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M/s First Capital Insurance Limited
36 Robinson Road #16-01
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Singapore 068877
(Motor Claims Department)

**AUTOMOBILE TECHNICAL INVESTIGATION REPORT OF ACCIDENT
INVOLVING SHC 8317Z AND SLM 10K ON 22 OCTOBER 2017**

1. I refer to your request dated 26 October 2017 to comment on the accident, in particular which reported circumstance of accident had occurred.
2. The following documents were provided to me for my review and consideration in the preparation of this report: -
 - a) Singapore Accident Statement and police report T/20171023/2074 of the driver of SHC 8317Z, where amongst other information, the circumstance of accident was described;
 - b) Singapore Accident Statement and police report T/20171023/2146 of the driver of SLM 10K, where amongst other information, the circumstance of accident was described;
 - c) 14 coloured photographs and 02 video recordings of the accident scene;
 - d) 01 video recording taken from the recording device mounted on SHC 8317Z;
 - e) News article dated 23 October 2017 in relation to the accident; and
 - f) Preliminary report dated 26 October 2017 by M/s Ajax Adjusters & Surveyors Pte Ltd.
3. In preparation of this report, I had visited the accident location on 24 November 2017 and conducted a physical inspection of SHC 8317Z on 02 January 2018 after it was released by Traffic Police Department. The documents that were provided to me were thereafter technically analyzed together with the information that I was able to gather during the course of my investigations. My findings and analysis are set out below.

Reported Circumstance of Accident

4. From the police report T/20171023/2074, which was made by the driver of SHC 8317Z, on 22 October 2017 at about 0300hrs, he had stopped his vehicle at the bus stop in front of Orchid Park Condominium. He turned off the ignition key and started counting his earning. He then felt a great impact from the right side of his vehicle. His vehicle was forced forward, collided onto the bus stop beam and bus stop stand. After being assisted out of his vehicle, he saw the vehicle SLM 10K totally damaged on top of the grass verge near to his vehicle.
5. The driver of SLM 10K, on the other hand, had stated in his police report T/20171023/2146 that on 22 October 2018 at about 0350hrs, he was driving his vehicle on the left most lane along Yishun Avenue 1. When he was driving past the bus stop in front of Block 817, the vehicle SHC 8317Z drove out from the bus stop into his travelling lane. He applied brakes and his vehicle skidded. The front of his vehicle then collided onto the left rear side of SHC 8317Z. He was disoriented and could not remember much details thereafter.

Accident Scene Photos

6. My review of the accident scene photographs and 02 video recordings taken after the accident had produced several notable physical evidences found at the accident scene that could be relied on to establish the events of the accident. The following paragraphs discusses my observations from these photographs and video recordings.
7. Firstly, the final rest positions of the involved vehicles were clearly depicted. SHC 8317Z was observed to have come to a rest with its left rear wheel mounted onto the pedestrian pavement adjacent to the bus bay. It was in a slanted position, approximately 40° towards the right of the direction of traffic flow. It was stopped entirely within the bus bay of the bus stop. None of its body had protruded into the extreme left lane of the roadway. The location where it had stopped was also observed to be towards the end of the bus bay.
8. SLM 10K was observed to have mounted onto the pedestrian pavement and stopped on the grass patch adjacent to the pedestrian pavement, away from the roadway. It was stopped approximately 30m in front of where SHC 8317Z had stopped. See photo 1 – 4 below.



Photo 1 shows a general view of the frontal portion of SHC 8317Z after the accident. It was observed to have come to a complete rest with its entire body within the bus bay. It was stopped in a slanted position approximately 40° towards the right of the direction of traffic flow.



Photo 2 shows a general view of the left side of SHC 8317Z after the accident. It was observed to have come to a complete rest with its entire body within the bus bay. Its left rear wheel was also observed to have mounted onto the pedestrian pavement adjacent to the bus bay.



Photo 3 shows a general view of SHC 8317Z after the accident. It was observed to have come to a complete rest with its entire body within the bus bay. It was stopped in a slanted position approximately 40° towards the right of the direction of traffic flow. None of its body had protruded into the extreme left lane of the roadway. The location where it had stopped was also observed to be towards the end of the bus bay.



Photo 4 shows the final rest position of SLM 10K after the accident. The photographs taken at the accident scene had depicted SLM 10K stopped on the grass patch adjacent to the pedestrian pavement, away from the roadway. It was stopped approximately 30m in front of where SHC 8317Z had stopped.

9. Vehicular debris from both the involved vehicles were all seen mainly within the bus bay. Broken body parts from SLM 10K can be seen lying within the bus bay on the right side of SHC 8317Z. Closer examination of the photographs and video recordings revealed what appears to be some debris on the extreme left lane at the stretch after the location where SHC 8317Z had stopped. There was however no debris found before the location where SHC 8317Z had stopped. See photo 5 & 6 below.



Photo 5 shows the accident scene after the accident. Vehicular debris could be seen lying mainly within the bus bay, on the right side of SHC 8317Z. This had included broken body parts (circled) from SLM 10K. Upon closer examination of the photograph, I had also observed some vehicular debris (arrowed) lying on the extreme left lane after the location where SHC 8317Z had stopped.



Photo 6 shows a screenshot from one of the video recordings of the accident scene. Closer examination of the video recording appears to indicate that there was no vehicular debris on the roadway before the location where SHC 8317Z had stopped.

Technical Analysis

10. For this case, determining the point of impact location on the roadway can determine which reported accident circumstance had occurred. If following the description of the driver of SHC 8317Z, the point of impact location would be within the bus bay, whereas the point of impact location would be somewhere on the extreme left lane if following the description of the driver of SLM 10K.
11. During a collision where impact force is relatively significant, detachable body parts of a vehicle may break and fall off from the vehicle onto the road surface. The first location of where vehicular debris is found can typically provide an approximate point of impact location. The accident scene photographs and video recordings at the accident scene that I had reviewed, showed such vehicular debris largely within the bus bay. The debris were from both SHC 8317Z and SLM 10K.
12. Although there were also vehicular debris on the extreme left lane, these were found after the final rest location of SHC 8317Z. Since both the vehicles were facing in the same direction to vehicular traffic flow prior to the accident, the vehicular debris found on the extreme left lane after the final rest location of SHC 8317Z is then not the first location of where vehicular debris was found. These vehicular debris were left behind by SLM 10K as it was coming to a rest after collision with SHC 8317Z.

13. Given that there was no vehicular debris found before the final rest location of SHC 8317Z, the vehicular debris that was found within the bus bay, on the right side of SHC 8317Z would then be the first area where vehicular debris was found. Basing on this physical evidence at the accident scene, the location of the point of impact between SHC 8317Z and SLM 10K was within the bus bay. This corresponds to the accident circumstance described by the driver of SHC 8317Z rather than the circumstance that was described by the driver of SLM 10K.
14. The accident circumstance described by the driver of SHC 8317Z occurring is further supported by the location of its final rest. The accident scene photographs had showed SHC 8317Z stopped entirely within the bus bay with none of its body protruding into the extreme left lane of Yishun Avenue 1, which was the reported lane of travel of SLM 10K. This final rest location was slightly in front of its initial stop location prior to the accident, as seen from the video recording taken from the recording device that was mounted on the front windscreen of SHC 8317Z.
15. The last seen image from the recording device had showed SHC 8317Z stopped towards the end of the bus bay. The bus stop stand that had toppled after the accident could be seen towards the left and slightly ahead of SHC 8317Z. This initial stopped location to the final rest location was approximately less than 5m, taking reference from the fixed road features, in particular the start of the grass patch and black and white paint of the road kerb. See photo 7 below.



Photo 7 shows a screenshot of the video recording taken from the recording device that was mounted on the front windscreen of SHC 8317Z. The last seen image from the recording device had showed SHC 8317Z stopped towards the end of the bus bay as seen from the screenshot. Taking reference from the fixed road features like the bus stop stand (red arrow) that was toppled after the accident, start of grass patch, and black and white paint of the road kerb (yellow arrow), the initial stopped location of SHC 8317Z to its final rest location was approximately less than 5m. Refer to photograph 1 above for comparison.

16. The driver of SLM 10K had stated in his police report that the front of his vehicle had collided onto the left rear side of SHC 8317Z. This corresponds to the physical damage found on SHC 8317Z where its left rear body had sustained relatively significant damage, consistent to the first impact being at the left rear body of SHC 8317Z.
17. If following the accident circumstance described by the driver of SLM 10K, the left rear body of SHC 8317Z would have been on the extreme left lane of Yishun Avenue 1 at the time of collision. If one was to consider a moving out maneuver that a normal driver would reasonably make, the position of SHC 8317Z at the time of collision would have been much further ahead than 5m from its initial stopped location. Consequently, I would expect SHC 8317Z to come to a final rest further away than 5m after the collision.

18. The evidence that SHC 8317Z had stopped slightly ahead from its initial stopped position indicates that the point of impact between the vehicles had occurred close to or at its initial stopped position within the bus bay. The impact force arising from the collision had shifted/pushed SHC 8317Z slightly forward before it came to a final rest as seen in the accident scene photographs.

Conclusion

19. Having investigated and technically analyzing the material evidence available at the time of writing this report, I am of the opinion that the physical evidence found at the accident scene had corresponded to the events described by the driver of SHC 8317Z.



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