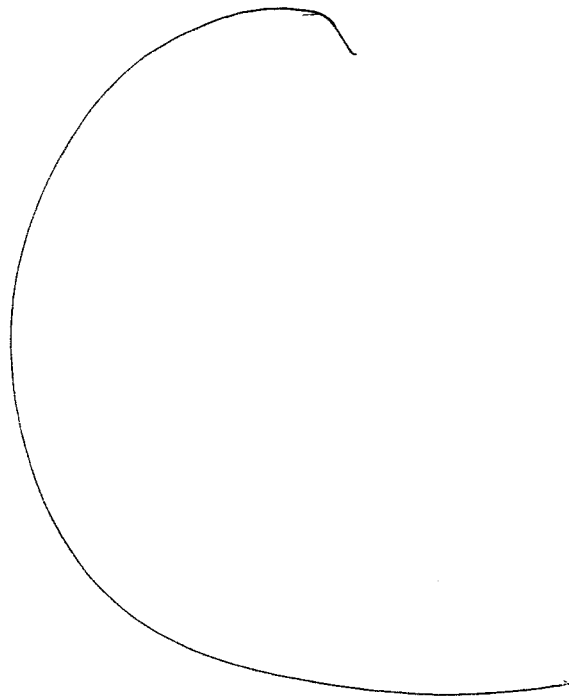


### Nature Code (Depicts Nature of Defect)

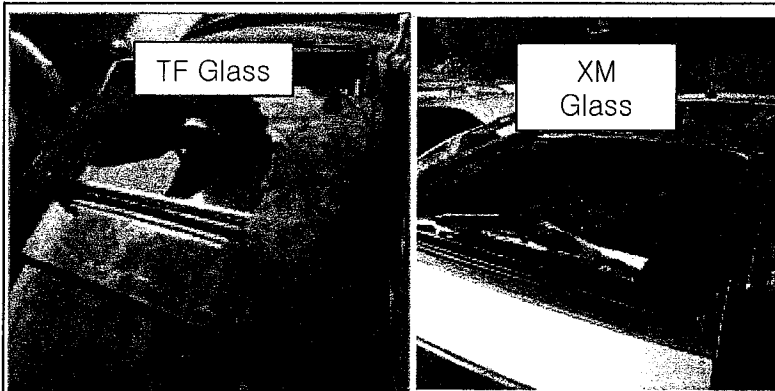
Code	DESCRIPTION	Code	DESCRIPTION
N01	HARD STARTING	N43	SLIP&SHOCK WHEN UP-SHIFTING
N02	ROUGH IDLING	N44	IMPOSSIBLE FOURTH DRIVE
N03	SURGE, STUMBLE	N45	SHIFTS TOO LATE AND SHOCK AT N→D SHIFTING
N04	EXCESSIVE KNOCKING	N46	SHIFTS TOO LATE AND SHOCK AT N→R SHIFTING
N05	CHOKE MALFUNCTION	N47	SHIFTS TOO LATE AND DOUBLE SHOCK AT N→R SHIFTING
N06	ENGINE STALLING	N48	IMPOSSIBLE FRONT, REAR SHIFT
N07	EXCESSIVE FUEL CONSUMPTION (EXCEPT FUEL LEAK)	N49	IMPOSSIBLE INTERMITTENT FRONT SHIFT & RE-DRIVING
N08	EXCESSIVE OIL CONSUMPTION (EXCEPT OIL LEAK)	N50	DETERIORATION
N09	OVERHEATING	N51	IMPROPER OPENING & CLOSING
N10	ENGINE RUN-ON	N52	DIRTY, STAIN
N11	ABNORMAL TEMPERATURE	N53	COLOR MISMATCH
N12	OVERFLOWING	N54	POOR PAINTING, PLATING
N13	POOR ACCELERATION	N56	RUST, CORROSION
N14	ABNORMAL COMBUSTION	N58	DISTORTED BLURRED
N15	POOR ENGINE POWER	N59	BROKEN, CRACKED
N16	PERCOLATION	N61	DEAD BATTERY
N17	IMPROPER EXHAUST GAS	N63	INACCURATE (METER)
N18	BACK-FIRE, AFTER-FIRE	N64	POOR SOUND (HORN, RADIO)
N21	SHUDDERING, VIBRATION	N66	ELECTRICAL MALFUNCTION
N22	SLIPPING	N68	BLOWN FUSE
N23	FAILS TO DISENGAGE	N69	WARNING LIGHTS ON
N24	JUMPING-OUT	N82	WIND NOISE
N25	IMPROPER SYNCHRONIZING	N83	POOR RECOVERY
N26	ABONRMAL SHIFT	N86	FALLING OFF, SAGGED
N27	IMPOSSIBLE SHIFT (3rd HOLD)	N87	OIL LEAK, ENTERING
N29	ABNORMAL NOISE(RATTLE,SQUEALING....)	N88	WATER LEAK, ENTERING
N30	DRAGGING	N89	LEAKS-OTHER (AIR, FUEL, GAS, VACUUM)
N31	PULLS	N92	GRABS
N32	SPONGY PEDAL	N93	INTERFERENCE
N33	UNSTABLE STEERING	N94	INOPERATIVE
N34	EXCESSIVE SHOCK	N95	HIGH EFFORT
N35	IMPROPER GAP, CLEARANCE	N96	POOR MANEUVERABILITY
N38	UNUSUAL TIRE WEAR	N99	OTHERS
N41	SLIP AND SHOCK WHEN STARTING		
N42	SHOCK AT KICK-DOWN		

### Cause Code (Depicts Cause of Defect)

Code	DESCRIPTION	Code	DESCRIPTION
C01	BURNT, MELTED	C24	IMPROPER CLEARANCE
C02	FROZEN (ICING)	C26	LACK OF LUBRICANT
C03	SCARRED	C28	IMPROPER WELDING
C04	PEELING, COME-OFF	C29	IMPROPER TIGHTENING
C05	RUSTY, CORRODED	C31	STICKING, SEIZED
C06	BROKEN, SPLIT, TORN	C32	FOREIGN MATERIAL
C07	CRACKED	C37	DISCOLORATION, STAIN
C08	POROUS, PINHOLES	C38	IMPROPER SEALING
C09	DEFORMED	C40	IMPROPER ADJUSTMENT
C10	WEAKENED	C48	VACUUM LEAK
C11	ABNORMAL WEAR	C61	INCORRECT PART
C12	OUT OF BALANCE	C62	MISSING PART
C15	POOR CONTACT	C63	FLAW IN MATERIAL
C19	VAPOR-LOCK	C88	WATER ENTERING
C20	POOR INSULATION	C98	NORMALITY
C23	IMPROPER MACHINING	C99	OTHERS

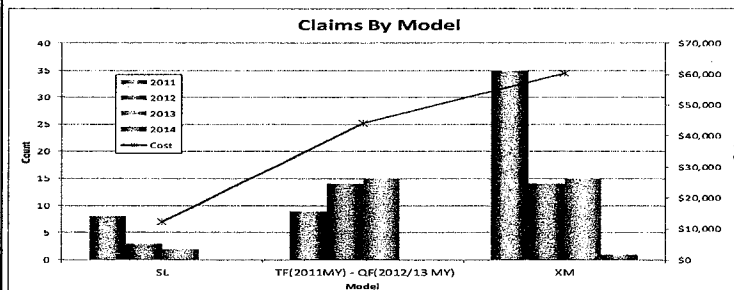


Days Since QIR Opened: 855 (7/12/2011) – Need Root Cause  
 TF/QF/XM/SL/VG – Panorama Sunroof Glass Shatter (Re – Opened 3/25/13)



Customer Impact/Warranty

Total Cost: \$116,783



Claim	Count
WAR	116 *(1)
TL	58
CA	130
NHTSA (VOQ)	XMA – 15 QF – 5 TF – 2 SL – 2

Concern

- Consumer complaints of Panorama Sunroof Glass shatter while driving @ highway speeds.
- Consumers are reporting a loud explosion noise heard; then glass fragmentation falls into interior
- Consumers are reporting Panorama Sunroof Glass shatter while operating sunroof or closing doors
- NHTSA investigation opened for XM on 10/21/13 →

Countermeasure Status

- Production C/M
- This concern was raised during QF EWR and multiple investigation were conducted with supplier to identify “Root Cause”.
  - Glass samples were recovered and sent to Supplier via NAQC (10/30/12)
- Field C/M
- None

KMA Action

QIR: ACD-BO-13019 – QF

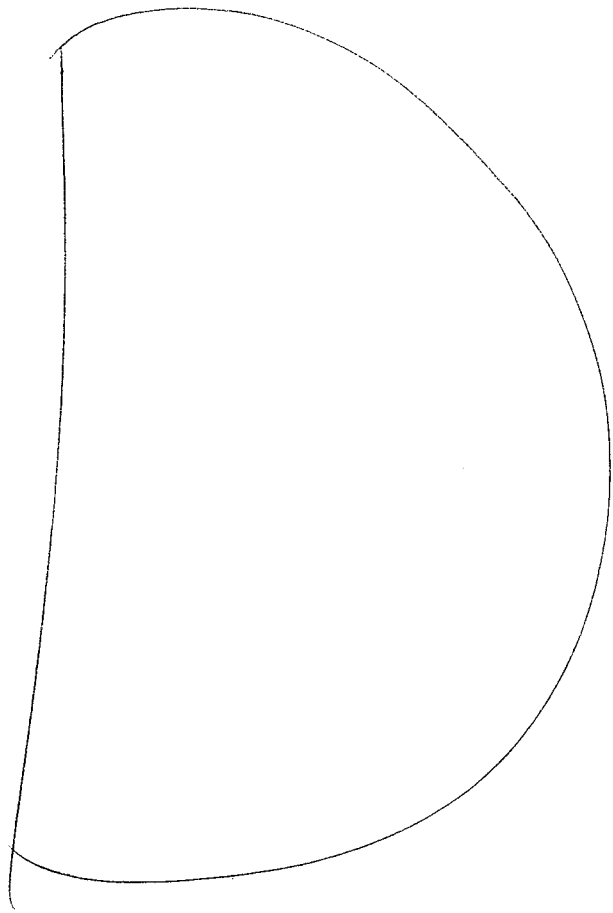
- KMA has issued two QIR's for XMa for this concern 7/12/2011 and QIR ACD-BO-11116 was issued on 12/15/2011 for QF.
- KMA / KMMG /Supplier have conducted over 27 Customer Complaint “Go & See” activities.
- Continuous monitoring of field complaints through techline, consumer affairs and field notification.
- KMA / HATCI CPG has completed a Controlled Durability Test for the Panorama Glass on both XMa and QF (11/21). No issues found on vehicles tested
- Geometry Study – Complete →
- Information on all cases of this concern gathered and forwarded to the legal department for review ~ 06/01/13 →

KMA Request

NAQC PPR: 13-5 (5/2/2013)

- KMC & Supplier TFT Assistance for Further Investigation to “Root Cause” as Issue is Complex
- KMC to investigate supplier sunroof heat treatment variability and material characteristics (heat expansion).
- KMC to investigate body opening cavity variability and sunroof dimension variability for potential interference
- KMC to continue investigating recovered glass samples for material quality variability. (11/01/13)

\*WAR ( ) – Increase in last 2 weeks



**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
Report of Physical Property Testing on Tempered Safety Glass DOT22 AS-3 M-40T3, 5/9/07	4/26/07	5/4/07	FMVSS 205 certification testing of Sorento panorama sunroof glazing.	Stork Twin City Testing Corp., for Guardian Industries	Testing indicates that the glazing complies with all 205 requirements including impact ball, fracture, and impact shot bag tests.  <b>See Tab 1.</b>
FMVSS, ECE R43 and CCC Certification, 3/6/09	NA	NA	FMVSS 205 certification confirmation	Guardian Automotive	Front and movable rear fixed sunroof glass for the Sorento comply with FMVSS 205.  <b>See Tab 2.</b>
MDS Report—Substances of Assemblies and Materials	4/17/09	NA	Summary of material composition of the fixed glass panel.	Guardian Automotive	Material composition within appropriate ranges.  <b>See Tab 3.</b>
MDS Report—Substances of Assemblies and Materials	4/17/09	NA	Summary of material composition of the front moveable glass panel.	Guardian Automotive	Material composition within appropriate ranges.  <b>See Tab 4.</b>
XMA (LP2) Panorama Roof Open/Close Durability Test Report, 10/22/09	10/22/09	NA	Evaluate the durability of the panorama sunroof during opening/shutting/tilting process and noise meter	KMC Chassis Design Team 3	Panorama roof operational durability and roller blind all were satisfactory. Panorama roof material with modified strip part [Silicon EPDM] satisfies assessment

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
					standards.  <b>See Tab 5.</b>
Report of Physical Property Testing on Tempered Safety Glass #GUA008-01-18-11468, 1/19/10	1/14/10	1/19/10	FMVSS 205 certification testing of Sorento panorama sunroof glazing.	Stork Twin City Testing Corp., for Guardian Industries	Testing indicates that the glazing complies with all 205 requirements including impact ball, fracture, and impact shot bag tests.  <b>See Tab 6.</b>
Quality Information Report ("QIR") titled "Sunroof Glass Blow Out", 5/17/12	5/17/12	NA	Investigate customer complaints of 2011-2012 Sorento panorama sunroofs not operating properly or blowing out.	KMA Product Quality Department	Various reports of sunroof issues including rattling noise, delamination, and improper function causing the sunroof to break. KMA requests that KMC/KMMG investigate further.  <b>See Tab 7.</b>
Quality Improvement Status ("QIS"), Report No. B28KD201205152	9/8/12	NA	Kia Motors Manufacturing Georgia, Inc. ("KMMG") responds various reports of sunroof issues including rattling noise, delamination, and improper function causing the sunroof to break.	KMMG	KMMG QA has verified with supplier that the glass panel is within specifications. Glass tempering has also been checked and verified to be within specifications. KMMG QA will continue to monitor warranty and customer complaints for any

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
					<p>further concerns.</p> <p><b>See Tab 8.</b></p>
Webasto Kia Sunroof Impact Test Results, 10/2/12	10/2/12	NA	Six (6) 12 x 12 tempered glass samples of the construction used for Webasto Kia Front and Rear Sunroofs were tested per the ANSI/SAE Z26.1-1996 Standard, Test 6, 3.05m (10') ball drop.	Guardian Automotive	<p>All 6 samples passed the test. That is, all 6 samples were able to withstand the impact without breaking.</p> <p><b>See Tab 9.</b></p>
Receiving Inspection Control Card #RI-2916579-A03, 10/15/09	10/3/12	10/3/12	Incoming inspection of 10 sample pieces of fixed glass panels for lot number 2630164 supplied by Guardian Automotive.	Webasto Roof Systems, Inc.	<p>Lot approved through inspection.</p> <p><b>See Tab 10.</b></p>
Rigidity and Excessive Load Test for Three (3) XMA Sunroof Units  Internal Test Number: 12-343, 10/19/12	10/11/12	10/11/12	Kia requests evaluation of Sorento panorama sunroof glass to investigate glass breakage reported in the field.	Webasto Roof Systems, Inc.	<p>Sample units all passed panel operating time, noise, panel durability, rigidity and excessive load testing.</p> <p><b>See Tab 11.</b></p>
XM Panorama Glass Investigation, 10/18/12	10/17/12	10/18/12	Investigation by Webasto, KMMG and KMA of complaint of sunroof fracture while	KMMG Quality Assurance	<p>Inspection revealed witness marks on the right side of the glass. Web-like patterns indicate glass began to</p>



**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
			driving on highway complaint.	Team	break because of external impact to glass.  <b>See Tab 12.</b>
XM MY'13 Panorama Installation Process, 11/6/12	11/6/12	11/6/12	Evaluation of Sorento Panorama sunroof delivery and installation process at KMMG.	KMMG Quality Assurance team	No potential for damage to Sorento panorama sunroof glass identified during installation process  <b>See Tab 13.</b>
Webasto Kia Sunroof Impact Test Results, 11/9/12	11/9/12	NA	Six (6) 12 x 12 tempered glass samples of the construction used for Webasto Kia Front and Rear Sunroofs were tested per the ANSI/SAE Z26.1-1996 Standard, Test 6, 3.05m (10') ball drop.	Guardian Automotive	All 6 samples passed the test. That is, all 6 samples were able to withstand the impact without breaking.  <b>See Tab 14.</b>
XM Panorama Glass Investigation, 11/10/12	11/9/12	11/10/12	Webasto, KMMG and KMA investigate claim of 11MY Sorento panorama sunroof fracture while driving.	KMMG Quality Assurance Team	Vehicle inspected by KMA revealed fracture appears to have started in the front of the glass on the right side and promulgated to the center of the roof. Web-like breaking patterns indicates where the cracking began due to some external impact. Root cause of

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
					<p>failure determined to be external impact.</p> <p><b>See Tab 15.</b></p>
<p>QF/XM Sunroof Glass Durability test, 11/26/12 (California Proving Grounds)</p>	<p>11/6/12</p>	<p>11/20/12</p>	<p>Conduct durability testing to evaluate panorama sunroof in the 2013 Sorento and Optima:</p> <ul style="list-style-type: none"> <li>– 2,000 Mile durability Test including aerodynamics, thermal effects, body twisting, sound pressure, door and roof operation, and Belgian Block testing.</li> <li>– Stone Impact Test</li> <li>– Center Non-Shatter Verification Test</li> </ul>	<p>Hyundai-Kia America Technical Center, Inc. (“HATCI”) Vehicle Evaluation Durability Group</p>	<p>The panorama sunroofs revealed no tendency to break under any of the environmental or road test conditions.</p> <p>Testing also indicated that the center of the glass can absorb an extraordinarily large impact without shattering. Additionally, it was only at the edges of the sunroof that it could fracture, but only when impacted with a force in the range of 12-15 kgfs.</p> <p><b>See Tab 16.</b></p>
<p>Customer Visit Report on XMA Glass Breakage (Case No. T2373852), 11/20/12</p>	<p>11/20/12</p>	<p>11/20/12</p>	<p>Representatives from KMMG, Webasto, Guardian and KMA inspect 13MY Sorento vehicle due to claimed sunroof breakage while passing semi-truck on highway.</p>	<p>Webasto Roof Systems, Inc.</p>	<p>Due to external impact, 1) Front glass panel was shattered but still secured to brackets; 2) Impact point 4-5” back from front trim panel on the right hand side of the sliding glass panel edge; 3) Fragments showed good break</p>

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Description/Action	Group Responsible	Findings/Conclusion Summary
			Webasto to verify glass quality involved in Case No. T2373852.		<p>pattern; and 4) Tempering of glass good.</p> <p>Webasto and Guardian use bar code on panorama sunroof bracket to confirm the glass passed all pre-assembly testing and inspections.</p> <p><b>See Tab 17.</b></p>
Customer Visit Report on XMA Glass Breakage (Case No. T2384085), 11/28/12	11/28/12	11/28/12	Webasto to verify glass quality involved in Case No. T2384085.	Webasto Roof Systems, Inc.	<p>Due to external impact, 1) Front glass panel was shattered but still secured to brackets; 2) Impact point ~center right of roof opening along front edge of glass panel; 3) Fragments showed good break pattern; and 4) Tempering of glass good.</p> <p>Webasto and Guardian use bar code on sunroof bracket to confirm the glass passed all pre-assembly testing and inspections.</p> <p><b>See Tab 18.</b></p>
Field Investigation Report—CA Case—Miller, 11/29/12	11/26/12	11/29/12	Evaluate cause of 13MY Sorento panorama sunroof	KMA Product	Large dent on the left side of the roof very close to the lead edge of

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Accident Title	Start Date	End Date	Subject/Category of Action	Group Responsible	Finding/Conclusion Summary
			fracture while driving event.	Quality	glass likely the impact point resulting in fracture.  <b>See Tab 19.</b>
Receiving Inspection Control Card #RI-KG31-01110, 5/12/11	11/28/12	11/28/12	Incoming inspection of 3 samples of the panorama sunroof frame assembly for lot number 00029456.	Webasto Roof Systems, Inc.	Lot approved through inspection.  <b>See Tab 20.</b>
XM Panorama Glass Investigation—GA073, 11/30/12	11/28/12	11/30/12	Representatives from KMMG, Webasto and KMA evaluate cause of 12MY Sorento panorama sunroof fracture while driving event.	KMMG Quality Assurance Team	Root cause of glass fracture inconclusive due to missing glass and no visible damage to roof. Analysis of glass fragments indicates glass within specification.  <b>See Tab 21.</b>
Receiving Inspection Control Card # RI-2916581-A03, 10/16/09	12/4/12	12/4/12	Incoming inspection of 10 sample pieces of moving glass panel from lot number 2630164 supplied by Guardian.	Webasto Roof Systems, Inc.	Lot approved through inspection.  <b>See Tab 22.</b>
Executive Summary Status Report—Panorama Sunroof Glass, 3/1/13	11/6/12	3/1/13	Summarizing current status of panorama sunroof fracture investigations.	KMA Product Quality	Investigation reports from 11/9/12, 11/26/12 and 11/28/12 investigations referenced herein.  1/29/13 claim of fragmentation of the movable glass in garage investigated. Investigations

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion/Summary
					<p>consistently revealing either external impact or inconclusive as root cause of fracture.</p> <p>Future part sales put on hold to ensure all claims are evaluated and inspected.</p> <p><b>See Tab 23.</b></p>
<p>Executive Summary Status Report—Panorama Sunroof Glass, 3/14/13</p>	<p>3/2/13</p>	<p>3/14/13</p>	<p>Summarizing current status of panorama sunroof fracture investigations.</p>	<p>KMA Product Quality</p>	<p>2 additional Sorento panorama sunroof fracture claims were evaluated by Kia Field Technical Representatives on 3/5/13 and 3/6/13.</p> <p>During the inspections, the TFT observed fragmentation had occurred in the front glass. Inspection of the sunroof identified no impact marks on the roof. Root Cause of fracture is inconclusive.</p> <p>KMA Product Quality will continue to monitor Techline and Warranty Claims for “Go and See” investigations with affiliates [KMMG/HATCI/NAQC]</p>

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
					<p>As of this date, 5 go and see inspections identified external impact and 8 were inconclusive. KMC testing has identified no issues regarding the body cavity variability, build quality or glass treatment.</p> <p><b>See Tab 24.</b></p>
<p>Correlation Analysis Optima/Sorento/Sportage Sunroof Glass, 3/25/13</p>	<p>3/25/13</p>	<p>3/25/13</p>	<p>Analyze panorama sunroof fracture claims to identify trends.</p>	<p>KMA Product Quality</p>	<p>Based on the data evaluated, February 2013 and August 2011 were the two months with the highest claim rates. There is a significant difference in temperature between the two months and thus no correlation regarding temperature could be identified. Additionally, external influences/rock impacts continue to be identified during the investigations as a contributing factor of glass fracture.</p> <p><b>See Tab 25.</b></p>
<p>Executive Summary Status</p>	<p>3/16/13</p>	<p>4/5/13</p>	<p>Summarizing current status of</p>	<p>KMA Product</p>	<p>Additional investigation was</p>

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion/Summary
Report—Panorama Sunroof Glass, 4/5/13			panorama sunroof fracture investigations.	Quality	<p>conducted on 3/13/13. During the inspection, the Task Force Team (“TFT”) observed fragmentation had occurred in the front panorama sliding glass. Inspection of the edges of the sunroof identified no impact marks around the edge of the roof. Root cause of fracture is inconclusive.</p> <p>KMA Product Quality monitoring Techline and Warranty Claims for “Go and See” investigations with affiliates.</p> <p><b>See Tab 26.</b></p>
Pano/Sunroof Size Benchmark, 4/16/13	NA	NA	Conduct a comparative analysis of Kia panorama sunroof glass with other industry vehicles.	Forward Model Product Quality	Comparative analysis of size of Sorento sunroof glass area to other vehicles. Hyundai Santa Fe, Ford Edge, Jeep Grand Cherokee and Nissan Pathfinder have similar size sunroof glass area as Sorento. Ford Edge has approximately the same sunroof glass area size as the Sorento. Jeep Grand Cherokee and Nissan Pathfinder vehicles have a sunroof glass area which is 30%

**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
					<p>shorter and 11% narrower than the Sorento. Sorento dimensions are within typical range of size for panorama sunroofs.</p> <p><b>See Tab 27.</b></p>
<p>Executive Summary Status Report—Panorama Sunroof Glass, 4/19/13</p>	<p>4/6/13</p>	<p>4/19/13</p>	<p>Summarizing current status of panorama sunroof fracture investigations.</p>	<p>KMA Product Quality</p>	<p>No new vehicle inspections reported.</p> <p>KMA Product Quality monitoring Techline and Warranty Claims for “Go and See” investigations with affiliates [KMMG/HATCI/NAQC]</p> <p>External influences/rock impact has been identified through this investigation as a contributing factor to field complaints. KMC investigation - Component test completed by supplier with passing results of system components. KMC reporting no issue found in body cavity variability/build quality or glass treatment.</p> <p><b>See Tab 28.</b></p>



**PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8**

Action/Title	Start Date	End/Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
Executive Summary Status Report—Panorama Sunroof Glass, 4/26/13	4/20/13	4/26/13	Summarize current status of panorama sunroof fracture investigation.	KMA Product Quality	<p>No new vehicle inspections reported.</p> <p>KMA Product Quality monitoring Techline and Warranty Claims for “Go and See” investigations with affiliates [KMMG/HATCI/NAQC]</p> <p><b>See Tab 29.</b></p>
Outside counsel for Kia contacts NHTSA to identify investigation results and seek any additional information known to the agency.	5/7/13	5/7/13	Determine if NHTSA has any additional information which could affect Kia’s analysis and discuss prior panorama sunroof investigations	NA	Monitor and evaluate.
Results of Panorama Sunroof Glass Investigation, 8/10/13	NA	NA	Evaluation of Sorento, Optima and Sportage panorama sunroof fracture claims in Korea to determine cause of damage.	Quality Assurance Team 1	<p>Based on traces of verification points of impact, Panorama sunroof glass damage has been determined to have been caused by external impact in 71% of the cases investigated. (15 cases/21 units investigated). Other events were inconclusive.</p> <p><b>See Tab 30.</b></p>
Weibull’s claim analysis for XM	11/26/13	11/26/13	Evaluation of future panorama sunroof failure claim rates	KMA	Based on current data, future claim rates are projected at below 0.35%.

PE13-035 Sorento Panorama Sunroof—Tab D in Response To Request No. 8

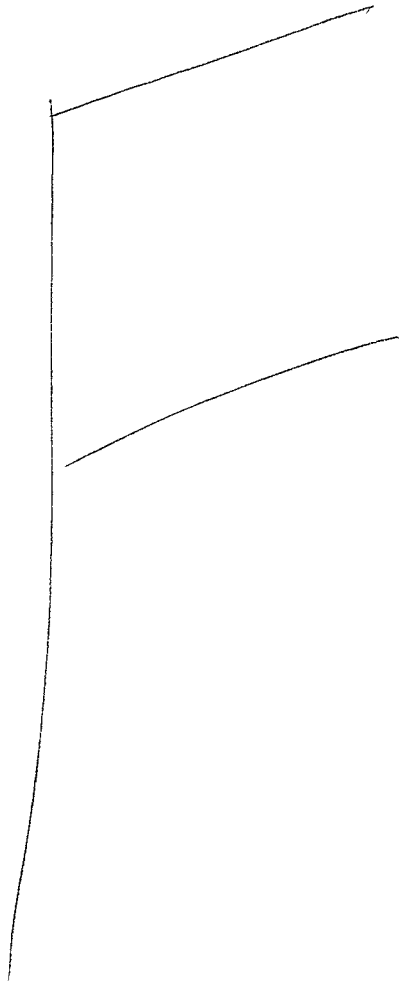
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Action Title	Start Date	End Date	Subject/Object of Action	Group Responsible	Finding/Conclusion Summary
			based on current data reported through 10/31/13.		<b>See Tab 31.</b>



Panoramic Sunroof Glass - Parts Sales by Part Number and Shipment Month/Year  
*(Parts Sales as of 10/31/2013)*

Sum of Ship Qty	Column Labels	YEAR / MONTH																																				Grand Total														
		2010												2011												2013																										
PART #	01	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	01	02	03	04	05	06	07	08	09	10										
81610 2P000		1	5	5	8	3	2	4	2	1	6	10	12	11	13	9	9	8	8	9	13	6																													399	
81616 2P000							3	4	1	1		1	2	1	2	3	5	1	3	2	4	1																														123
81620 1U000																																																		44		
81620 2P000		1	4	4	5	2	2	3	3	4	2	1	3	3	7	6	6	5	3	7	4	3																														158
<b>Grand Total</b>		<b>1</b>	<b>1</b>	<b>9</b>	<b>9</b>	<b>13</b>	<b>5</b>	<b>7</b>	<b>11</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>12</b>	<b>17</b>	<b>15</b>	<b>22</b>	<b>18</b>	<b>20</b>	<b>14</b>	<b>14</b>	<b>18</b>	<b>21</b>	<b>10</b>	<b>16</b>	<b>14</b>	<b>6</b>	<b>20</b>	<b>38</b>	<b>21</b>	<b>20</b>	<b>21</b>	<b>19</b>	<b>20</b>	<b>30</b>	<b>10</b>	<b>30</b>	<b>23</b>	<b>19</b>	<b>34</b>	<b>17</b>	<b>16</b>	<b>28</b>	<b>20</b>	<b>23</b>	<b>22</b>	<b>724</b>						



PE13-035 Sorento Panorama Sunroof—Response to Request No.  
11(f)

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1. **VOQ No. 10553341, 11/21/ (VIN 5XYKUDA23DG [REDACTED]), [REDACTED]  
[REDACTED] 2013 Sorento**

Customer states that the sunroof “imploded scattering glass on vehicles” behind them while driving westbound on the US 60 in Tempe, AZ. Customer stated he was traveling 65 mph when the incident occurred. Customer indicated he contacted the Kia dealership who stated they were unaware of the problem.

Kia has no record of any contact with this customer.

Analysis:

Kia was not given an opportunity to inspect this vehicle and thus no attempt to determine cause of the sunroof fracture could be made.

2. **VOQ No. 10534883, 8/8/13 (VIN 5XYKW4A21DG [REDACTED]), [REDACTED]  
[REDACTED] 2013 Sorento**

Customer reported a fracture of the front moveable sunroof glass while driving approximately 70 mph on the Interstate. The sunroof shade was open and glass fell into the passenger compartment. Customer’s nose began to bleed 10 minutes after fracture occurred.

Customer contacted KMA’s Consumer Affairs (“CA”) department on 8/9/13. Customer reported a fracture of the front moveable sunroof glass while driving approximately 70 mph on the Interstate. Customer did not identify nose bleed to the CA department. The sunroof shade was open and glass fell into the passenger compartment. It is unclear from customer’s later statements as to whether they were opening the sunroof when it fractured.

Glass fell into the vehicle and one piece went into her purse. When customer arrived at work, she reached into purse and received a small cut. Customer did not seek any medical treatment. The dealership indicated that they would send pictures to KMA.

Analysis:

Kia is unable to determine cause of sunroof fracture based on dealer photos. Customer did not identify nose bleed to the CA department. Sunroof repaired under goodwill.

3. **VOQ No. 10531972, 7/24/13 (VIN 5XYKWDA2XCG [REDACTED]), [REDACTED]  
[REDACTED] 2012 Sorento**

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Customer stated “while driving 55 mph, the sunroof exploded.”

Husband was driving while she was in the passenger seat. They heard something shaking above them and then became aware the sunroof had fractured. They pulled over. The sunshade was closed, customer stated a “few pieces of glass” fell on them. No injuries were reported but customer later identified husband had a cut on the inside of his left arm. KMA inspected the vehicle and was unable to determine the cause of the fracture. Kia informed the customer that the repair would be covered by Kia as goodwill.

Analysis:

Not possible to determine the event which caused shaking and fracture.

**4. VOQ No. 10514388, 2/17/13 (VIN 5XYKU4A24DG [REDACTED]), [REDACTED], 2013 Sorento**

While driving 65 mph, customer states the front moveable sunroof glass “exploded off” of the vehicle. Sounded and felt like a “rapid decompression in an aircraft”. Customer states the “car behind [him] was damaged by the glass flying” from the vehicle. The sunroof and shade were closed so no glass entered the passenger compartment.

Customer had his vehicle repaired by his insurance company immediately after the incident. Customer later submitted a claim to his repairing dealership but due to a management change at the dealership, customer’s claim was never submitted to KMA. Kia agreed to reimburse customer for repair cost as a courtesy.

Analysis:

Kia was not given an opportunity to inspect this vehicle and thus no attempt to determine cause of the sunroof fracture could be made.

**5. VOQ No. 10508983, 4/21/13 (VIN 5XYKUDA25BG [REDACTED]), [REDACTED], 2011 Sorento**

Customer states that the glass on her sunroof shattered while the vehicle was parked in her driveway.

Customer contacted Kia CA department on 4/21/13. Customer lives in a rural residential area of Virginia and her house is located in an open field. The sunroof and sunshade were completely closed at the time of the incident. No one was

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injured as a result of the fracture. On 4/24/13, Kia inspected the vehicle and identified that there were signs of something hitting the hood and front windshield of the vehicle. On 4/25/13 Kia covered the repair as a one-time goodwill gesture.

Customer was interviewed on 6/7/13. Customer stated the damage to the hood and front windshield had been caused by hailstorm. Customer confirmed sunroof and sunshade were closed at the time of the incident. Customer described the fracture to the front glass “like someone had put a fist through the glass.”

Analysis:

The sunroof fracture may have been caused by an external impact or the sunroof may have been cracked at one point and the drastic change in temperature in the prior two weeks caused sunroof to shatter. Goodwill repair was performed for customer satisfaction purposes.

**6. VOQ No. 10502219 3/9/13, (VIN 5XYKWDA20DG [REDACTED] [REDACTED])  
[REDACTED] 2013 Sorento**

Customer states while driving on the freeway in her 2013 Sorento, she and her husband “heard a loud bang and felt the glass from the sunroof . . . fall on [them] and into the vehicle.”

Kia’s Technical Assistance Case Center opened a case on 3/12/13. On 3/13/13, the vehicle was inspected by Kia’s District Parts & Service Manager and the Regional Parts & Service Manager.

Customer was interviewed on 6/7/13 where she identified that “the assembly that controls the glass sort of snapped” and “the rubber seal was completely gone”. The fracture occurred in the middle of the front moveable glass panel. Customer was traveling 55 mph eastbound on Highway 26 at the time of the incident and was able to safely pull over when the incident occurred. No one sustained any injuries as a result of the incident.

Analysis:

Inspection of vehicle was inconclusive. Kia unable to determine the cause of the sunroof fracture.

**7. VOQ No. 10492886, 1/14/13 (VIN 5XYKUDA2XBG [REDACTED] [REDACTED])  
2011 Sorento**



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Customer driving on I-70 in Colorado in the mountains when he heard “loud bang and pulled over”. Customer got out of car and “front sunroof. . . had exploded outward.” Glass was caught by sunshade.

Customer contacted KMA’s CA department on 1/14/13 to inquire if Kia would cover the repair. Although customer stated nothing hit the car when the glass fractured, he identified that he had previously been in a major hail storm. On 1/16/13, DPSM denied payment of the repair claim. No injuries were reported.

Analysis:

External impact occurring during hail storm likely damaged the sunroof glass. Fracture occurred on later date due to weakening of the glass.

**8. VOQ No. 10478778, 9/6/12 (VIN 5XYKW4A28DG [REDACTED] [REDACTED])  
2011 Sorento**

Customer stated that the “front portion” of her sunroof “exploded” while driving her car approximately 50 mph. The sunroof was partially open and the temperature was approximately 90 degrees when the incident occurred. Vehicle had been housed in an interior garage all day. She did not see anything hit her sunroof and pulled over immediately when the incident occurred. Customer suffered minor cuts.

Kia was never contacted regarding these events. Kia has attempted on several occasions to contact this customer to further evaluate this incident, however, customer will not answer her phone or return calls.

Analysis:

Kia was not given an opportunity to inspect this vehicle and thus a determination of the cause of the sunroof fracture could not be made.

**9. VOQ No. 10466987, 7/21/12, (VIN 5XYKWDA2XDG [REDACTED] [REDACTED])  
[REDACTED] 2013 Sorento**

Customer states while returning from vacation and “on the interstate” the “(glass top) shattered.”

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On 8/15/12, customer emailed KMA's CA department requesting CA to contact him so he could provide photos of his sunroof to Kia. Kia attempted to contact customer on 8/16/12, 8/17/12 and 8/21/12. Customer did not return any of Kia calls. Customer's case was closed on 11/20/12, pending further contact.

On 6/13/13, customer was interviewed to assist in evaluating the sunroof fracture incident. Customer alleges the rear fixed glass in his sunroof fractured while traveling North on interstate 77 in Parkerburg, West Virginia. The vehicle was traveling 70mph when the incident occurred. Customer heard a loud sound and saw the glass begin to splinter when the fracture occurred but did not see anything strike the sunroof. No injuries were sustained. Customer immediately pulled over and contacted his selling dealer.

Customer further indicated that he believes the failure resulted from the "binding" of the sunroof due to improper installation of the frame.

Analysis:

Customer's description of the fracture suggests it was caused by an improper installation of the sunroof assembly. Kia was not given an opportunity to inspect this vehicle to evaluate the fracture pattern in the glass and/or any installation issues thus a determination of the cause of the sunroof fracture could not be made.

**10. VOQ No. 10453957, 3/31/12, (No VIN Provided) [REDACTED], 2011 Sorento**

Customer stated "while driving approximately 50 mph, the sunroof glass exploded unexpectedly."

Customer never contacted Kia. Several attempts have been made to contact this customer with no answer.

Analysis:

Kia was not given an opportunity to inspect this vehicle and thus a determination of the cause of the sunroof fracture could not be made.

**11. VOQ No. 10410440, 9/1/11 (VIN 5XYKWDA24BG [REDACTED] [REDACTED])  
[REDACTED] 2011 Sorento**

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Customer states while driving home on rainy day, the “sunroof shattered out of nowhere.” Customer stated did not “run off the road nor did I hear anything hit the vehicle.” Customer heard “one loud pop and notice sunroof visor sagging significantly.”

Customer’s boyfriend contacted KMA’s CA department on 9/8/11 to make Kia aware of the incident. No glass came into the vehicle because the sunshade was closed. The boyfriend identified the incident had been reported to the insurance company because he did not know if something had hit the vehicle. Repair was covered by insurance company.

Customer was interviewed on 6/17/13. Customer confirmed no one was injured as a result of the incident. No different additional information was provided.

Analysis:

Kia was not given an opportunity to inspect this vehicle and thus an evaluation and determination of the cause of the sunroof fracture could not be made.

**12. VOQ No. 10428261, 9/30/11 (VIN unknown) [REDACTED] 2011 Sorento**

Customer stated “while driving 35mph, she heard a popping noise and the rear windshield shattered.” The vehicle was taken to an authorized dealer. Vehicle was not repaired. Customer stated Kia was notified, however, Kia has no record of being contacted by this customer in relation to this alleged incident.

Subsequent attempts to contact this customer in order to further evaluate the incident have been unsuccessful.

Analysis:

Customer’s claim appears to be unrelated to sunroof. The claim appears to be related to the rear windshield/window.

**13. VOQ No. 10410440, 7/1/2011 (VIN 5XYKUDA20BG [REDACTED] [REDACTED] 2011 Sorento**

Customer stated “while driving 40 mph the rear sunroof exploded.” The vehicle was taken to a Kia dealership but was not repaired under warranty. Customer stated sunroof “must have fractured due to body stresses or unit was installed incorrectly.”

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Customer contacted KMA's CA department on 7/5/11 and stated his daughter was driving the vehicle when the fracture occurred and she "was sprayed with glass". No injury was reported.

Kia has attempted to contact customer on several occasions to better understand the fracture event but has been unsuccessful.

Analysis:

Kia was not given an opportunity to inspect this vehicle and is unclear as to the cause of the sunroof fracture. Thus an evaluation and determination of the cause of the sunroof fracture could not be made.

**14.VOQ No. 10380921, 1/25/2011 (VIN 5XYKW4A26BG [REDACTED] [REDACTED])  
[REDACTED] 2011 Sorento**

Customer stated while sitting in the driveway opening the sunroof "it shattered on me and my family[.]" Customer indicated the "seats were scratched" and he had "scratches on [his] forehead[.]"

Customer reported rear glass of sunroof fractured. Customer stated that he saw the left side of the sunroof slightly raised when sunroof was closed. During an inspection of the vehicle, it was determined that the driver-side sunroof hinge was not properly glued to the sunroof and permitted movement.

Analysis:

Improper application of glue permitted movable sunroof to contact and break fixed rear glass panel.

**15.VOQ No. 10366885, 11/17/2010 (VIN 5XYKUDA2XBG [REDACTED] [REDACTED])  
[REDACTED] 2011 Sorento**

Customer stated the "rear sunroof" in his 2011 Kia Sorento shattered when he went to open the "main sunroof." A "pop" sound preceded the shattering.

Customer contacted KMA's CA department on 11/17/10. Customer stated that when opening the sunroof he could "hear the glass breaking". He got out of the car and noticed that the moveable glass got caught on the secondary glass causing it to "bubble and shatter". The vehicle was stationary when the incident occurred. The sunroof shade was closed keeping most of the glass out of the vehicle compartment. No one was injured during the incident. The dealership and DPSM inspected the vehicle and were unable to identify any impact marks.

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Customer was interviewed on 6/17/13. Customer used to work at a Kia dealership when he decided to purchase his vehicle. The Sorento had been a demo vehicle. Customer believes the brackets on the track for the moveable glass became “bound-up” on the edge of the non-moveable glass pushing down on it until it broke. Customer confirmed no injuries were sustained during the incident.

Analysis:

The description provided suggests the moveable front glass may have become misaligned during operation causing it to rub against the fixed glass causing the fixed glass to fracture. Cause of the sunroof fracture is unclear.

**16.VOQ No. 10345933, 4/19/2010 (VIN 5XYKU4A25BG [REDACTED] [REDACTED]  
[REDACTED], 2011 Sorento**

Customer stated after pulling out of the driveway while going down the road customer “heard a crack and a loud pop” and the “whole sunroof fell in” on her.” Customer stated it “seems the glass had popped up before it fell in on me.” Customer sustained scratches on her back and damage to her vehicle.

Customer indicated that she sustained minor scratches to her head and back as a result of the sunroof fracture. Customer request Kia to cover repair under warranty. Dealership inspected vehicle and saw no signs of obvious outside influence causing the fracture. Dealer repaired the vehicle.

Kia has attempted to contact customer on several occasions but has been unable to reach the customer.

Analysis:

This matter could not be evaluated due to lack of customer involvement.