

Your Ref : D20003816MFSH
Our Ref : CS4/FCI20010103/N

28 September 2020

M/s First Capital Insurance Limited

36 Robinson Road #16-01
City House
Singapore 068877

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE
INSURED VEHICLE SHD 3409U ON 18 SEPTEMBER 2020**

1. We refer to your letter dated 21 September 2020 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle SHD 3409U (herein referred to as “**Insured Vehicle**”) are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 22 September 2020 at the premises of ComfortDelGro Engineering Pte. Ltd. (herein referred to as “**CDGE**”) located 59 Loyang Drive, Singapore 508969. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: SHD 3409U
Make / Model	: HYUNDAI AE IONIQ HEV 1.6 DCT
Chassis No	: KMHC851CVLU189329
Year of Registration	: November 2019
Mileage	: N.A. (battery melted)

4. The Insured Vehicle was noted to have sustained fire damage that was confined to its frontal portion and right body. The entire engine compartment of the Insured Vehicle was observed to be severely burnt while the interior compartment was observed to be severely affected by the fire.
5. The fire had resulted in the body parts at the frontal portion and right body of the Insured Vehicle to be burnt. This had included its front bumper, front bonnet, front support panel, front grille, front headlamps, front windscreen, right rims, right body and right tyres amongst others. See photos 1 – 6 below.



Photo 1 shows the general view of the left frontal portion of the Insured Vehicle at the time of our inspection. The left body of the Insured Vehicle was relatively unaffected by the fire.



Photo 2 shows the general view of the frontal portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its frontal portion and right body. The entire engine compartment of the Insured Vehicle was observed to be severely burnt while the interior compartment was observed to be severely affected by the fire.



Photo 3 shows the closer view of the right front body of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its frontal portion and right body. Its front bumper, front bonnet, front support panel, front grille, front headlamps, front windscreen, right rims, right body and right tyres were amongst the body parts that were found to have been affected by the fire.



Photo 4 shows the general view of the front windscreen of the Insured Vehicle at the time of our inspection. The fire damage to the front windscreen was extensive.



Photo 5 shows the engine compartment of the Insured Vehicle at the time of our inspection. The entire engine compartment of the Insured Vehicle was observed to be severely burnt. Most of the parts inside the engine compartment were found to be burnt and/or melted as a result of the fire.



Photo 6 shows the interior compartment of the Insured Vehicle, which was severely affected by the fire.

6. At the time of inspection of the Insured Vehicle, we did not find any additionally fitted electronic and/or electrical component(s) on the Insured Vehicle. There also appears to be no modification(s) fitted on the Insured Vehicle.

Investigation and Technical Analysis

7. For this particular case, the fire appears to have originated from the exterior of the Insured Vehicle, at the right rear portion. This was determined basing on the area where the extent of fire damage was more severe, and also the high heat intensity burn marks (whitish burn marks) that were found on the exterior surface of its right rear fender. These whitish burn marks are a result of exposure to prolong heat intensity. Rust would normally start to develop around these areas soon after a fire as the prolonged exposure to high heat intensity usually causes the bare steel/metal material of the body parts to be exposed to natural environmental condition. The rust that had developed on the right rear fender, in the immediate vicinity of where these whitish burn marks were found, would also support our findings of where the fire to the Insured Vehicle had originated. See photo 7 below.



Photo 7 shows the fire damage at the right rear portion of the Insured Vehicle. The high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right rear fender (circled) and rust that had developed on the right rear fender (arrowed) indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.

8. Since the physical damage and burn pattern of the Insured Vehicle had indicated that the fire had originated from the exterior of the Insured Vehicle, we had on 28 September 2020, visited the reported incident location, which was at the open air public carpark at Block 201 Ang Mo Kio Avenue 3. This was carpark number AMA10, serving Blocks 201 and 202.
9. Prior to our visit, we spoke to the registered owner of the Insured Vehicle, Mr Cheng Hian Kwang (herein referred to as **“Mr Cheng”**) who informed us that the Insured Vehicle was parked inside parking lot 29 at the back of Block 201 when the incident had occurred. It was approximately less than an hour after it was parked that he was alerted of the fire.
10. He had picked up a passenger from Sentosa and after alighting the passenger at Transit Road, he went to fill up fuel before returning home. He parked the Insured Vehicle inside parking lot 29 on 18 September 2020 at 2230 hours. He received a call from CDGE at 2305 hours, informing him that the Insured Vehicle was on fire and asked him to go the incident location. The SCDF and police were already at the incident location. The fire was put out and police took down Mr Cheng’s statement. Mr Cheng mentioned that a motor car parked on the right side of the Insured Vehicle had sustained damages as a result of the fire.
11. During our visit, we had observed that parking lot 29 was one of many parking lots located along the right side of the carpark driveway. There is a raised kerb behind parking lot 29 which acts as a walkway for the HDB blocks behind parking lot 29. The parking lot was also observed to be directly behind Block 201. Mr Cheng stays at this block.
12. Upon checking the rear of parking lot 29, we had found charred residual remains on the kerb towards the rear side of parking lot 29. Standing at the back of parking lot 29 and when facing towards its front, the charred residual remains would be at the right rear portion of the Insured Vehicle when the Insured Vehicle was parked inside parking lot 29.
13. We did not find any CCTV camera(s) located in the vicinity of the parking lot where the incident had occurred. See photos 8 – 12 below.



Photo 8 shows the general view of the location where the fire incident had occurred. The Insured Vehicle was parked inside parking lot number 29 (arrowed) at the material time of incident, which was at the open air public carpark at Block 201 Ang Mo Kio Avenue 3. This was carpark number AMA10, serving Blocks 201 and 202. From our observations, there was no CCTV camera(s) located in the vicinity of parking lot number 29.



Photo 9 shows the general view of the location where the fire incident had occurred. The Insured Vehicle was parked inside parking lot number 29 (circled) at the material time of incident. The motor car which had sustained damages as a result of the fire was parked inside parking lot number 28 (arrowed).



Photo 10 shows the general view around of the back of parking lots 28 and 29. There is a raised kerb behind these parking lots which act as a walkway for the HDB block behind these parking lots (arrowed).



Photo 11 shows the charred residual remains (circled) found on the kerb towards the right rear side of parking lot 29. Standing at the back of parking lot 29 and when facing towards its front, the charred residual remains would be at the right rear portion of the Insured Vehicle when the Insured Vehicle was parked inside parking lot 29.



Photo 12 shows a close up view of the charred residual remains found on the kerb towards the right rear side of parking lot 29.

14. During the course of our investigations, we were able to speak to the owner of the other car parked beside the Insured Vehicle when the incident occurred, Mr Yew Mon Kiee (herein referred to as “**Mr Yew**”). Mr Yew mentioned that on the day of the incident, he had parked his car inside parking lot 28 at 1900 hours before heading home to Block 201. When he returned to his car later, he noticed the Insured Vehicle parked in parking lot 29. Later that night at about 2330 hours, one of Mr Yew’s neighbours came to his house and informed him that the Insured Vehicle had caught fire and his car was also on fire. He quickly rushed down to the incident location and saw the police and SCDF there, with firefighters attempting to put out the fire. Mr Yew also mentioned that there was an eye witness at the scene, a Mr Maran who came forward and told Mr Yew that the right rear tyre of the Taxi had caught fire and the flames had spread to his car.
15. We were able to obtain coloured photographs showing the Insured Vehicle as well as the other parked car at the incident scene after the fire was extinguished by SCDF personnel. These were provided to us by Mr Cheng.

16. Our examination of these photographs revealed that the kerb surrounding the rear portion of the Insured Vehicle was burnt. The photographs had also showed similar extent of damage and burn pattern to the Insured Vehicle as per what we had observed during our inspection of the Insured Vehicle. We also observed firefighters conducting preliminary investigations into the cause of fire post-incident, pointing towards the right rear tyre of the Insured Vehicle, which had corresponded to Mr Maran's account of the incident. See photos 13 - 15 below.



Photo 13 shows the Insured Vehicle and the other parked car at the incident scene after the fire was extinguished by SCDF personnel. The extent of damage and burn pattern to the Insured Vehicle was observed to be similar to what we had observed during our inspection of the Insured Vehicle.




Photo 14 shows the rear portion of the Insured Vehicle and the other parked car at the incident scene after the fire was extinguished by SCDF personnel. The raised kerb directly behind the rear portion of the Insured Vehicle was observed to be burnt (arrowed).



Photo 15 shows firefighters conducting preliminary investigations into the cause of fire post- incident, pointing towards the right rear tyre of the Insured Vehicle, which had corresponded to Mr Maran's account of the incident (arrowed).

17. Our checks with both local and international bodies and associations had also revealed that at the time of writing this report, there is no manufacturer recall of similar make and model vehicle as the Insured Vehicle that may possibly be related to fire being originated from the exterior of the Insured Vehicle. See search result from LTA below.



Vehicle Recall Details

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

Owner ID Type Company	Owner ID 821R ←
Vehicle No. SHD3409U ←	Make/Model HYUNDAI/ AE IONIQ HEV FL 1.6 DCT
Engine No.: G4LEKU406590	Chassis No.: KMHC851CVLU189329
Recall Details: No Recall Detail records ←	

Conclusion

18. 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 likely due to external factors.
19. There was no modification(s) or additional electronic and/or electrical component(s) fitted on the Insured Vehicle at the time of our inspection of the Insured Vehicle.
20. At the time of writing this report, there was also no manufacturer recall of similar make and model vehicle as the Insured Vehicle that could possibly be related to this particular incident.

21. SCDF was activated to attend to the fire incident and a fire report pertaining to their findings will likely be forth coming. We have applied for this fire report and will forward a copy of the report once it is made available to us.

**Muhd Nazril***Senior Technical Investigator***Ang Bryan Tani***AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA**Senior Technical Investigator**Technical Investigation & Reconstructionist (SAE-A)*

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