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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 SHD 9303B AND YN 2522C ON 11 MAY 2018**

1. We refer to your letter dated 30 August 2018 and the instructions therein to comment on the damage consistency of the motor taxi SHD 9303B involved in the captioned accident, in particular to establish whether there was possibly contact between the rear portion of the motor taxi SHD 9303B and the front portion of the motor lorry YN 2522C; and if there was contact, whether the damages on the rear portion of the motor taxi SHD 9303B 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 taxi SHD 9303B (herein referred to as "**Taxi**"), where amongst other information, the circumstances of accident was described together with 5 coloured photographs of the Taxi at the time of reporting;
 - b) Singapore Accident Statement of the driver of the motor lorry YN 2522C (herein referred to as "**Lorry**"), where amongst other information, the circumstances of accident was described together with 4 coloured photographs of the Lorry at the time of reporting;
 - c) 19 coloured photographs of the damage to the Taxi taken during the Pre- Repair Survey by LKK Auto Consultants Pte. Ltd.;
 - d) 45 coloured photographs taken during our physical inspection of the Lorry;
 - e) 8 coloured post-accident photographs taken by the driver of the Lorry.

3. In preparation of this report, we had conducted height measurements of the rear portion of the Taxi (using a similar make and model). We had also conducted a physical inspection and thereafter conducted height measurements of the front portion of the Lorry; 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 Accident Statement of the driver of the Taxi, Mr Lau Oui Wah (herein referred to as **"Mr Lau"**) he was driving the Taxi on 11 May 2018 at 1530 hours on the slip road along Jalan Boon Lay towards Bukit Batok when he stopped to check for oncoming vehicles. While stationary, he felt an impact at the rear. He saw a lorry bearing registration number YN 2522C had rear-ended the Taxi.
6. The Singapore Accident Statement of the driver of the Lorry, Mr Yew Noor Edi (herein referred to as **"Mr Yew"**), however had stated that on 11 May 2018 at 1530 hours he was travelling along Boon Lay Avenue towards Jalan Boon Lay. A taxi bearing registration number SHD 9303B was in front of the Lorry. When the Taxi stopped at the slip road, Mr Yew applied the brakes and managed to stop in time. The taxi driver alighted and asked Mr Yew to either pay for the damages to the Taxi or make an accident report. Mr Yew stated that the Lorry did not touch the Taxi and there was no damage on the rear of the Taxi.

Damage to the Taxi

7. Based on the circumstances of the case contained in the Singapore Accident Statement and photographs which were taken during the accident reporting on the same day after the accident, we note that the Taxi had sustained an impact onto its rear portion, particularly to its rear bumper.

8. Our review of the photographs showing the Taxi at the time of reporting did not produce any significant information as the photographs were all taken from afar, without any close up photographs of the damaged body parts at the rear portion of the Taxi. See photos 1 & 2 below.



Photo 1 shows a general view of the rear portion of the Taxi at the time of reporting, which was taken the same day after the accident. Based on the circumstances of the case contained in the Singapore Accident Statement, we note that the Taxi had sustained damages to its rear portion.



Photo 2 shows a closer view of the rear portion of the Taxi at the time of reporting, which was taken the same day after the accident. Based on the circumstances of the case contained in the Singapore Accident Statement, the damage to the Taxi was observed to be confined to its rear portion. However our review of the photographs showing the Taxi at the time of reporting did not produce any significant information as the photographs were all taken from afar, without any close up photographs of the damaged body parts at the rear portion of the Taxi.

9. Our subsequent examination of the photographs taken during the Pre- Repair Survey conducted by LKK Auto Consultants Pte. Ltd. 5 days after the accident revealed paint cracks on the top portion of the rear bumper of the Taxi. The left reverse sensor was dislodged as a result of the rear bumper being pushed inwards. We also observed a crack on the left reflector lamp of the Taxi.
10. In general, these physical damages observed on the rear bumper of the Taxi indicate that it had sustained an impact directly onto its rear portion. This impact was relatively light as we did not observe any obvious misalignment at the corner edges of the rear bumper. See photos 3 - 9 below.



Photo 3 shows a left view of the rear portion of the Taxi at the time of the Pre-Repair Survey conducted by LKK Auto Consultants Pte. Ltd. taken 5 days after the accident. The damages were concentrated at the lower left portion and the top portion of the rear bumper (circled). We did not observe any obvious misalignment at the left corner edges of the rear bumper (arrowed).



Photo 4 shows a right view of the rear portion of the Taxi at the time of the Pre-Repair Survey conducted by LKK Auto Consultants Pte. Ltd. taken 5 days after the accident. We did not observe any obvious misalignment at the right corner edges of the rear bumper (arrowed).



Photo 5 shows the paint cracks on the top portion of the rear bumper of the Taxi (circled).

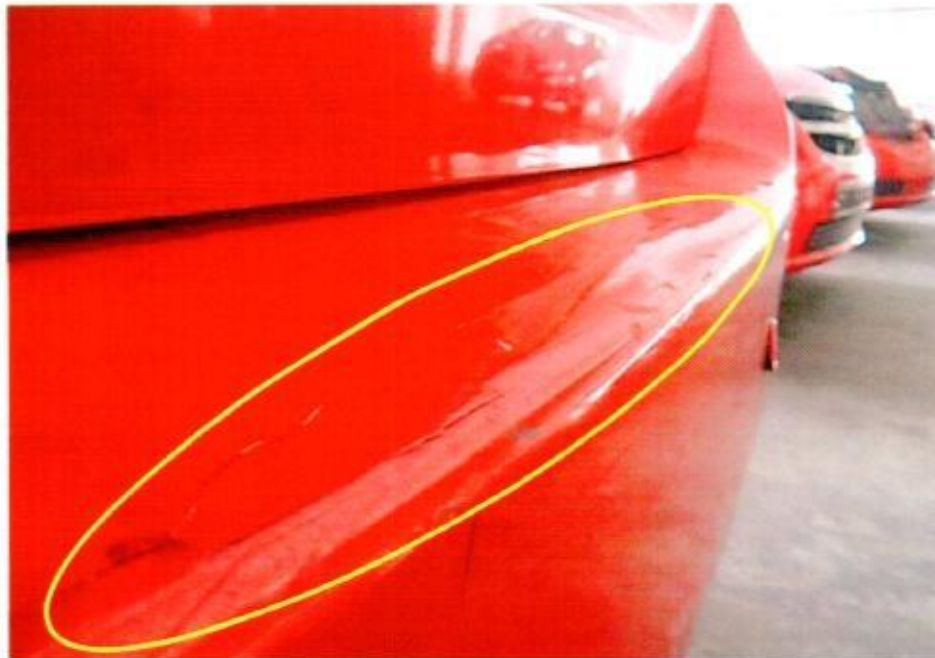


Photo 6 shows a close up view of the paint cracks on the top portion of the rear bumper of the Taxi (circled).



Photo 7 shows the left reverse sensor which was dislodged as a result of the rear bumper being pushed inwards (circled).



Photo 8 shows a close up view of the left reverse sensor which was dislodged as a result of the rear bumper being pushed inwards (circled).



Photo 9 shows the cracked left reflector lamp of the Taxi (circled).

Physical Inspection of the Lorry

11. The Lorry was physically inspected on 6 September 2018 at the premises of ISS Facility Services Private Limited located at 21 Third Chin Bee Road, Singapore 618694.
12. At the time of our inspection, we observed that the Lorry had sustained numerous damages on its front portion as a result of past accidents as mentioned by Mr Yew who was present during the physical inspection. We noticed that the Lorry's front number plate was distorted. We observed horizontal paint graze marks on the front bumper. There was also a vertical dent on the lower left portion of the Lorry's front bumper. Upon closer examination of the left portion of the Lorry's front bumper, we found faint red paint transfer marks. See photos 10 – 18 below.



Photo 10 shows the general view of the front portion of the Lorry at the time of our physical inspection. We observed that the Lorry had sustained numerous damages on its front portion (circled) as a result of past accidents as mentioned by Mr Yew who was present during our physical inspection.



Photo 11 shows the Lorry's front number plate which was observed to be distorted.

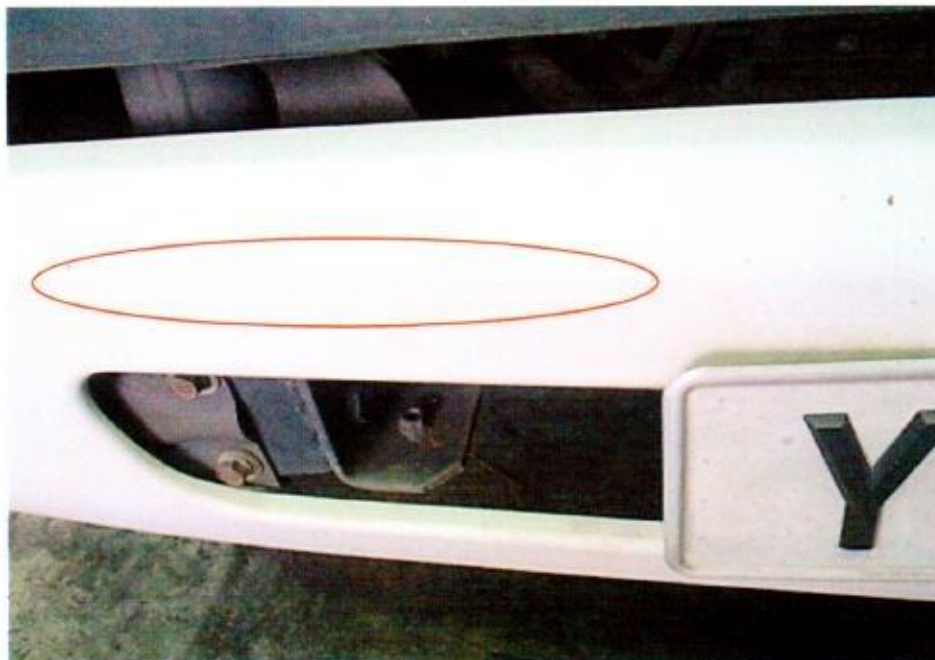


Photo 12 shows horizontal paint graze marks observed on the right portion of the Lorry's front bumper (circled).

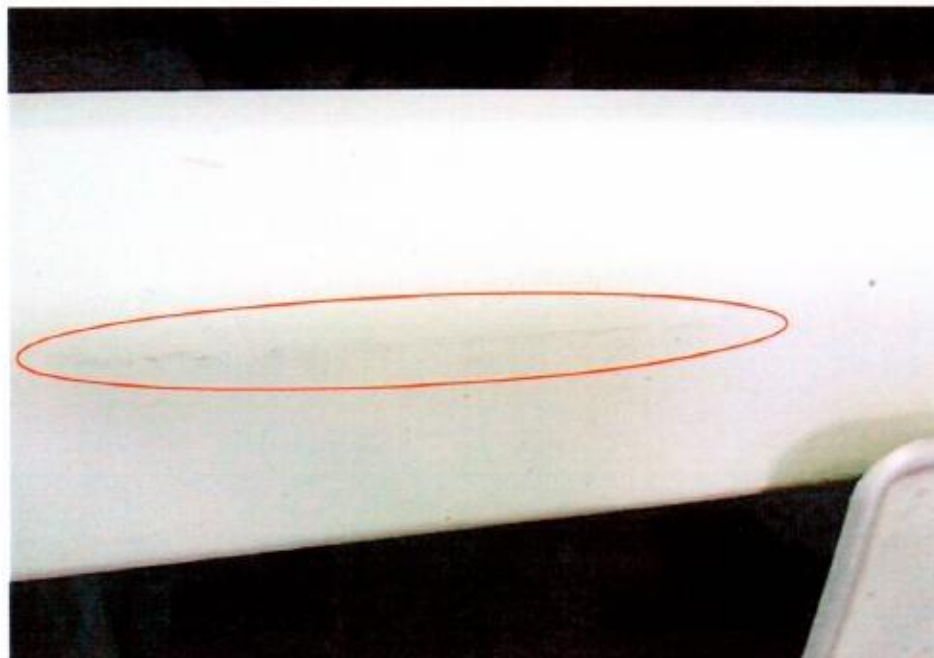


Photo 13 shows a close up view of the horizontal paint graze marks observed on the right portion of the Lorry's front bumper (circled).



Photo 14 shows horizontal paint graze marks observed on the left portion of the Lorry's front bumper (circled).

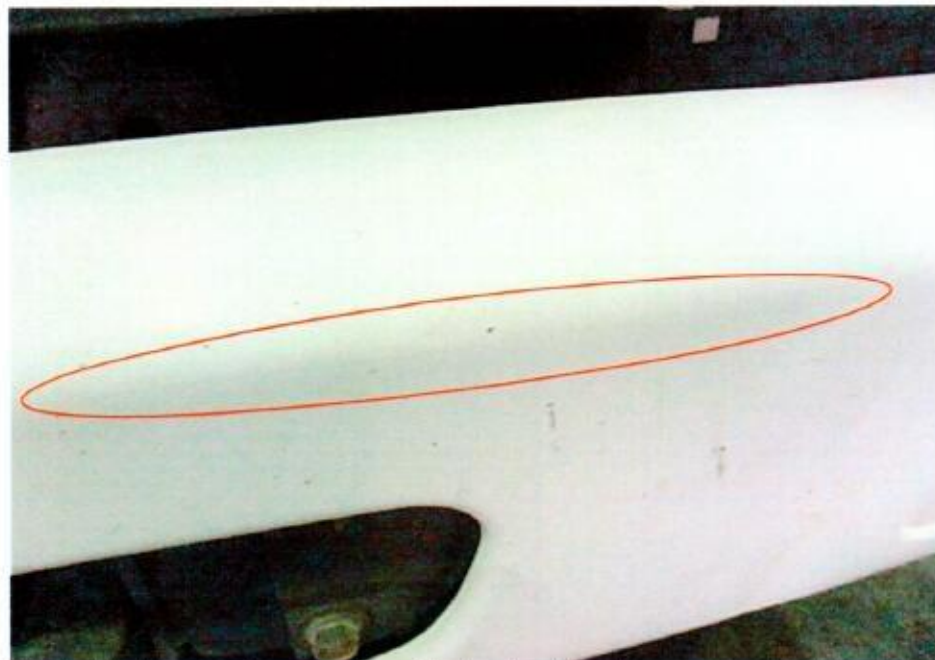


Photo 15 shows a close up view of the horizontal paint graze marks observed on the left portion of the Lorry's front bumper (circled).



Photo 16 shows a closer view of the vertical dent found on the lower left portion of the Lorry's front bumper (circled).



Photo 17 shows upon closer examination of the left portion of the Lorry's front bumper, we found faint red paint transfer marks (circled).

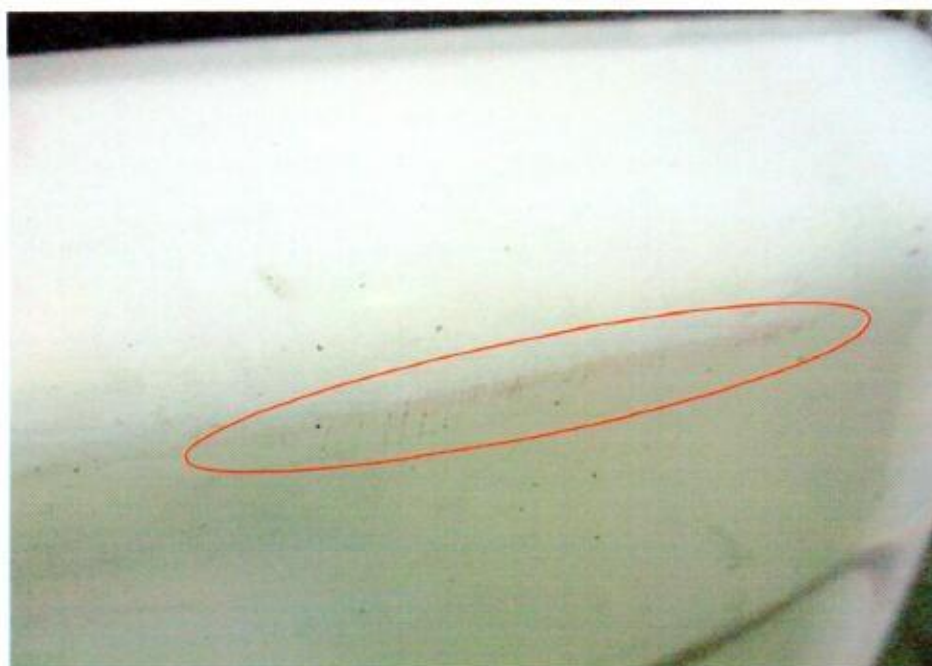


Photo 18 shows a close up view of the faint red paint transfer marks upon our closer examination of the left portion of the Lorry's front bumper (circled).

Accident Scene Photograph and Technical Analysis

13. For this case, we were able to obtain from Mr Yew several post- accident photographs. It shows the final position of the Involved Motor Vehicles at the accident scene. The Lorry was observed to be directly behind the Taxi. We observed the same paint cracks on the top portion of the Taxi's rear bumper as well as the dislodged left reverse sensor. We also noticed the same vertical dent on the lower left portion of the Lorry's front bumper.
14. Our analysis of the documents that were made available to us in preparation of this report and our observations following the physical inspection of the Nissan would appear to suggest that the Lorry's front bumper had contacted onto the rear bumper of the Taxi. Reasons for which are set out below.
15. Firstly, the vertical crack on the left reflector lamp of the Taxi was caused by an object pressing onto the rear portion of the Taxi. If one was to consider the vertical dent on the lower left portion of the Lorry's front bumper, it would then appear that these dents were caused by the front bumper of the Lorry.

16. Secondly, the red paint transfer marks were found on the left portion of the Lorry's front bumper at the area directly above the vertical dent which was found on the lower left portion of the Lorry's front bumper, suggesting that there was contact between the Involved Motor Vehicles. See photos 19 - 22 below.



Photo 19 shows a front view of the position of the Involved Motor Vehicles after the accident. The Lorry was observed to be directly behind the Taxi.



Photo 20 shows a rear view the position of the Involved Motor Vehicles after the accident. The Lorry was observed to be directly behind the Taxi.



Photo 21 shows the rear portion of the Taxi post-accident. We observed the same paint cracks on the top portion of the Taxi's rear bumper (arrowed) as well as the dislodged left reverse sensor (circled).



Photo 22 shows the front portion of the Lorry post-accident. We observed the same vertical dent on the lower left portion of the Lorry's front bumper (circled).

Height Measurement

17. Notwithstanding that the accident scene photos had showed possible contact between the front bumper of the Lorry and the rear bumper of the Taxi, we had conducted a height configuration test to determine whether the damages observed on the rear bumper of the Taxi corresponds to the damages observed on the front bumper of the Lorry.

18. In order to determine this, we had measured the height above ground level of the rear portion of the Taxi (using a similar make and model), at the area where the various damages were found. We had thereafter compared this measured height against the front portion of the Lorry. See photos 23 & 24 below.



Photo 23 shows the height measurement being conducted on the rear portion of the Taxi (using a similar make and model). The height range above ground level of the Taxi's left reflector lamp where the vertical crack was found was measured to be approximately between 41cm to 47cm. The height above ground level of the top portion of the Taxi's rear bumper at the area where the paint cracks were found was measured to be approximately 61cm.



Photo 24 shows the height measurement being conducted on the front portion of the Lorry. The vertical dent found on the lower left portion of the Lorry's front bumper is within the 41cm to 47cm height range. The bodypart at 61cm above ground level was the left upper portion of the Lorry's front bumper which corresponded to the height of the red paint transfer marks found on the Lorry as well as the height of the paint cracks found on the top portion of the Taxi's rear bumper.

19. 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 Taxi's left reflector lamp where the vertical crack was found was measured to be approximately between 41cm to 47cm;
- b) the height above ground level of the top portion of the Taxi's rear bumper at the area where the paint cracks were found was measured to be approximately 61cm;
- c) the vertical dent found on the lower left portion of the Lorry's front bumper is within the 41cm to 47cm height range;
- d) the bodypart at 61cm above ground level was the left upper portion of the Lorry's front bumper which corresponded to the height of the red paint transfer marks found on the Lorry as well as the height of the paint cracks found on the top portion of the Taxi's rear bumper;

- e) the height measurements appear to support the findings of possible contact between the rear portion of the Taxi and the front portion of the Lorry. The damage observed on the rear bumper of the Taxi was a result of this contact and corresponds to the damage observed on the front bumper of the Lorry. In other words, the damage observed on the front bumper of the Lorry is consistent to the damage observed on the rear bumper of the Taxi;
- f) our findings are further supported by, upon our physical inspection of the Lorry, red paint transfer marks found on the left portion of the Lorry's front bumper.

Conclusion

- 20. Having investigated and technically analyzing the material evidence available at the time of writing this report, we are of the opinion that the damages sustained to the rear portion of the Taxi were likely to be caused by the front portion of the Lorry as a result of the contact at the material time of accident.
- 21. The impact force from the contact was relatively minor and had occurred when the Lorry had hit the rear portion of the Taxi while coming to a sudden halt along the slip road. The impact of the contact may have caused the crack on the left reflector lamp as well as the paint cracks on the rear bumper of the Taxi.
- 22. Both damages are corresponding to their respective heights and are consistent to their nature of contact.


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