INFORMATION Redacted PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C . 552(B)(6)

HYUNDAI-KIA
AMERICA TECHNICAL CENTER, INC.

July 19, 2012

Rec'd 7/25/12
Dept
ARI V10

Mr. D. Scott Yon
Chief, Vehicle Integrity Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, D.C. 20590

OFFICE OF DEFECTS & INVESTIGATIONS
2012 JUL 26 A 8:15
July 26

RE: NVS-212mjl, PE12-012

Dear Mr. Yon:

This letter provides a response to your above referenced request for information, dated June 05, 2012.

Prior to responding to the request, Hyundai objects to NHTSA's boilerplate definition of "Document" as vague, incomprehensible, overly broad and unduly burdensome. Hyundai has made a good faith, reasonable attempt to search for materials responsive to each request in the time frame provided.

Request 1.

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

a. Vehicle identification number (VIN);
b. Make;
c. Model;
d. Model Year;
e. Date of manufacture;
f. Date warranty coverage commenced; and
g. 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 2007, or a compatible format, entitled "PRODUCTION DATA."

Hyundai-Kia America Technical Center Inc.
6800 Geddes Road, Superior Township, MI 48198
TEL: 734-337-9499 FAX: 734-483-5919
www.hatci.com

Response to Request 1.

MY 2011-2013 Hyundai Elantra manufactured in Hyundai's Ulsan, Korea factory.

See ATTACHMENT "PRODUCTION DATA.accdb" for additional requested information.

Source: Hyundai Motor America
Information as of June 28, 2012

NOTE: Other Hyundai US market vehicles manufactured by Hyundai Motor Company utilize support brackets in their headliner assemblies; however, the configuration and dimensions differ from those used in the Korean produced 2011-2013 Elantra. Hyundai is not aware of any occurrences in these vehicles similar to the incident that is the subject of this evaluation. See ATTACHMENT A "Hyundai US Models with support brackets.xlsx" for a list of these models.

Request 2.

State the number of each of the following, received by Hyundai-Kia, or of which Hyundai-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, 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 Hyundai-Kia is or was a party to the arbitration; and
f. Lawsuits, both pending and closed, in which Hyundai-Kia is or was a defendant or codefendant.

For subparts "a" through "f," 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 Hyundai-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 2.

a. Hyundai consumer complaints, including those from fleet operators;

None

b. Hyundai field reports, including dealer field reports;

None

c. Hyundai 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;

One, the subject 2012 Elantra (KMHDH4AE7CU[redacted])

d. Hyundai property damage claims;

None

e. Third-party arbitration proceedings where Hyundai is or was a party to the arbitration; and

None

f. Lawsuits, both pending and closed, in which Hyundai is or was a defendant or codefendant.

None

Source: Hyundai Motor America
Information as of June 28, 2012

Request 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. Hyundai-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;
h. Report or claim date;
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 "REQUEST NUMBER TWO DATA."

Response to Request 3.

See ATTACHMENT "REQUEST NUMBER TWO DATA.accdb" for requested information.

Source: Hyundai Motor America
Information as of June 28, 2012

Request 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 Hyundai-Kia used for organizing the documents.

Response to Request 4.

See ATTACHMENT B for requested Hyundai report information.

Source: Hyundai Motor America
Information as of June 28, 2012

Request 5.

State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Hyundai-Kia to date that relate to, or may relate to, the alleged defect in the subject vehicles including all claims for repairs of the subject components: 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 (TSB) or customer satisfaction campaign. Also, state, by model and model year, a total count for all claims that relate to repairs related to any TSBs involving the subject components.

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

a. Hyundai-Kia's claim number;
b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
c. VIN;
d. Vehicle's make, 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. Whether or not the repair is related to a TSB (and if so, identify the TSB number)
k. Replacement part number(s) and description(s);
l. Concern stated by customer; and
m. Comment, if any, by dealer/technician relating to claim and/or repair.

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

Response to Request 5.

No Hyundai warranty claims; extended warranty claims or claims for good will services relate to the alleged defect.

No TSBs involve the subject component.

Source: Hyundai Motor America
Information as of June 28, 2012

Request 6.

Describe in detail the search criteria used by Hyundai-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 lists of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by model and model year, the terms of the new vehicle warranty coverage offered by Hyundai-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 Hyundai-Kia offered for the subject vehicles, and state by model and model year, the number of vehicles that are covered under each such extended warranty.

Response to Request 6.

The claims were identified by searching for all subject vehicle warranty claims containing information for the Headliner Operation Code (85310R00) or Headliner Part Numbers (85313-3X***-** and , 85413-3X***-** for 2011-2013 model year Hyundai Elantra vehicles.

Please see ATTACHMENT C for a complete list of related part numbers.

The Hyundai New Vehicle Limited Warranty period is limited to 60 months from the date of original retail delivery or date of first use, or 60,000 miles, whichever occurs first. The headliner is covered by the Hyundai New Vehicle Limited Warranty.

As the subject vehicles are 2011-2013 model year vehicles for which the Hyundai New Vehicle Limited Warranty is in effect, no extended warranty information is applicable.

Source: Hyundai Motor America
Information as of June 28, 2012

Request 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 Hyundai-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 Hyundai-Kia is planning to issue within the next 120 days.

Summarize and provide a brief chronology of all actions taken by Hyundai-Kia leading to each of the technical service bulletins that have been issued relating to the alleged defect in the subject vehicles. Provide copies of all documents, organized in chronological order, related to the development of these bulletins.

Response to Request 7.

No responsive Hyundai documents exist.

Source: Hyundai Motor America
Information as of June 28, 2012

Request 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, Hyundai-Kia. This includes, but is not limited to, any

and all actions by the subject component manufacturer relating to the alleged defect. 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. If an action is not complete, provide a detailed schedule for the work to be done, tentative findings and/or conclusions, and provide an update within 10 days of completion of the action.

Response to Request 8.

Hyundai Motor Company's Crash Performance Development Team conducted thirteen (13) side curtain air bag deployment tests prior to the subject incident. In each of these tests, the headliner support brackets remained securely attached to the headliner substrate. See 'TEST_MATRIX_1.XLS" in ATTACHMENT D for a test summary matrix.

Following the report of the subject incident, Hyundai Motor Company's Crash Performance Development Team conducted six (6) additional side curtain air bag deployment tests in an attempt to duplicate the reported condition in the subject vehicle. The support bracket became dislodged only during the condition where spray adhesive was eliminated from the assembly process. See 'TEST_MATRIX_2.XLS" in ATTACHMENT D for a test summary matrix.

Following the report of the subject incident, Hyundai Motor Company contacted eight (8) retail customers in the Korean market who had purchased vehicles with production dates in the range of the incident vehicle (June 16, 2012). The headliners of these vehicles (with a headliner manufacturing process identical to those of Elantras exported to the US) were removed and inspected for any indications of a lack of adhesion between the support brackets and the headliner substrate. Inspection revealed the headliner support brackets securely attached to the headliner substrate. See 'INSPECTION_MATRIX.XLS" in ATTACHMENT D for an exemplar vehicle inspection summary matrix.

Source: Hyundai Motor Company
Information as of July 10, 2012

Request 9.

Describe the function of the metal stiffener in the headliner installed in the subject vehicles. Provide all design and performance specifications for the metal stiffener and the headliner assembly (subject component). Also, provide copies of all documents associated with the design and product validation testing of the subject component used in the subject vehicles.

Response to Request 9.

The support bracket provides two primary functions:

1. Provide structural rigidity to the headliner assembly.
2. Facilitate assembly of the component into the vehicle.

See ATTACHMENT E for engineering drawing associated with the headliner assembly for Hyundai Elantras manufactured in Hyundai's Ulsan, Korea factory

Source: Hyundai Motor Company
Information as of July 10, 2012

Request 10.

Describe in detail the installation process used to attach the metal stiffener to the headliner in the subject vehicles, including but not limited to, the type of adhesive used, the amount of adhesive used, and the locations of adhesive application on the subject component.

Response to Request 10.

The assembly process of the headliner can be described as follows:

1. The support brackets are coated on one side with a resin based spray adhesive using an industrial adhesive spray gun. The production requirement is 100% adhesive coverage of the support bracket surface which contacts the headliner substrate.
2. The metal support brackets are then placed in an assembly fixture to properly locate the brackets for attachment to the polyurethane-based headliner substrate.
3. The headliner substrate is then compressed with an industrial press to form the headliner and securely attach the support brackets to the headliner substrate.
4. The headliner is subject to a visual inspection to confirm support bracket attachment and acceptable visual appearance
5. The excess material is trimmed from the headliner assembly edges using an industrial trimming press.
6. A polyolefin-based adhesive (hot melt) is applied to ends of the metal support brackets. The specification is for a continuous bead of the adhesive to be applied between the edge of the metal support bracket and the headliner substrate. The adhesive extends 10 centimeters from each end of the metal support bracket.

See ATTACHMENT F for information related to the resin based spray and polyolefin-based adhesives.

Source: Hyundai Motor Company
Information as of July 10, 2012

Request 11.

State whether any other design of the subject component for the subject vehicles was ever considered or used by Hyundai-Kia. If so, describe the other design(s) considered or used and the differences between the subject component design and the other designs. Identify the subject vehicles that used another subject component design by model, model year and the period of vehicle production. Also, identify the suppliers of the other subject component designs.

Response to Request 11.

Hyundai Motor Company utilizes a polypropene-based headliner assembly without support brackets for 2011-2013 Hyundai Elantras manufactured in its Montgomery, Alabama assembly plant. The 2011-2013 Elantras produced at the Alabama assembly plant are not exported outside of North America

The Korean produced 2011-2013 Elantras are manufactured for domestic (Korea) and several overseas markets including the United States and Canada.

See ATTACHMENT G for the engineering drawings associated with the US production headliner assembly.

Supplier of the US production headliner:

DAEHAN Solution
9101 County Rd. 26
Hope Hull, Alabama 36043

Source: Hyundai Motor Company
Information as of July 10, 2012

Request 12.

Describe all modifications or changes made by or on behalf of Hyundai-Kia (e.g., by a supplier) in the design, material composition, manufacture, quality control, supply, or installation of the subject components, from the start of production to the end of production of the subject vehicles, 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) (engineering and service) of the original component;

e. The part number(s) (engineering and service) 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 Hyundai-Kia is aware of which may be incorporated into vehicle production within the next 120 days.

Response to Request 12.

No modifications or changes made by or on behalf of Hyundai have occurred in the design, material composition, manufacture, quality control, supply, or installation of the support brackets to the headliner substrate.

No modifications or changes related to the manufacturing of the headliner assembly will be incorporated into vehicle production within the next 120 days.

Source: Hyundai Motor Company
Information as of July 10, 2012

Request 13.

State, by model and model year, all part numbers of the subject components that have been installed on the subject vehicles as assembled by Hyundai-Kia. State, by model and model year, the service part numbers of the subject components Hyundai-Kia designates for installation on the subject vehicles. State, by month, year and part number, the total number of subject components sold as service parts by Hyundai-Kia. Identify any kits that Hyundai-Kia has released or developed for use in service repairs to the subject components or assembly. For each subject component part number, provide the supplier's name, address, and point of contact used by Hyundai-Kia (name, title, and telephone number). Also, identify by make, model and model year, any other vehicles of which Hyundai-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 13.

State, by model and model year, all part numbers of the subject components that have been installed on the subject vehicles as assembled by Hyundai-Kia.

See ATTACHMENT E for engineering drawings listing the manufacturer part numbers for the subject vehicle headliner assembly.

State, by model and model year, the service part numbers of the subject components Hyundai-Kia designates for installation on the subject vehicles.

See ATTACHMENT H for the Hyundai service part number application based on vehicle production date.

State, by month, year and part number, the total number of subject components sold as service parts by Hyundai-Kia.

See ATTACHMENT I for the Hyundai's service part sales.

Identify any kits that Hyundai-Kia has released or developed for use in service repairs to the subject components or assembly.

Hyundai has not released or developed any kits for use in service repairs to the subject components or assembly.

For each subject component part number, provide the supplier's name, address, and point of contact used by Hyundai-Kia (name, title, and telephone number).

Supplier information for the Korean built Hyundai Elantra headliner:

NVH Korea
801-5,Munsan-ri, Oedong-eup,
Gyeongju-si, Gyeongbuk
Korea

Kim, Dae-ho
+82-10-9363-0093

Also, identify by make, model and model year, any other vehicles of which Hyundai-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.

No other Hyundai models manufactured by Hyundai Motor Company utilize an identical component.

Source: Hyundai Motor Company
Information as of July 10, 2012, 2010

Request 14.

Furnish Hyundai-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; 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 incident reported in the VOQ report referenced in this inquiry.

Response to Request 14.

a. The causal or contributory factor(s):

The most likely explanation is insufficient adhesive application to a portion of the driver's side headliner support bracket. Following a thorough review of the headliner assembly processes and inspection results, Hyundai believes this was an isolated incident.

b. The failure mechanism(s);

Insufficient adhesion between a portion the driver's side headliner support bracket and the headliner substrate.

c. The failure mode(s);

It is believed that upon deployment of the incident vehicle's driver's curtain air bag (in response to a lateral collision), the curtain air bag material contacted a portion of the headliner support bracket where there was insufficient adhesive. The front portion of the metal bracket was dislodged and forced downward. The rear portion of the support bracket remained adhered and attached to the headliner substrate.

d. The risk to motor vehicle safety that it poses;

If a vehicle with this condition is involved in a collision where the side curtain air bag deploys, the air bag could contact a portion of the headliner support bracket with insufficient adhesive and possibly dislodge a portion of the metal bracket.

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.

There would be no warning to the operator and the other persons both inside and outside the vehicle.

f. The incident reported in the VOQ report referenced in this inquiry.

See ATTACHMENT J for the requested VOQ

Source: Hyundai Motor Company
Information as of July 10, 2012

There is no defect trend associated with the Hyundai Elantra side curtain air bag. Please let me know if you have any questions about the information provided in this letter.

Sincerely,

Robert Babcock

Robert Babcock
Director, Certification and Compliance Affairs
Hyundai-Kia America Technical Center, Inc.

Attachments:

Two CDs, each containing:
PRODUCTION DATA. accdb;
REQUEST NUMBER TWO DATA. accdb;
ATTACHMENT A Hyundai US Models with support brackets.xlsx;
ATTACHMENT B Reports (containing one Report pdf file);
ATTACHMENT C 2011-2013 Headliner Part Number Application;
ATTACHMENT D Test and Inspection Information (containing 3 xlsx files);
ATTACHMENT E Korean Manufactured Headliner Drawings (containing 2 xlsx files);
ATTACHMENT F Adhesive Information;
ATTACHMENT G US Manufactured Headliner Drawings (containing 2 xlsx files);
ATTACHMENT H Headliner Service Part Information;
ATTACHMENT J Korean Manufactured Headliner Service Part Sales Information
ATTACHMENT K Incident VOQ

PE12-012

HYUNDAI-KIA

7/19/2012

ATTACHMENT B

Hyundai Report Information

Mitchell, Goff & Mitchell, L.L.P.

Attorneys at Law

10440 North Central Expressway

Suite 1100

Dallas, Texas 75231

Fax (214) 651-8506

www.mitchellgoff.com

Carmen S. Mitchell
Michael R. Mitchell
Ben A. Goff

Phone (214) 651-8218

bgoff@mitchellgoff.com

Friday, May 04, 2012

Hyundai Motor America
P.O. Box 20850
Fountain Valley, CA 92728-0850

Gentlemen:

Our firm represents [redacted] On April 7, 2012 he was driving a 2012 Hundai, KMHDH4AE7CU[redacted] when it was struck in the left front by another vehicle causing the driver side airbag to deploy. When it did, a sharp piece of metal was driven into his left ear cutting it severely and puncturing the ear drum. The vehicle was about a month old at the time of the accident. He does not believe the airbag functioned as intended and that the injury to his ear was caused by the airbag. He has sustained permanent injury as the result of this failure.

The vehicle is available for your inspection at the Goodwin Wrecker in Longview. His insurance carrier has declared the vehicle a total loss and desires to sell it for salvage, therefore, time to do this inspection is limited. If you will contact me, I will make arrangements for your inspection.

Thank you for your consideration.

Sincerely

Ben A. Goff
Attorney

cc[redacted]

PE12-012

HYUNDAI-KIA

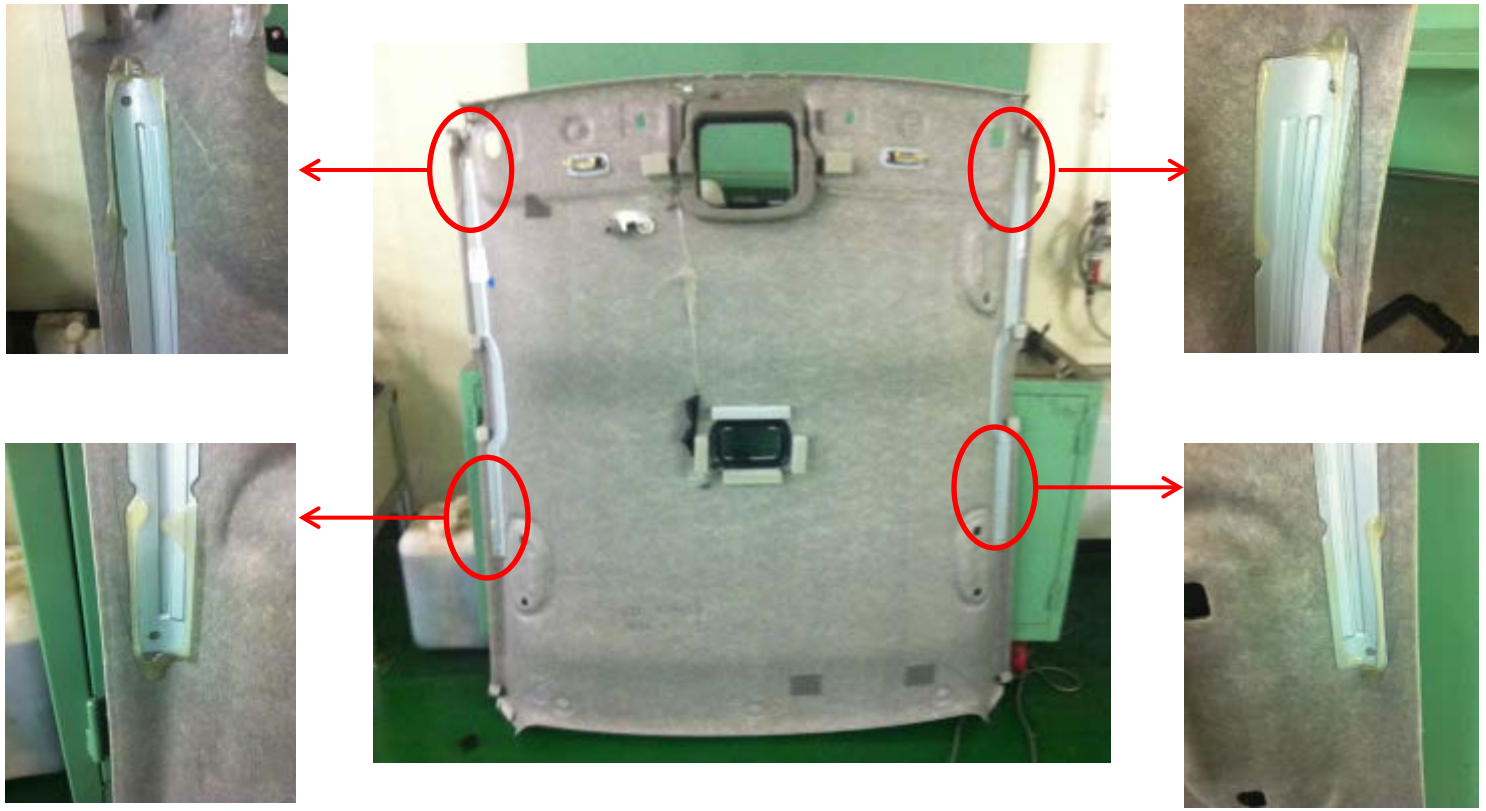
7/19/2012

ATTACHMENT D

INSPECTION MATRIX PHOTOGRAPH REPORT

▣ MD headlining BRKT inspection results

Part No.	853133X150TX	Inspection date	’12.06.01
License No.	[redacted]	Production date	’12.01.11
Photo			



Part No.	854133X150TX(s/roof)	Inspection date	'12.06.04
License No.	[redacted]	Production date	'12.01.18
Photo			

Part No.	853133X150TX	Inspection date	’12.06.06
License No.	[redacted]	Production date	’12.01.09
Photo			

Part No.	853133X130TX	Inspection date	’12.06.05
License No.	[redacted]	Production date	’12.01.14
Photo			

Part No.	853133X130TX	Inspection date	’12.06.05
License No.	[redacted]	Production date	’12.01.12
Photo			

Part No.	853133X150TX	Inspection date	’12.06.07
License No.	[redacted]	Production date	’12.01.17
Photo			

Part No.	853133X150TX	Inspection date	’12.06.04
License No.	[redacted]	Production date	’12.01.16
Photo			

Part No.	854133X150TX (s/roof)	Inspection date	'12.06.07
License No.	[redacted]	Production date	'12.01.16
Photo			

PE12-012

HYUNDAI-KIA

7/19/2012

ATTACHMENT F

POLYOLEFIN BASED ADHESIVE

Material Safety Data Sheet

OKONG BOND® No.SJ2004

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAMES/SYNONYMS : No. SJ2004
EMERGENCY TELEPHONE NUMBER : 82-32-822-5050 (SOUTH KOREA)
8L-14B,Namdong industrial Complex
Namchon-dong, Namdong-gu,Inchon-city, 405-846,South Korea
SUBSTANCE: Hotmelt adhesive
CREATION DATE: OCT 07 1998
REVISION DATE:

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No	content(%)
1.ETHYLENE-VINYLACETATE COPOLYMER	24937-78-8	15
2.POLYPROPYLENE	9003-07-0	50
3. PETROLEUM HYDROCARBON RESIN	64742-16-1	30
4. HIGH-DENSITY POLYETHYLENE	9002-88-4	5

SECTION 3 HAZARDS IDENTIFICATION

Danger immediate, harm information

Ingredients ~~NFPA RATINGS (SCALE 0-4)~~	FIRE	HEALTH	REACTIVITY
1.ETHYLENE-VINYLACETATE COPOLYMER	1	1	0
2.POLYPROPYLENE	1	1	
2. PETROLEUM HYDROCARBON RESIN	1	1	0
3. HIGH-DENSITY POLYETHYLENE	1	1	0

EYE CONTACT
Short-term effects : No data available
Long-term effects : No data available
SKIN CONTACT
Short-term effects :The stimulus can be happended.
Long-term effects : No data available
INHALATION
Short-term effects :Can cause stimulus and vomiting.
Long-term effects : No data available
ENGESTION
Short-term effects : No data available
Long-term effects : No data available
CARCINIGEN STATUS:

OSHA : N
NTP : N
IARC : N
ACGIH : N

SECTION 4 FIRST AID MEASURES

EYE CONTACT : Wash eyes immediately with large amousts of water. get medical attention immediately.
SKIN CONTACT : Remove contaminated clothing and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least

15-20 minute). Get medical attention immediately.
INHALATION : Remove from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention if needed.
INGESTION : If vomiting occurs, keep head lower than hips to help prevent aspiration. Treat symptomatically and supportively. Get medical attention if needed.
INFORMATION TO DOCTOR : No known detoxificants. Treat according to symptoms.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT : 271℃(OC)
SPONTANEOUS COMBUSTION POINT : No data available
MINIMUM FLAMMABLE LIMITS : No data available
MAXIMUM FLAMMABLE LIMITS : No data available
FLAMMABILITY CLASS(OSHA) : No data available
FIREFIGHTING : Move container from fire area if you can do it without risk. Do not scatter spilled material with high-pressure water streams. Dike fire-cotrol water for later disposal. Use agents suitable for type of surrounding fire. Avoid breathing hazardous vapors, keep upwind.
HARZARDOUS COMBUSTION PRODUCTS : Combustion will produce CO2, water, sand, regulated foam
TOXIC MATERIAL ON BURNING : Chemical toxic carbon combination may be included.
THE FIRE EXTINGUISHER NOT TO BE USED : Information provided

SECTION 6 ACCIDENTAL RELEASE MEASURES

STEP TO BE TAKEN TO PROTECT FROM BODILY HARM : Keep unnecessary people away.
STEP TO BE TAKEN TO PROTECT ENVIRONMENT : Collect spilled material in appropriate for later disposal keep out of water supplies and sewers. keep unnecessary people away isolate hazard area deny entry.

SECTION 7 HANDLING AND STORAGE

HANDLLING : Observe all federal, state and local regulations when storing this substance.
STORAGE : Store in a dry place. Store in tighly closed container.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS : Use adequate ventilation to keep airborne concentration low.
EYE PROTECTION : Operator should wear splash resistant or particle resistant safety goggles to avoid eye contact with chemical material.
An emergency eye wash fountain and quick drench shower should be installed in the immediate work area.
RESPIRATORY PROTECTION : The following respiratory protection equipment is recommended by information obtained from various data sources related to toxicty and health.
The listed respiratory protection equipment are ranked in the order of minimum requirements to maximum requirements.
The selected respiratory protection equipment should be based on pollution levels and production processes in the working area, and should not exceed the maximum operating limits of the respiratory protection equipment.
Products should be approved by NIOSH/MSHA
: Respiratory protective equipment for particles and mist.
Supplied air purifying respiratory protective equipment with high efficiency particle filter
: Supplied air purifying respiratory protective equipment with particle and mist filter.
: C type air supply(ventilating type) respiratory protective equipment with pressure-demand or positive-pressure mode.
Self-contained respiratory equipment.

PROTECTIVE BODY AND GLOVES : Operator should wear appropriate(imprevious) protective clothing to avoid repetitive or long-term contact with chemical material.

EXPOSURE LIMITS

ETHYLENE-VINYLACETATE COPOLYMER : No standard or limits listed by OSHA, ACGIH, or NIOSH

POLYPROPYLENE : No standard or limits listed by OSHA, ACGIH, or NIOSH

PETROLEUM HYDROCARBON RESIN : 5 mg/m3(15 mppcf) OSHA TWA(respirable dust)
15 mg/m3(50 mppcf) OSHA TWA(total dust)

HIGH-DENSITY POLYETHYLENE : No standard or limits listed by OSHA, ACGIH, or NIOSH

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Yeloowish block
Odor : faint smell
pH : No data available
SOLVENT SOLUBILITY : No data available
BOILING POINT/RANGE : No data available
MELTING POINT : 130~150℃
VAPOR PRESSURE : No data available
VAPOR DENSITY : No data available
SECIFIC GRAVITY : 0.98
MOLECULAR WEIGHT : No data available
DISTRIBUTING COEFFICIENT : No data available
VISCOSITY : 6000cps/180℃

SECTION 10 STABILITY AND REACTIVITY

CHEMICAL STABILITY : Stable under normal temperatures and pressures.
CONDITIONS TO AVOID : Avoid all possible sources of ignition (spark or flame)
HAZARDOUS DECOMPOSITION PRODUCTS : carbon oxides(CO, CO2)
HAZARDOUS POLYMERIZATION : No data available

SECTION 11 TOXICOLOGICAL INFORMATION

ETHYLENE-VINYLACETATE COPOLYMER
TOXICITY DATA : Inhalation : No data available
: Oral : No data available
: Skin : No data available
CARCINOGEN STATUS : OHSA - None
: NTP - None
: IARC - None
ACUTE TOXICITY DATA : No data available
CHRONIC DATA : No data available
MUTAGENIC DATA : No data available
REPRODUCTIVE EFFECTS DATA : No data available

POLYPROPYLENE
TOXICITY DATA : Inhalation : No data available
: Oral : No data available
: Skin : No data available
CARCINOGEN STATUS : OHSA - None
: NTP - None
: IARC - None
ACUTE TOXICITY DATA : No data available
CHRONIC DATA : No data available
MUTAGENIC DATA : No data available
REPRODUCTIVE EFFECTS DATA : No data available

PETROLEUM HYDROCARBON RESIN
TOXICITY DATA : Inhalation : No data available
: Oral, rat : LD50 = 7g/kg
: Skin : No data available
CARCINOGEN STATUS : OHSA - None
: NTP - None
: IARC - None
ACUTE TOXICITY LEVEL : No data available
CHRONIC DATA : No data available
MUTAGENIC DATA : No data available
REPRODUCTIVE EFFECTS DATA : No data available

HIGH-DENSITY POLYETHYLENE
TOXICITY DATA : Inhalation : No data available
: Oral : No data available
: Skin : No data available
CARCINOGEN STATUS : OHSA - None
: NTP - None
: IARC - None
ACUTE TOXICITY LEVEL : No data available
CHRONIC DATA : No data available
MUTAGENIC DATA : No data available
REPRODUCTIVE EFFECTS DATA : No data available

SECTION 12 ECOLOGICAL INFORMATION

ECOTOOXICITY : No data available
ENVIRONMENTAL FATE : No data available
PERSISTENCE/DEGRADABILITY : No data available
BIOACCUMULATIVE POTENTIAL : No data available

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE INFORMATION : Dispose of in accordace with applicable local and national regulations. Avoid contact of spill material and runoff with soil and surfase waterways. Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated material as hazardous waste. Use only approved transporters, recylers, treatment, storage or disposal facilities.

SECTION 14 TRANSPORT INFORMATION

No classification currently assigned.

SECTION 15 REGULATORY INFORMATION

No data available

SECTION 16 OTHER INFORMATION

THE SOURCE OF DATA: This MSDS is for the purpose of providing references to other enterprises which asking the MSDS by the Industrial Safety and Health Law, the 41st article. Therefore the O-Kong Adhesives (Co.) does not take any responsibility about any technical or legal responsible for this document

SJ2004

Hotmelt Adhesives for Automobile interior part

Characteristics

· Polyolefin-based hotmelt adhesives with excellent processing and bonding characteristics.
· Good heat resistance.
· Very good hot-tack.
· Excellent bond strength on various substrates.

Field of application

· Assembly of the Automobile interior felt and parts

Physical properties

Color :	Yellow block
Viscosity(Brookfield) :	6,000±1,000cps@180℃
Softening point(R&B) :	140±10℃

Application

· Melt SJ2004 for approx. 30minutes.
· Recommended working temperature range is 160~190℃.

Caution

· Store in a dark, dry and cool place
· Heat must be avoided before use to prevent a possible deformation of OPS500H.
· Pre-tests should be carried out because of the variety of substrates available.

Packaging

· 20kg box

OKONG Corporation

621-7, Namchon-dong, Namdong-gu
Incheon City, 405-846, KOREA
TEL : +82-32-822-5050
FAX : +82-32-812-5050
Homepage : www.okong.com

PE12-012

HYUNDAI-KIA

7/19/2012

ATTACHMENT F

RESIN BASED SPRAY ADHESIVE

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

-. Product Name : DC-710SP
-. General Chemical Characteristic : chloroprene rubber type adhesive based upon resin.
-. Analysis of Noxiousness : chronic exposure and contact may cause noxiousness.
-. Usages : automobile adhesive.
-. Information of Manufacturer

D. K. C
859. CHANG PYUNG-RI, BUKYEU-MYEON, GUNWI-GUN, GYEONGSANGBUK-DO, KOREA
Tel: 82-54-382-9880~1 Fax: 82-54-382-9882

. Dated Prepared :Oct.31,2006.

SECTION 2. INFORMATION ON INGREDIENTS

Name	Trade Name/ Synonyms	CAS No.	Content(%)
CHLOROPRENE RUBBER	-	9010-98-4	20~22
TOLUENE	METHYL BENZENE	108-88-3	20~30
ACETONE	2_PROPANONE	67-64-1	20
OTHERS(ISO-HEPTANE)		31394-54-4	15~35

SECTION 3. HAZARD IDENTIFICATION

Necessary Information in emergency

NFPA rating(scale 0-4) : Health=2 Fire=3 Reactivity=0

Potential Health Effects

-. Eye : may cause irritation and side effects may bring.
-. Skin : may cause irritation.
-. Inhalation : may cause irritation, headache, breathing difficulty, stomach pain.
-. Ingestion : may cause vomit, breathing difficulty, headache, liver/kidney damage and ingestion.
-. Chronic Effects : liver/kidney and brain damage, heart failure, convulsions, paralysis
-. Signs & Symptoms : nausea, drowsiness, dilated pupils, headache, vomit, yellowing of skin and eys

SECTION 4. FIRST AID MEASURES

. Eye : Wash eyes immediately with clean water and norsal saline until no evidence of chemical remains (at least 10-15 minutes). Get medical attention immediately.

. Skin : Remove contaminated clothing and shoes. Wash with soap or mild detergent and water until no evidence of chemical remains (at least 10 minutes). Get medical attention immediately.

. Inhalation : Move to fresh air area immediately. Keep the person warm and rest. Get medical attention immediately.

. Ingestion : Perform the personal vomit of it. Gastric lavage should be performed by qualified medical doctor.

. Note to Physician : no specific antidote, treat symptomatically and supportively.

SECTION 5. FIRE FIGHTING MEASURES

-. Flash point : -4°F(-20℃)

-. Auto-ignition : 473°F(245℃)

-. Flammable class : OSHA : IB

-. Extinguishing media : dry chemical, carbon dioxide, water spray or regular foams.
(In case of large fire, use water spray, fog, regular foams)

-. Fire fighting : use water in flooding quantities as fog.
In case of large fires, use unmanned hose holder or monitor nozzles.

-. Hazardous combustion products : thermal decomposition products may include toxic oxide of carbon and various hydrocarbon.

SECTION 6. ACCIDENTAL RELEASE MEASURES

-. Necessary points to protect human body : isolate hazard area & restrict entry.

-. Necessary points to protect ecology : prevent diffusion & flow of spilled material using soil or sandbag.

-. Defecation or remove : take up with sand, cement powder or other absorbents.

SECTION 7. HANDLING & STORAGE

-. Handling : handle at the place instilled ventilation facility,
do not use at source of ignition, avoid contact eyes, skin.

-.Storage : keep in tightly closed container and store at room temperature.
keep away from source of ignition.

SECTION 8. INFORMATION OF PERSONAL PROTECTION & EXPOSURE CONTROL

-. Engineering control : general(including local) ventilation to meet published.

-. Respiration protection : wear a gas mask if work at maximum concentration place.

-. Eye protection : safety goggles.

-. Hand protection : PE gloves.

-. Body protection : avoid long term skin contact. If necessary, put on protection wear.

-. Caution : do not eat on work.

-. Max. concentration : no data.

SECTION 9. PHYSICAL / CHEMICAL CHARACTERISTICS

Appearance	blue liquid		
Odor	aromatic odor		
pH	no data	Solvent solubility	insoluble in water
Boiling point	Min. 74℃	Melting point	no data
Explosion	no data	Oxidative	no data
Vapor pressure	no data	Specific Gravity	-
Distribution coefficient	no data	Vapor density	no data
Viscosity	① 700±100(CPS/25℃)	Molecular weight	-

SECTION 10. STABILITY AND REACTIVITY

-. Chemical stability : stable at room temperature and high pressure.
-. Conditions to avoid : avoid heat, flames, other sources of ignition.
-. Substances to avoid : no data.
-. Hazardous decomposition : thermal decomposition products may include toxic oxide of carbon and various hydrocarbon.

SECTION 11. TOXICOLOGICAL INFORMATION

-. Influence to eye : may cause irritation(especially to eyes)
-. Influence to skin : may cause irritation.
-. Acute oral : no data.
-. Acute suction : no data.
-. Toxicity of generation : no data.
-. Chronic : no data.

SECTION 12. ECOLOGICAL INFORMATION

-. Ecological contaminant :
-. Transfer to soil : no data.
-. Degradability & Persistency : no data.
-. Bio-concentration possibility : no data.

SECTION 13. DISPOSAL CONSIDERATION

-. Waste disposal regulation : this waste materials must comply with all applicable state & local regulations.

-. Waste disposal method : -

-. US EPA RCRA hazardous waste number : -

SECTION 14. TRANSPORTATION INFORMATION

-. US department of transportation shipping name-I.D. number : -

-. Regulation & classification by ICAO/IATA,ADR,RID : -

-. Cautions when transport : -

SECTION 15. REGULATORY INFORMATION

-. Sara hazardous categories : -

-. TSCA(Toxic Substance Control Act) : -

-. Others : -

SECTION 16. OTHER INFORMATION

-. Source of the information : Korea Industrial Safety Cooperation, MDL Information System Inc. Co.(USA).

-. This MSDS does not cover any dispute , please contact us for more information.

DKC

859 Changpyeong, Bugye, Gunwi, Gyeongsangbuk-do 716-833/Tell(054)382-9880~1/Fax(054)382-9882

DC-710SP(Product feature)

DC-710SP is a spray type, Neoprene adhesive which shows excellent adhesive property for various materials, in particular, has an excellent feature on thermal resistance and initial adhesive strength.

1. The main use and features

1) For interior material of automobile
Glued on manufactured components such as Resin felt, Hard board, Wood chip, ABS, PC, PP, etc and various epidermal textile such as PP foam, polyester cloth, Wool, etc.

2) Excellent adhesive property on various interior materials which specially need thermal resistance and M/Pocket(PP manufactured components/Polyester cloth)

2. Characters

Classification	Product Standard	Others
Exterior	Green Liquid	
Viscosity	700±100 CPS/25℃	Brookfiled
Solidity powder(%)	23±2 %	
Stability(Month)	For 6 months	

3. How to use

1) Clean the surface to be glued.
2) Apply adhesive on the both side of surface(both sides according to quality of the material)
3) Dry for proper time, then fully press the surface together.

4. Cautions when handling the product

1) It contains organic solvent. Avoid firearm and use in a well-ventilated place.
2) If you are not using, always seal and keep in a cold place.(20-25c room temperature)

PE12-012

HYUNDAI-KIA

7/19/2012

ATTACHMENT K

Incident VOQ

Form Approved: O.M.B. No. 2127-0008

U.S. Department of Transportation

National Highway Traffic Safety Administration

DOT Auto Safety Hotline

Vehicle Owner's Questionnaire

To Report Vehicle Safety Defects
1-888-DASH-2-DOT
(1-888-327-4236)
INTERNET:www.nhtsa.dot.gov/hotline

FOR AGENCY USE ONLY 100148

Date Received	Repository ☐
07-MAY-2012	Reference No. 10457696

OWNER INFORMATION (Type or Print)

Name		Daytime Telephone Number	E-mail Address
Address			
City CHARLOTTE	State NC	Zip Code	Evening Telephone Number

The information you provide will be used to identify potential safety-related defects. We may share your information with the applicable vehicle manufacturer during an investigation or recall in accordance with the routine uses described in the agency's Privacy Act notice. See 49 FR 53971 (Sep. 3, 2004).

VEHICLE INFORMATION

17 digit Vehicle Identification Number Located at bottom of windshield on driver's side	Make	Model	Model Year
KMHDH4AE7CU428863	HYUNDAI	ELANTRA	2012

Date Purchased	Dealer's Name and Telephone Number			Engine: No: Cylinders	Fuel Type:
Original Owner ☐	Dealer's City	State	Zip Code		

Transmission Type	☐ Antilock Brakes ☐ Cruise Control	Powertrain	Multiple Failure:	Incident Date(s) 07-APR-2012

FAILED COMPONENT(S)/PART(S) INFORMATION

Vehicle Component Codes: 980000 UNKNOWN OR OTHER, 140000 AIR BAGS	Failure Mileage	Failure Speed
		0

ADDITIONAL ITEMS TO BE COMPLETED WHEN REPORTING A TIRE FAILURE

Tire Make	Tire Model (Name or Number)	Tire Size (Example P215/65R15)
DOT No. (Example: DOTMAL9ABC036)	☐ Original Equipment ☐ Prior Repair	Failure Location:
Tire Component Code		Tire Failure Type:

ADDITIONAL ITEMS TO BE COMPLETED WHEN REPORTING A CHILD SEAT FAILURE

Make:	Date Manufactured:	Model No./Name:
Seat Type:	Installation System:	
Child Seat Component Code:	Failed Part:	

APPLICABLE INCIDENT INFORMATION

(Please describe in detail the incident(s), Failure(s), Crash(es), and injury(ies).)

Crash	Fire	Number of Persons Injured	Number of Deaths	Reported to Police
☒ Yes ☐ No	☐ Yes ☒ No	1	0	N

Narrative Description of Incident(S), Crash(es), and Injury(ies).
Please describe (1) events leading up to the failure, (2) failure and its consequences, and (3) what was done to correct the failure; i.e, parts repaired or replaced (and if old part is available).

DRIVERS SIDE AIR BAG DELPOYED AND METAL BRACKET DEPLOYED WITH AIR BAG FROM HEADLINER AREA ALSO AND SLICED MY EAR IN HALF... COULD HAVE BEEN NECK... I HAVE PICTURES OF THE WRECKAGE INSIDE AND OUTSIDE...

Include, if available: Police/Fire Department Report, Photos, and Repair Invoice. ATTACH ADDITIONAL SHEETS IF NECESSARY