikes when the circuit is opened further shortening bulb life. Significantly, the initial analysis indicated that the phenomena affected only the vehicle's low beams (i.e., high beams still functional) and appeared to be wear related.

KMC evaluated its manufacturing process and on May 27, 2011, KMC replaced the low beam connector inspection equipment and reduced the pogo pin length to minimize the risk of terminal damage during proof testing. On January 22, 2013, a new headlamp bulb connector was incorporated into production to reduce the likelihood of terminal bending and movement. In addition to the production improvements implemented, KMC also engaged in testing of the headlamp components to further evaluate the root cause and any potential hazards. This testing confirmed that (1) each headlamp bulb was fed by an independent power supply circuit meaning a failure in one headlamp has no effect on the performance of the other headlamp and (2) if the low beam short circuits or otherwise generates excessive heat in the circuitry, the power supply to the connector is switched off, meaning there is no risk of fire originating in the headlamp connector. The risk of fire is also mitigated by the fact that the combustion temperature of the connector material (350F) exceeds the maximum temperature measured during failure mode testing (310F).

In light of the testing conducted and in response to continued reports from the field pertaining to headlamp illumination, in May 2017, Kia initiated a service campaign to replace the halogen low beam connector in certain 2011 and 2012MY Sorento vehicles. In response to continued reports of illumination issues, including the 2013MY, Kia initiated a warranty extension campaign with customer notification in April 2019 for all 2011-2013MY Sorento vehicles. This action extended the warranty for the halogen headlamp low beam connector(s) from 5 years/60,000 miles to 10 years/unlimited mileage starting from the date of first service.

Sorento (UMa) Multi-Function Switch Issue

In 2017, KMA began looking into customer complaints for the 2016MY (UMa) vehicles related to headlamp performance. Specifically, these customers reported experiencing intermittent flickering and deactivation of the headlamps while driving with the "AUTO" mode selected on the multi-function switch. Deactivation of the headlamps from this root cause was intermittent as technicians were often unable to duplicate the customer concern through initial inspection.

Investigation further identified that headlamp illumination would immediately return when the multi-function switch was either toggled or set to the "ON" position. Replacement of the multi-function switch by dealers solved the problem in most instances.

Based on the information received from the field it was determined that the customer complaints were likely caused by contact wear in the multi-function switch. In January 2018, KMC changed the fixed contact pattern of the multi-function switch when in "AUTO" mode to prevent contact point wear. Given the age of these vehicles, the low warranty claims level, prior NHTSA precedent for similar lighting issues, and the effectiveness of the production change, and lack of safety risk, it was concluded that no additional customer satisfaction field action was required.

3. Regulatory Background

ODI has a long-standing policy that headlamp illumination issues only reach the level of a safety issue if they involve the simultaneous dual failure of headlamps. This policy is most clearly articulated in the Agency's analysis in the Closing Resume of a Defect Petition initiated in 2012. DP12–003 (involving allegations of headlamp illumination performance issues in the 2007–2009MY Saturn Outlook and GMC Acadia vehicles). As part of its closing analysis, ODI stated the following:

> Over the last 25 years, ODI has opened numerous defect investigations of the loss of headlamp illumination. Investigations that resulted in safety recalls **involved simultaneous loss of illumination from both headlamps**. NHTSA does not consider the loss of a single headlamp as presenting an unreasonable safety risk—such failures are readily detectable by the driver while allowing the vehicle to retain forward visibility and conspicuity from the remaining headlamp. There is typically enough time between the failure of the first headlamp and the second during which the vehicle operator can obtain the needed repairs.
>
> NHTSA Denial of Defect Petition, 79 Fed. Reg. Sec. 44,486 (Jul. 31, 2014) (emphasis added)

While ODI will accept general customer complaint allegations to initiate an investigation into perceived headlamp illumination performance issues, such allegations must be substantiated before a safety recall is warranted. *See e.g.*, PE03-017 Closing Resume (where ODI closed investigation into customer complaints of headlamps "flicker[ing] off and on" in certain 2001-2002MY Saturn LS vehicles because investigation revealed that "at no time do the headlamps turn completely off.") This often-times requires the evaluation of the anecdotal customer complaint, evaluation of warranty parts, customer contact, and engineering analysis. *See e.g.*, PE09-019 Closing Resume (where ODI's telephonic interviews of customers alleging dual headlamp failures identified that "in fact one headlight would be flickering and then cut off. The other headlight would still be operational.") As such Kia has distilled its data to focus on the simultaneous loss of illumination of the headlamps wherever possible.

4. Field Data Analysis

Customer Complaint Analysis

KMA received a total of 2,090 customer complaints alleging headlamp illumination concerns. However, most of those complaints do not involve headlamp illumination safety issues as recognized by ODI precedent. For example, of those 2,090 complaints, 1,145 involves customer complaints alleging only a single headlamp failure while another 612 customers provide insufficient information to determine if their incident involves a simultaneous loss illumination of headlamps. Likewise, another 184 customers allege only "flickering" of the headlamps rather than a loss of illumination. Another 19 customers report progressive illumination performance problems in one or both of their headlamps prior to experiencing loss of illumination in both headlamps. Indeed, of the 2,090 customer complaints identified that related to illumination issues, only 156 (complaint rate of 0.01% (156/1,364,522) involve customers that definitively allege the simultaneous loss of illumination of both headlamps.

Kia's engineering analysis suggests that many customers misinterpret what is actually occurring with their vehicle. This is supported by anecdotal accounts of some of the customers that purport to have experienced a loss of illumination in both headlamps, when in fact in many instances that is not the case. This customer behavior and complaint description pattern is consistent with that of prior NHTSA investigations for alleged loss of headlamps. *Supra.*, PE09-019.

For example, customers report simultaneous loss of illumination but actually experience prior singular failure first.

- "Both headlights" to be inoperative when contacting Consumer Affairs. Evaluation by the dealer indicates headlamp illumination failure is intermittent and occurs on "alternating sides" rather than simultaneously. Dealer identified two connectors melted and one bulb burned out suggesting one headlamp burned out prior to other. CA K2989817.
- "Headlights go out when the fog lights are activated." Dealer inspection indicates front left headlight goes out only. CA 13187603.

This is consistent with Kia's testing which identifies that the low beam connector issue affects one headlamp at a time because each headlamp has an independent power source. Kia notes that even if these customers do eventually experience dual headlamp failure, if the connector issue is the cause, they still are able to use the high beams for illumination until the vehicle can be repaired.

- "Low beam headlights won't work but the high beams are fine." VOQ 11162343
- "Both head lights went out, simultaneously . . . high beams still worked. . . ." VOQ 11056224

Customers also alleged to have experienced simultaneous loss of headlamp illumination when the multi-function switch is in the "AUTO" position. However, headlamp illumination immediately returns when the multi-function switch is turned to the "ON" position or by toggling the switch.

- When "headlights are in the auto position, they will just turn off at random times. The only way to get it to come back on is to put it on manual mode. CA 12786979
- Headlamps flicker on and off or turn off when in auto mode. Lights turn back on after turning switch or "pulling/pushing low/high beam control." VOQ 11140629

Once the customer has this experience, they immediately learn to turn the multi-function switch to the "ON" position and has functioning headlamps until their vehicle is repaired. Even assuming the handful of customers identified above did experience simultaneous loss of headlamp illumination, most are within the scope of the vehicle warranty (or a warranty extension campaign).

Fire analysis

Pursuant to the information request propounded by ODI, Kia has provided data relating to fires. The term "fire" as defined in 49 C.F.R. part 579.4 includes all thermal events regardless of whether they result in an actual fire or not. Consequently, the data provided includes many thermal events in which the customer's vehicle did not experience a fire as that term is commonly understood by the public. Indeed, the vast majority of customer complaints alleging a fire involve claims of melted connectors. A handful of customers allege to have experienced an actual fire but those are either unrelated to headlights, unsubstantiated, due to aftermarket parts or, as a result of the overheating of the headlamp connector which the customer interpreted as a "fire". Kia's testing and field data support the lack of fire risk associated with headlamp failure.

Warranty Claims Analysis

NHTSA's Information Request seeks warranty information related to "headlight assembly, smart junction box, and related components manufactured for use on MY 2014-2015 Soul and MY 2011-2019 Sorento." In addition to the headlight assembly and smart junction box, Kia included loss of illumination warranty claims involving the repair and/or replacement of the multi-function switch and the connector. The collected data also includes responsive claims from the referenced campaigns. KMA received 24,030 warranty claims (included claims related to the warranty extension campaigns) out of a total vehicle population of 1,364,522 vehicles for a claims rate of 1.8%. Based on a review of the data, a significant number the of claims relate concerns that do not pose an unreasonable risk to motor vehicle safety (e.g., single headlamp illumination failures, headlamp flickering).

VOQ Analysis

ODI's Opening Resume suggests that there are a total of 74 VOQ complaints related to sudden unexpected loss of illumination of both headlamps. ODI attached a total of an additional 158 VOQs for a total of 232 to its information request letter. Kia's review of the VOQs identified by ODI has determined that both numbers are substantially overinclusive. Of the 232 VOQs identified by the Agency, 79 involve reports of single headlamp loss of illumination, 45 involve complaints of loss of both headlamps, many of which are unclear as to whether the failure occurred at the same time, 47 involve allegations of flickering headlamps, 27 involve complaints where there is insufficient information provided to assess headlight issue, 23 involve reports of loss of illumination when multi-function switch is turned to AUTO (and headlamps still function when switch turned to ON), 8 involve complaints unrelated to the current investigation and 3 VOQs were duplicates. Kia's assessment of the VOQs referenced in your letter is submitted with this response. **TAB 29**.

Conclusion

Over the course of 10 years that the subject vehicles have been on the road, there have been no injuries and only one unsubstantiated accident (with no injury) allegedly caused by illumination issues. As indicated at the beginning of the response to this request, Kia does not believe that the headlight concerns raised by the Agency result in an unreasonable risk to motor vehicle safety.

Sincerely,

J.S. (Jurassic) Park
Vice President, Product Litigation &
Regulatory Compliance
Kia Motors America, Inc.