

Your Ref: S8M00EBB  
Our Ref : CS/ASM18007106/N

24 April 2018

**M/s AXA Insurance Pte. Ltd.**  
8 Shenton Way #24-01  
AXA Tower  
Singapore 068811  
(Motor Claims Department)

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE  
INSURED VEHICLE SKN 9587K ON 15 APRIL 2018**

1. We refer to your letter dated 17 April 2018 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle SKN 9587K (herein referred to as “**Insured Vehicle**”) are set out below.

**Inspection of the Insured Vehicle**

3. The Insured Vehicle was physically inspected on 20 April at the premises of K Kim Hin Automotive Pte. Ltd. (herein referred to as “**KKH**”) which is located at 160 Sin Ming Drive, #02-20, Sin Ming AutoCity, Singapore (575722).

4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: SKN 9587K
Make / Model	: Honda Stream 1.8 A
Chassis No	: RN61054602
Year of Registration	: February 2008
Mileage	: 176,409km

5. The main engine compartment of the Insured Vehicle did not sustain any visible fire damage except for the wiring harness located at the right portion. The exterior body of the Insured Vehicle was observed to be relatively unaffected by the fire except for the right side panel which was observed to be partially burnt and/or melted.
6. The interior compartment of the Insured Vehicle was relatively unaffected by the fire. See photos 1 – 6 below.



**Photo 1** shows the general view of the front portion of the Insured Vehicle at the time of our inspection. The exterior body of the Insured Vehicle was relatively unaffected by the fire except for the right side panel which was observed to be partially burnt and/or melted (circled).



**Photo 2** shows the general view of the right portion of the Insured Vehicle at the time of our inspection. The right portion of the Insured Vehicle was relatively unaffected by the fire except for the right side panel which was observed to be partially burnt and/or melted (circled).

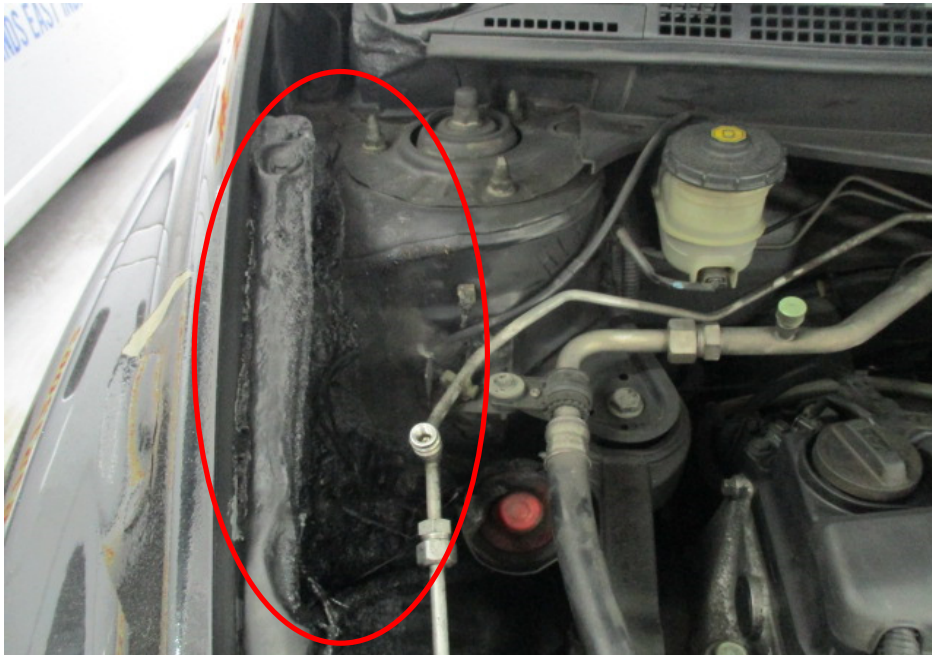


**Photo 3** shows a closer view of the right side panel of the Insured Vehicle which was observed to be partially burnt and/or melted (circled).



**Photo 4** shows a general view of the engine compartment of the Insured Vehicle at the time of our inspection. The main engine compartment of the Insured Vehicle did not sustain any visible fire damage except for the wiring harness located at the right portion (circled).





**Photo 5** shows a closer view of the wiring harness located at the right portion of the Insured Vehicle which was observed to be partially burnt and/or melted (circled).



**Photo 6** shows the interior compartment of the Insured Vehicle at the time of our inspection which was relatively unaffected by the fire.

7. At the time of physical inspection of the Insured Vehicle, we had found several modifications and additionally fitted electronic and/or electrical component(s) on the Insured Vehicle. These included an aftermarket vehicular alarm system, 2 twitters, an in-car flip-down monitor, 2 headrest monitors and aftermarket 18-inch alloy rims and tyres. All these fitted components were not the standard type for the Insured Vehicle. See photos 7 - 14 below.



**Photo 7** shows the aftermarket vehicular alarm system which is not the standard type for the Insured Vehicle.



**Photo 8** shows the 1st aftermarket twitter fitted onto the right corner of the dashboard of the Insured Vehicle upon our inspection (circled).



**Photo 9** shows the 2nd aftermarket twitter fitted onto the left corner of the dashboard of the Insured Vehicle upon our inspection (circled).





**Photo 10** shows the in-car flip-down monitor fitted onto the Insured Vehicle upon our inspection. The brand of the in-car flip-down monitor was 'VISION' (circled).



**Photo 11** shows the 2 headrest monitors fitted onto the rear of the passenger seats of the Insured Vehicle upon our inspection (circled).



**Photo 12** shows the 1st headrest monitor fitted onto the rear of the left passenger seat of the Insured Vehicle upon our inspection.



**Photo 13** shows the 2nd headrest monitor fitted onto the rear of the right passenger seat of the Insured Vehicle upon our inspection.





**Photo 14** shows the non-standard rim and tyre found to be fitted on the Insured Vehicle at the time of our inspection. The 18- inch alloy rims fitted on the Insured Vehicle were not the standard type for the Insured Vehicle.

### **Investigation and Technical Analysis**

8. For this particular case, the fire appears to have originated within the engine compartment of the Insured Vehicle, somewhere around the right portion of the engine compartment. This can be determined from the cracks as well as discolouration found on the insulating material on the underside of the right portion of the bonnet due to prolonged exposure to high heat intensity. A closer examination revealed faint whitish burn marks on the underside of the right portion of the bonnet due to prolonged exposure to high heat intensity. We also observed paint bubbles on the right side panel. In general the location of the fires' origin was determined given that the damage of fire nature was confined to these particular areas on the Insured Vehicle. See photos 15 - 18 below.



**Photo 15** shows the cracks as well as discolouration found on the insulating material on the underside of the right portion of the bonnet (arrowed) due to prolonged exposure to high heat intensity. We also observed paint bubbles on the right side panel of the Insured Vehicle (circled).



**Photo 16** shows a closer view of the cracks as well as discolouration found on the insulating material on the underside of the right portion of the bonnet of the Insured Vehicle (circled) due to prolonged exposure to high heat intensity.



**Photo 17** shows faint whitish burn marks on the underside of the right portion of the bonnet (circled) of the Insured Vehicle due to prolonged exposure to high heat intensity upon our closer examination.



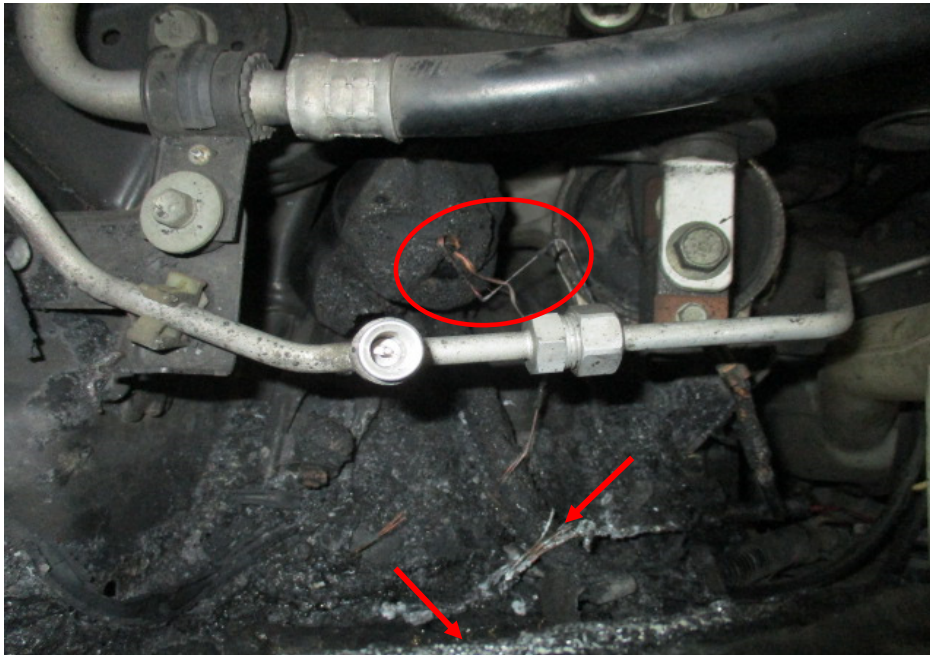
**Photo 18** shows paint bubbles on the right side panel of the Insured Vehicle (circled).



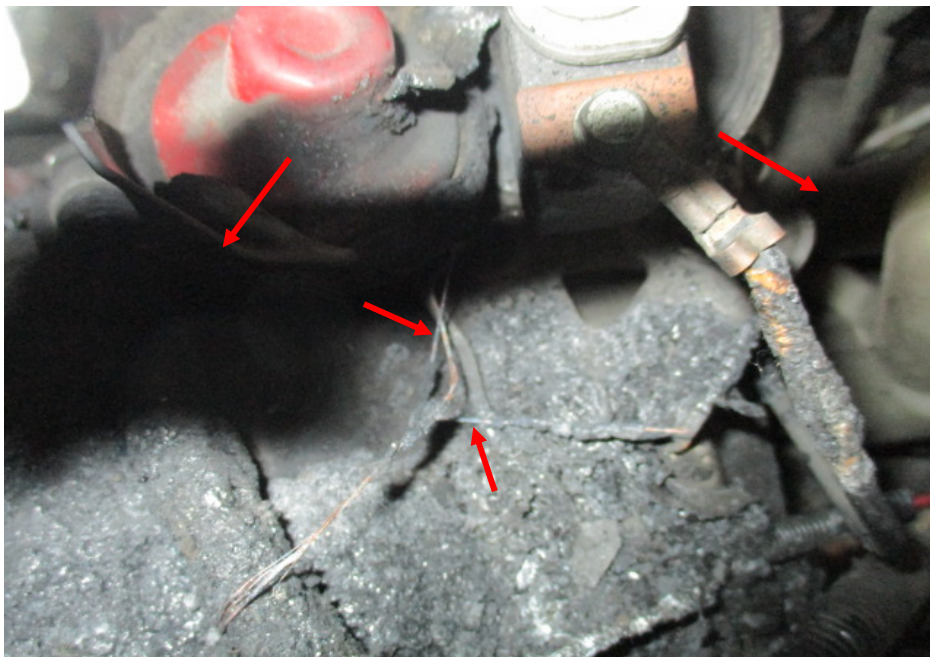
9. Upon closer examination of the right portion of the engine compartment, we found several stretches of burnt wirings from the wiring harness burnt to its bare copper state. We also noticed faint traces of greenish residue on the wirings leading from the vehicular alarm horn. The presence of such greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring. The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires. These physical evidences would then appear to suggest that the cause of fire to the Insured Vehicle could have possibly been due to electrical in nature. See photos 19 - 21 below.



**Photo 19** shows the stretches of burnt wirings from the wiring harness (arrowed) as well as the wiring leading from the vehicular alarm horn (circled). We noticed faint traces of greenish residue on some of these wirings.



**Photo 20** shows a closer view of the stretches of burnt wirings from the wiring harness (arrowed) as well as the wiring leading from the vehicular alarm horn (circled). We noticed faint traces of greenish residue on some of these wirings. The presence of such greenish residue suggests occurrence of an electrical short circuit.



**Photo 21** shows a close up view of the greenish residue on several stretches of wiring leading from the vehicular alarm horn (arrowed). The presence of such greenish residue suggests occurrence of an electrical short circuit.

10. From the Singapore Police Report No. J/20180415/2136 and Accident Statement, which was made by Mr Mohd Kasim bin Mohamed Ibrahim (herein referred to as “**Mr Kasim**”), we note that the fire to the Insured Vehicle had started at a time after he had dropped off his son-in-law and 2 grandchildren near a loading/unloading bay leading to a supermarket. Mr Kasim was first alerted of the fire by white smoke emitting from the right portion of the Insured Vehicle’s front bonnet.
11. We managed to speak to Mr Kasim on 21 April 2018 where we were able to gather further information pertaining to the incident as well as information pertaining to the history of the Insured Vehicle.
12. According to Mr Kasim, at about 2110hrs on 15 April 2018, he had dropped off his son-in-law and 2 grandchildren near a supermarket at Vista Point Shopping Centre located at Block 548 Woodlands Drive. They had travelled from Mr Kasim’s home located at Block 572B Woodlands Avenue 1. After dropping them off, he saw white smoke and flames emitting from the right portion of the Insured Vehicle’s front bonnet. He quickly switched off the engine and released the front bonnet. When he lifted up the front bonnet, the fire had gotten bigger. He quickly asked his grandchildren to run towards him and as far away from the Insured Vehicle as possible. His son-in-law ran to the nearby rubbish collection centre and grabbed a water hose. He started spraying the engine compartment. The fire was extinguished in less than 5 minutes. Mr Kasim’s grandchildren took some photographs of the incident.
13. No police or SCDF were called to the incident scene. After the fire was put out, Mr Kasim called the AXA insurance hotline and made towing arrangements. The tow truck arrived after 2300 hours. The Insured Vehicle was towed to KKH. Mr Kasim was instructed by AXA to make a police report for insurance claim purposes.
14. Mr Kasim lodged the police report at the Woodlands East Neighbourhood Police Centre at 2239 hours. He made the insurance report at KKH the next day, 16 April 2018 at 1730 hours.
15. With regards to the history of the Insured Vehicle, we were able to gather from Mr Kasim that the Insured Vehicle was purchased second hand on 9 February 2018. The COE was renewed for 5 years when Mr Kasim purchased the Insured Vehicle. He is the registered owner and main driver of the Insured Vehicle. To the best of his recollection, there has not been any major mechanical problem and/or electrical problem with the Insured Vehicle.



16. We asked Mr Kasim regarding the aftermarket vehicular alarm system, 2 twitters, in-car flip-down monitor, 2 headrest monitors, aftermarket 18- inch alloy rims and tyres that were fitted onto the Insured Vehicle. He mentioned that the aftermarket vehicular alarm system, 2 twitters, in-car flip-down monitor and 2 headrest monitors were already installed onto the Insured Vehicle when he purchased it. He only replaced the original rims with aftermarket 18- inch alloy rims together with new tyres in Johor Bahru a week before the incident occurred.
17. Pertaining to the maintenance aspect, Mr Kasim was informed by the dealer that the Insured Vehicle had been serviced before his purchase. According to Mr Kasim, when he had the rims and tyres replaced in Johor Bahru a week prior to the incident, he had the workshop change the engine oil as well. However he did not keep the tax invoice.
18. Mr Kasim mentioned that since he bought the Insured Vehicle till the day of the incident, there has not been any engine overhaul or major repair work done. He stressed that there were neither warning lights displayed nor was there an abnormal rise in temperature of the Insured Vehicle while he was driving on the day of the incident.

### **Site Inspection**

19. With the information gathered, we visited the incident location on 23 April 2018 taking the reports made by Mr Kasim and the information that we had gathered from him as references.
20. Firstly, we note that the incident had occurred at the loading/unloading bay of Vista Point Shopping Centre located at Block 548 Woodlands Drive, Singapore 730548.
21. No CCTV camera(s) was observed around the incident location. At the time of our visit, we did not find any burnt marks and/or burnt residual remains on the ground as it was a very small fire. The rubbish collection centre was in operation at the time of our visit but we were not allowed entry into the premises by the staff for security reasons. We did not observe any damaged or newly replaced property at the time of our visit to the incident location. See photos 22 & 23 below.



**Photo 22** shows the loading/unloading bay of Vista Point Shopping Centre. The Insured Vehicle was positioned adjacent to the rubbish collection centre (arrowed) when the incident occurred.



**Photo 23** shows the rubbish collection centre where Mr Kasim's son-in-law grabbed the water hose from. The rubbish collection centre was in operation at the time of our visit but we were not allowed entry into the premises by the staff for security reasons.

22. Although we were not able to obtain video footage of the incident, we were however able to obtain photographs which were taken by Mr Kasim's grandchildren at the incident location. The photographs were taken during and after the fire to the Insured Vehicle was extinguished.
23. In general, the information that could be gathered from these photographs had corresponded to the events that were related to us by Mr Kasim. Our close examination of these photographs also showed no unusual foreign material(s) and/or object(s) found on the ground in the immediate area of the loading/unloading bay where the Insured Vehicle was positioned. See photos 24 & 25 below.



**Photo 24** shows the Insured Vehicle when the fire got bigger after Mr Kasim opened the front bonnet. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Kasim, which is he saw flames emitting from the right portion of the Insured Vehicle's front bonnet after he had dropped off his son-in-law and grandchildren near the loading/unloading bay.





**Photo 25** shows the Insured Vehicle after the fire was put out. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Kasim, which is the fire started from the right portion of the engine compartment of the Insured Vehicle (circled).

24. Given the circumstances of incident as reported, the possibility of the cause of fire to the Insured Vehicle being due to engine overheating would seem unlikely as the Insured Vehicle had been driven for a relatively short distance from Mr Kasim's home to the incident location. Moreover, Mr Kasim had mentioned to us there were no indications of abnormally high temperatures on the Insured Vehicle when he was driving on the day of the incident.

25. The possibility of the fire being due to external factors (foreign material(s) stuck on hot surfaces, arson and sabotage amongst others) would also seem unlikely given that our examination of the available incident scene photographs did not reveal any unusual material(s)/object(s) found on the ground near where the Insured Vehicle had caught fire. Furthermore, the location of where the Insured Vehicle was parked was also observed to be not at a secluded location.
26. The possibility of the fire being due to electrical in nature would then seem more likely given that engine overheating and external factors would both seem unlikely. The fire being due to electrical nature is also supported by the faint traces of greenish residue that was found on the wirings of the Insured Vehicle, which was earlier discussed in paragraph 9 above.
27. Our checks with both local and international bodies and associations had revealed that at the time of writing this report, there was a manufacturer recall on 9 July 2015 for the gas propellant in the SRS Airbag. However the fault was not rectified. See search result from LTA below.

#### Enquiry on Vehicle Recall - Vehicle Specific

\* ONLY INFORMATION ON VEHICLE RECALLS SUBMITTED FROM 9 APRIL 2007 IS AVAILABLE

Vehicle Owner Particulars	
Owner ID Type:	Singapore NRIC
Owner ID:	3493B 
Vehicle Details	
Vehicle Registration number:	SKN9587K 
Make:	HONDA
Vehicle Model:	STREAM 1.8 A
Engine No.:	R18A1761039
Chassis No.:	RN61054602
Recall Details	

1	Recall No.:	R2015110180
	Manufacturer Recall Date:	09 Jul 2015 ←
	Estimated Completion Year of Recall:	2017
	Brief Description (As Provided by Motor Dealer):	On investigation of the certain types of driver's SRS airbag retrieved from the market, it was found that some of them varied greatly in density of gas generating propellant. ←
	Date Rectified:	- ←
	For more details, contact LI HONG MOTOR & CREDIT	
	Hotline Information:	SARAH SIM at 67430018

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## Conclusion

28. Having investigated and technically analysed the damages of burnt nature to the Insured Vehicle, we are of the view that the cause of fire to the Insured Vehicle was of electrical in nature. For this particular case, the fire had originated along the wirings inside the engine compartment, somewhere underneath the right portion. These wirings were original factory wirings leading from the wiring harness of the Insured Vehicle.
29. We did not find any evidence which had suggested that the cause of fire to the Insured Vehicle was due to poor maintenance and/or recurring electrical problem.
30. We found the Insured Vehicle to be fitted with an aftermarket vehicular alarm system, 2 twitters, an in-car flip-down monitor, 2 headrest monitors, aftermarket 18- inch alloy rims and tyres. The abovementioned electrical/electronic components, rims and tyres do not require prior approval from LTA.
31. We are further of the opinion that the additionally fitted electrical/electronic components found on the Insured Vehicle could have possibly caused overloading to the electrical system of the Insured Vehicle. These components had included an aftermarket vehicular alarm system, 2 twitters, an in-car flip-down monitor and 2 headrest monitors which are all LTA compliant. However considering that the installation was carried out for a considerable period of time prior to the fire incident, the overloading was likely to be minimal.



32. Although the aftermarket 18- inch alloy rims and tyres fitted on the Insured Vehicle were not the standard type for the Insured Vehicle, we are of the view that these parts did not cause and/or contribute to the fire incident.
33. Our investigations had also revealed that at the time of writing this report, there is no manufacturer recall of electrical nature to similar make and model vehicle as the Insured Vehicle that may possibly be related to this incident.

**Muhd Nazril**

*Technical Investigator*

**Ang Bryan Tani**

*AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA*

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