

Your Ref: CDMCG22001320 10<sup>th</sup> August 2022

Our Ref: CS4/EGI22006462/P

M/s ERGO INSURANCE PTE LTD.
8 TEMASEK BOULEVARD #04-01
SUNTEC TOWER THREE
Singapore 038988
(Motor Claims Department)

# TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE INSURED VEHICLE GBD 7178E ON 3<sup>rd</sup> July 2022

- 1. We refer to your letter dated 6<sup>th</sup> July 2022 and the instructions therein.
- Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle GBD 7178E (herein referred to as "Insured Vehicle") are set out below.

## **Inspection of the Insured Vehicle**

- 3. The Insured Vehicle was physically inspected on 8<sup>th</sup> July 2022 at the premises of Forza Autohaus Pte. Ltd (herein referred to as "Forza Autohaus") located at 39 woodlands Close, #01-34/35, Singapore 737854
- 4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No. : GBD 7178E

Make / Model : TOYOTA HIACE DX 3.0M

Chassis No : KDH2010161214 Year of Registration : 09 APRIL 2015

Mileage : N.A (Instrument cluster affected)

5. The Insured Vehicle was noted to have sustained fire damage that was confined to its right and interior cabin portion. As a result of the fire the right and roof exterior body and interior cabin was observed to be most severe. The front, left and rear exterior body portion of the Insured Vehicle was relatively unaffected by the fire. See photos 1 – 7 below.



**Photo 1** shows the right view of the Insured Vehicle at the time of our inspection. The right body panel of the Insured Vehicle had sustained heat and smoke damage by as a result of the fire.



**Photo 2** shows the top view of the Insured Vehicle at the time of our inspection. The roof top of the Insured Vehicle had sustained heat and smoke damage by as a result of the fire.



**Photo 3** shows the front view of the Insured Vehicle at the time of our inspection. Only the front windscreen (circled) of the Insured Vehicle was damaged as a result of the fire. However, the front body portion of the Insured Vehicle was relatively unaffected by the fire.



**Photo 4** shows the rear view of the Insured Vehicle at the time of our inspection. Only the rear windscreen (circled) of the Insured Vehicle was damaged as a result of the fire. However, the rear body portion of the Insured Vehicle was relatively unaffected by the fire.



**Photo 5** shows the up view of the right side of the Insured Vehicle at the time of our inspection. Only the rear windscreen (circled) of the Insured Vehicle was damaged as a result of the fire. However, the rear body portion of the Insured Vehicle was relatively unaffected by the fire.



**Photo 6** shows the general view of the interior compartment of the Insured Vehicle at the time of our inspection. Its interior compartment had suffered heat, smoke damage and melted as a result of the fire.



**Photo 7** shows the general view of the interior compartment of the Insured Vehicle at the time of our inspection. Its interior compartment had suffered heat, smoke damage and melted as a result of 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. Based on the circumstances for this particular case, the fire appears to have originated from the exterior of the Insured Vehicle, somewhere around the right portion. This can be determined basing on the area where the extent of fire damage was most severe, the circumstances of the fires' origin at the material time of incident and also the high heat intensity burn marks (whitish burn marks) that were found on the exterior surface of its right side.
- 8. 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 portion, in the immediate vicinity of where these whitish burn marks were found, would also support our findings of where the fire had affected the Insured Vehicle.

9. During our inspection, we notice that the front, rear and left side exterior body panel of the Insured Vehicle did not sustain any heat and smoke damages as compared to the right portion of the Insured Vehicle. See photo 8-21 below.



**Photo 8** shows the fire damage at the exterior portion of the right side of the Insured Vehicle. The high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right side as well as rust that had also developed on (circled) this indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.



**Photo 9** shows the fire damage at the front right headlamp and bumper portion of the Insured Vehicle. The front right headlamp and bumper had melted as a result of the fire as well as the high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right side body panel as well as rust that had also developed on (circled) this indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.



**Photo 10** shows close up view of the fire damage at the exterior portion of the right side of the Insured Vehicle. The high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right side as well as rust that had also developed on (circled) this indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.



**Photo 11** shows the fire damage at the front right wheel portion of the right side of the Insured Vehicle. The tyre and wheel rim had sustained fire damages to it. high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right side as well as rust that had also developed on (circled) this indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.



**Photo 12** shows the fire damage at the rear right wheel portion of the right side of the Insured Vehicle. The tyre and wheel rim had sustained fire damages to it. high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right side as well as rust that had also developed on (circled) this indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.



**Photo 13** shows the fire damage at the rear right headlamp and bumper portion of the Insured Vehicle. The rear right headlamp and bumper had melted as a result of the fire as well as the high heat intensity burn marks (whitish burn marks) found on the exterior surface of its right side body panel as well as rust that had also developed on (circled) this indicates that the fire to the Insured Vehicle had originated from the exterior of the Insured Vehicle.



**Photo 14** shows the general view of the interior compartment of the Insured Vehicle at the time of our inspection. Its interior compartment had suffered heat, smoke damage and melted as a result of the fire.



**Photo 15** shows the close up view of the interior compartment of the Insured Vehicle at the time of our inspection. Its interior compartment had suffered heat, smoke damage and melted as a result of the fire.



**Photo 16** shows the close up view of the interior compartment of the Insured Vehicle at the time of our inspection. Its goods and materials in the Insured Vehicle were all damaged as a result of the fire.



**Photo 17** shows the close up view of the interior compartment of the Insured Vehicle at the time of our inspection. Its goods and materials in the Insured Vehicle were all damaged as a result of the fire.



**Photo 18** shows the close up view of the interior compartment of the Insured Vehicle at the time of our inspection. The Insured Vehicle was carrying combustible materials and that had resulted in the spread of the fire in the Insured Vehicle at the material time of incident.



**Photo 19** shows the front exterior portion of the Insured Vehicle. The front exterior portion of the Insured Vehicle was not affected by heat and smoke damage.



**Photo 20** shows the rear exterior portion of the Insured Vehicle. The rear exterior portion of the Insured Vehicle was not affected by heat and smoke damage.



**Photo 21** shows the rear exterior portion of the Insured Vehicle. The rear exterior portion of the Insured Vehicle was not affected by heat and smoke damage.

- 10. From the Singapore Accident Statement, which was made by Mr Foong Jia Hong (herein referred to as "Mr Foong"); we note that the fire to the Insured Vehicle was spread from another vehicle which was parked beside the Insured Vehicle which was on fire at the carpark. Mr Foong was first alerted of the fire when his mother informed him that there was fire at the carpark below his block and then notice that the Insured Vehicle was on fire.
- 11. We managed to speak to Mr Foong on 4<sup>th</sup> August 2022 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 Foong, on 2<sup>nd</sup> July 2022, Mr Foong parked the Insured Vehicle at the parking lot of block 216 Petir Road, Singapore 670216 at about 1100 hours after ending his work. He mentioned that he had parked at the carpark because he was going to have dinner over at his mother's place at block 216 Petir Road. After dinner he stayed over his mother's place and on the next day 3<sup>rd</sup> July 2022 at about 0400 hours Mr Foong's mother informed him that there was vehicles on fire below their block and he looked out the window and realise that there was a vehicle that was on fire which was parked beside on the right side of the Insured Vehicle and the fire had spread onto right side of the Insured Vehicle and the fire was engulfing the Insured Vehicle.

- 13. Mr Foong went out of the house to the corridor and took some photos. Shortly he rushed downstair to the Insured Vehicle and saw that SCDF personnel had arrived on scene and start put out the fire on the vehicles. Mr Foong was told to evacuate away from the Insured Vehicle and the fire was put out shortly after.
- 14. Mr Foong mentioned that he did not have any statement taken by either the SCDF or the Police officers.
- 15. Mr Foong subsequently contacted his insurance broker company and they made towing arrangements. The tow truck arrived within 30 minutes and the Insured Vehicle was towed to Forza Autohaus Pte. Ltd. The authorised insurance workshops. Mr Foong then made an insurance and Police report on the 6 July 2022 at 1150 hours.
- 16. Mr Foong mentioned that he did not experience any mechanical or electrical/electronic problems with the Insured Vehicle till the day of the incident. He also mentioned that there were neither warning lights displayed nor was there an abnormal rise in temperature throughout the period the Insured Vehicle and when driven, prior to the fire.
- 17. With regards to the history of the Insured Vehicle, we were able to gather from Mr Foong that he is the registered owner of the Insured Vehicle and it was purchased pre-owned 6 years ago. Mr Foong informed us that he is the sole driver of the Insured vehicle since the day he bought the Insured Vehicle and it is daily driven.
- 18. Pertaining to the maintenance aspect, Mr Foong sends the Insured Vehicle for periodical servicing and informed that there was no major overhaul done or modifications done to the Insured Vehicle.

## **Incident Scene Photographs**

19. During the course of our investigations, we were able to obtain coloured photographs showing the Insured Vehicle at the incident before and after the fire was extinguished by SCDF personnel. These were provided to us by Mr Foong.

20. Our examination of these photographs revealed that the fire had started from the vehicle parked on the right side and spread on the Insured Vehicle. The photographs had also showed the Insured Vehicle on fire and similar extent of damage and burn pattern to the Insured Vehicle as per what we had observed during our physical inspection of the Insured Vehicle. The fire was spread from the vehicle on fire that was parked on the right side of the Insured Vehicle. Apart from the aforesaid; there was no further notable information that could be gathered from these photographs. See photos 22 - 25 below which were provided to us by Mr Foong



**Photo 22** shows the Insured Vehicle on the left side (red arrowed) of the vehicle (yellow arrow) that was on fire at the parking lot when the fire had just started up, the fire observed to be spread from the vehicle beside the Insured Vehicle. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Foong, location when the fire broke out.



**Photo 23** shows the SCDF officers on scene and putting out the fire on the vehicle on the right side on the Insured Vehicle first. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Foong, location when the fire broke out.



**Photo 24** shows the SCDF officers on scene and putting out the fire on the Insured Vehicle which had spread from the vehicle on its right and onto it. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Foong, location when the fire broke out.



**Photo 25** shows the exterior of the Insured Vehicle after the fire was put out. The high heat intensity burn marks (whitish burn marks) and rust that had development found on the right side exterior surface of the Insured Vehicle which was caused be the vehicle that was parked on the right side which had called fire. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Foong, location when the fire broke out.

## **Site Inspection**

- 21. 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 visited the reported incident location, which was at the Open Space Carpark, at carpark lot 349 and 350, 216 Petir Road, Singapore 670216
- 22. From the Singapore Accident Statement which was made by Mr Foong Jia Hong (herein referred to as "Mr Foong"), we note that the fire had started from the vehicle parked on the right side of the Insured Vehicle and spread of the Insured Vehicle that was parked stationary on the left. Mr Foong was first alerted of the fire when his mother informed him that there was a fire at the carpark downstairs, he when to look down and realized that the vehicle on the right side of the Insured Vehicle was on fire, he subsequently rushed down to the Insured Vehicle saw that the fire had already spread to the Insured Vehicle and engulfed the right portion.

23. At the time of our visit, we observed burn marks and/or burnt residual remains of both Insured Vehicle and the vehicle beside it as well as the ground where the Insured Vehicle was positioned when the fire occurred. We also observed that the trees that were closest to the vehicle were affected by the heat and smoke damages. We had also found the charred and melted residual remains of the vehicle components and tyres. We did not observe any other damaged or newly replaced property at the time of our visit to the incident location and no repair works was conducted yet. See Photo 26 - 31



**Photo 26** shows the general view of the location where the fire incident had occurred. The Insured Vehicle was positioned at carpark lot 350 (arrowed) at 216 Petir Road, Singapore 670216.



**Photo 27** shows the general view of the location where the fire incident had occurred. The Insured Vehicle was positioned head out at the carpark lot 350 (arrowed) at block 216 Petir Road, Singapore 670216. From our observations, the trees and surroundings were affected by the fire.



**Photo 28** shows the close-up view of the location where the fire incident had occurred. The trees at the vicinity of where Insured Vehicle was also damaged as a result of the fire.



**Photo 29** shows the general view of the carpark lot number 349 and 350 where the fire incident had occurred. The Insured Vehicle was parked at carpark lot 350 beside the vehicle that was on fire at carpark lot 349. From our observations, we observed two black residue spots on the ground which was from the right front and rear tyres of Insured Vehicle that had melted as a result of the fire. (arrowed)



**Photo 30** shows the general view of the carpark lot number 349 and 350 where the fire incident had occurred. The Insured Vehicle was parked at carpark lot 350 beside the vehicle that was on fire at carpark lot 349. From our observations, we observed two black residue spots on the ground which was from the right front and rear tyres of Insured Vehicle that had melted as a result of the fire. (arrowed)



**Photo 31** shows the general view of the carpark lot number 349 and 350 where the fire incident had occurred. The Insured Vehicle was parked at carpark lot 350 beside the vehicle that was on fire at carpark lot 349. From our observations, we observed two black residue spots on the ground which was from the right front and rear tyres of Insured Vehicle that had melted as a result of the fire. (arrowed)

## Conclusion

24. Having investigated and technically analysed the damages of burnt nature to the Insured Vehicle, we are of the view that the cause of fire damage to the Insured Vehicle was due to a fire that had started from a vehicle that was parked on the right side of the Insured Vehicle which spread onto the Insured Vehicle engulfing it. Refer to Photo 22.

Sherwin Beh

Technical Investigator

**Ang Bryan Tani** 

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

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Technical Investigation & Reconstructionist (SAE-A)

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