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Your Ref : M607023 31 March 2021
Our Ref : CI/MSG21001142/N

M/s MSIG Insurance (Singapore) Pte. Ltd.
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Hong Leong Building
Singapore 048581
(Motor Claims Department)

AUTOMOBILE TECHNICAL INVESTIGATION REPORT OF ACCIDENT INVOLVING GBA 7106D AND SMF 1834T ON 25 SEPTEMBER 2019

1. We refer to your letter dated 7 September 2020 and the instructions therein to comment on the damage consistency of the motor van GBA 7106D involved in the captioned accident, in particular to establish whether there was possibly contact between the rear of the motor van GBA 7106D and the front of motor car SMF 1834T; and if there was contact, whether the damage on the rear portion of the motor van GBA 7106D is consistent to the accident.

2. The following documents were provided to us for our review and consideration in the preparation of this report:-

    a) Singapore Accident Statement of the driver of the motor van GBA 7106D (herein referred to as **"Toyota"**), where amongst other information, the circumstances of accident was described together with 11 coloured photographs of the Toyota at the time of reporting;

    b) Singapore Accident Statement of the driver of the motor car SMF 1834T (herein referred to as **"Subaru"**), where amongst other information, the circumstances of accident was described together with 8 coloured photographs of the Subaru at the time of reporting;

    c) 75 coloured photographs of the damage to the Toyota taken during the survey by STA Inspection Pte. Ltd.;

    d) 17 coloured photographs taken during the physical inspection of the Subaru;

    e) 8 post-accident photographs taken by the driver of the Subaru;

3. In preparation of this report, we had conducted height measurements of the rear portion of the Toyota (using a similar make and model). We had also conducted a physical inspection and thereafter height measurements of the frontal portion of the Subaru; both collectively referred herein as **"Involved Motor Vehicles"**. An analysis of all the available documents and information gathered was subsequently carried out.

4. We now set out below our detailed findings and analysis.

Nature of Accident

5. From the Singapore police Report No. T/20190927/2089 and Accident Statement of the driver of the Toyota, Mr Mohamed Kamarudin bin Abdul Latif (herein referred to as **"Mr Mohamed"**), on 25 September 2020 at 1840 hours, Mr Mohamed had stopped along the filter lane to give way to traffic along the main road of Tanjong Katong South. He was travelling from Mountbatten Road. Suddenly the front portion of the Subaru collided hard into the rear portion of the Toyota. Due to the accident, he suffered injuries and was given 3 days of medical leave.

6. The Singapore Accident Statement of the driver of the Subaru, Mr Michael Cole (herein referred to as **"Mr Cole"**), had stated that on the abovementioned date, time and location, he was travelling from Mountbatten Road towards Tanjong Katong South Road when suddenly the vehicle in front of him had stopped to give way to the traffic along the main road. Mr Cole did not have time to react and the Subaru rear- ended the Toyota.

Damage to the Toyota

7. From our examination of the photographs taken during the Pre- Repair Survey conducted by STA Inspection Pte. Ltd., we note that the Toyota had sustained an impact onto its rear portion. The damages were mainly observed to be at or around the rear bumper and tail gate.

8. We observed vertical indentations and a dislodged reverse sensor on the left portion of the Toyota's rear bumper. We also found a horizontal indentation below the rear number plate of the Toyota. Upon closer examination, we observed a dislodgement of the left corner edge of the rear bumper of the Toyota. See photos 1 - 7 below.

Photo 1 shows the general view of the rear portion of the Toyota at the time of the Pre- Repair Survey conducted by STA Inspection Pte. Ltd. The damage to the Toyota was observed to be confined to the rear bumper and tail gate (circled).

Photo 2 shows a closer view of the damages observed on the rear bumper and tail gate of the Toyota.

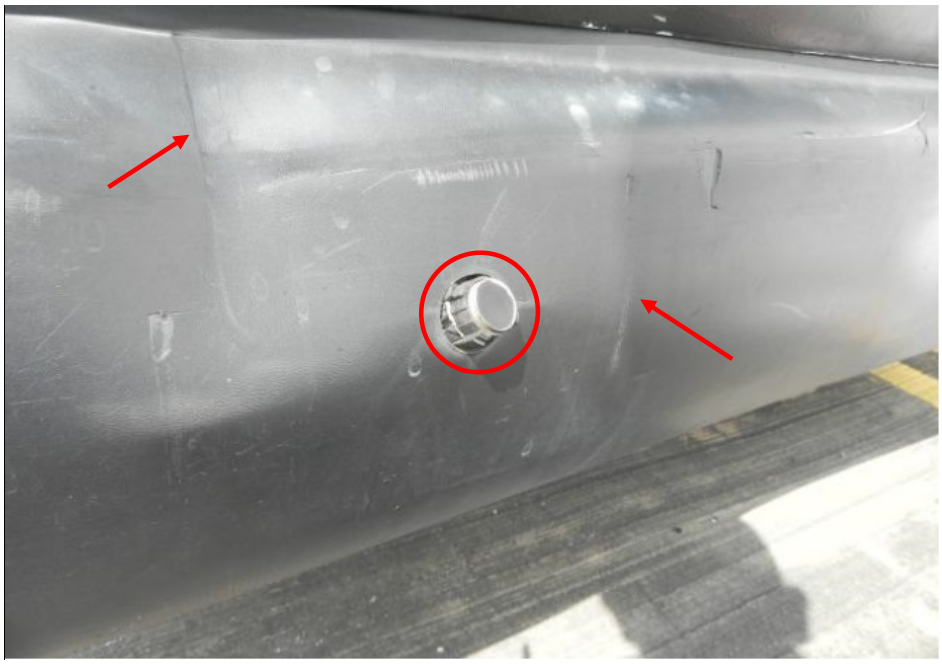


Photo 3 shows a close up view of the vertical indentations (arrowed) and dislodged reverse sensor (circled) found on the left portion of the Toyota's rear bumper.

Photo 4 shows a horizontal indentation found below the rear number plate of the Toyota (circled).

Photo 5 shows a close up view of the horizontal indentation found below the rear number plate of the Toyota (circled).

Photo 6 shows a closer view of the left corner edge of the rear bumper of the Toyota. We observed a dislodgement of the left corner edge of the rear bumper of the Toyota (arrowed).

Photo 7 shows a close up view of the dislodgement observed at the left corner edge of the rear bumper of the Toyota (arrowed).

Physical Inspection of the Subaru

9. The Subaru was physically inspected on 18 September 2020 at Mr Cole's home premises located at 129 Marshal Road, Singapore 424916.

10. The physical inspection carried out had primarily focused on the front portion of the Subaru, in particular its front bumper and front number plate as the accident was reported to be of a head to rear nature where the Subaru was behind the Toyota at the material time.

11. However during the physical inspection, we were informed by Mr Cole that he had been involved in another accident a few days later. He had sent the Subaru for repairs which included replacing the front number plate. Hence for the purposes of this report we referred to the photographs contained in the Singapore Accident Statement.

12. From the photographs contained in the Singapore Accident Statement of the Subaru, which was taken about 1 day after the accident, we note that the Subaru had sustained an impact onto its front portion. Examination of the photographs taken at the time of accident reporting showed the Subaru had sustained damages to its front number plate. See photos 8 – 11 below.

Photo 8 shows the general view of the front of the Subaru at the time of reporting, which was 1 day after the accident. The damage to the Subaru was observed to be confined to its front number plate. The front number plate appears to be cracked (circled).

Photo 9 shows a closer view of the cracked front number plate of the Subaru at the time of reporting, which was 1 day after the accident (red arrows).

Photo 10 shows a close up view of the cracked front number plate of the Subaru (red arrows). Upon closer examination, we also observed scuff marks on the left corner of the front number plate frame (circled).

Photo 11 shows a closer view of the left corner edge of the front bonnet and left front fender of the Subaru. We observed that there was a slight misalignment at the corner edges (red arrows) which indicates there was damage to the front bonnet of the Subaru.

Accident Scene Photographs & Technical Analysis

13. For this case, we were able to obtain several photographs taken at the accident scene by Mr Cole. It shows the position of the Involved Motor Vehicles at the accident location. The Subaru was observed to be directly behind the rear of the Toyota. Upon closer examination of these photographs, we observed a dent on the left portion of the Toyota's rear bumper. We also found a horizontal indentation which resembled the top centre portion of the Subaru's front grille. We observed cracks on the Subaru's front number plate and a slight misalignment of the front bonnet and left front fender of the Subaru.

14. It would appear that the damage to the Subaru that could possibly which indicates there was damage to the front bonnet of the Subaru. have been a result of contact with the rear of the Toyota was the front number plate and front grille of the Subaru. This is also taking into consideration that the rear bumper is the most protruded body part at the rear of the Toyota where in the event of any contact, it will be the first body part that will come into contact with the front number plate of the Subaru. See photos 12 - 16 below.

Photo 12 shows the position of the Involved Motor Vehicles at the accident location. The Subaru was observed to be directly behind the rear of the Toyota.

Photo 13 shows a closer view of the rear portion of the Toyota post- accident. Upon closer examination, we observed a dent on the left portion of the Toyota's rear bumper (arrowed).

Photo 14 shows a close up view of the rear portion of the Toyota post- accident. Upon closer examination, we also observed the dislodged reverse sensor on the left portion of the Toyota's rear bumper (arrowed) as well as a horizontal indentation which resembled the top centre portion of the Subaru's front grille (circled).

Photo 15 shows a close up view of the cracked front number plate of the Subaru post- accident (arrowed).

Photo 16 shows the slight misalignment of the front bonnet and left front fender of the Subaru post- accident (arrowed) which indicates there was damage to the front bonnet of the Subaru.

Height Measurement

15. We had conducted a height configuration test to determine whether the damages observed on the rear portion of the Toyota corresponds to the damages observed on the front portion of the Subaru.

16. In order to determine this, we had measured the height above ground level of the rear portion of the Toyota (using a similar make and model), at the area where the dislodgement and indentations were found. We had thereafter compared this measured height against the front portion of the Subaru. See photos 17 & 18 below.

Photo 17 shows the height measurement being conducted on the rear portion of the Toyota (using a similar make and model). The height range above ground level of the damages found on the Toyota, was measured to be approximately between 45cm to 68cm.

Photo 18 shows the height measurement being conducted on the front portion of the Subaru. The height range above ground level of the damages found on the front number plate and front number plate frame of the Subaru, was measured to be approximately between 46cm to 58cm. The body part at the height of 68cm above ground level was the top centre portion of the Subaru's front grille, which corresponds to the horizontal indentation found on the Toyota's tail gate.

17. We now set out below the findings that we had gathered following the height measurements that was conducted:-

    a) The height range above ground level of the damages found on the Toyota, was measured to be approximately between 45cm to 68cm;

    b) the height range above ground level of the damages found on the front number plate and front number plate frame of the Subaru, was measured to be approximately between 46cm to 58cm;

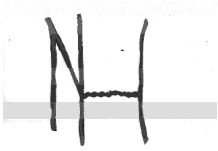
    c) the body part at the height of 68cm above ground level was the top centre portion of the Subaru's front grille, which corresponds to the horizontal indentation found on the Toyota's tail gate.

Conclusion

18. Having investigated and technically analyzing the material evidence available at the time of writing this report, we are of the opinion that there was contact between the rear portion of the Toyota and the front portion of the Subaru at the material time.

19. The impact force from the contact was relatively minor and had occurred when the Subaru had failed to come to a stop and rear- ended the Toyota. The impact of the contact may have caused the rear bumper of the Toyota to be pushed inwards, which in turn resulted in the left reverse sensor being displaced as well as a slight misalignment at the left corner edge of the rear bumper.

20. Based on the height measurement conducted, the contact area of the Toyota was at the rear bumper and tail gate. The contact area of the Subaru was at the front number plate, front number plate frame as well as the front grille.



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