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Our Ref : CS3/MSG16019773/N

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M/s MSIG Insurance (Singapore) Pte Ltd
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Singapore 048581
(Motor Claims Department)

**AUTOMOBILE TECHNICAL INVESTIGATION REPORT OF ACCIDENT
INVOLVING A MOTOR CAR EZ 3663X AND A MOTOR LORRY YP 3664J ON 18
NOVEMBER 2017**

1. We refer to your letter dated 22 March 2019 and the instructions therein comment on the damage consistency of the motor car EZ 3663X involved in the captioned accident, in particular to establish whether there was possibly contact between the front of the motor car EZ 3663X and the rear of the motor lorry YP 3664J and if there was contact, whether the damage on the front portion of the motor car EZ 3663X 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 car EZ 3663X (herein referred to as "Honda"), where amongst other information, the circumstances of the accident was described together with 16 coloured photographs of the Honda at the time of reporting;
 - b) Singapore Accident Statement of the driver of the motor lorry YP 3664J (herein referred to as "Lorry"), where amongst other information, the circumstances of the accident was described together with 6 coloured photographs of the Lorry at the time of reporting;
 - c) 38 coloured photographs of the damage to the Honda taken during the Pre- Repair Survey by LKK Auto Consultants Pte. Ltd.
3. In preparation of this report, we had conducted height measurements of the Honda's front portion (using a similar make and model) and the Lorry's rear portion (using a similar make and model). Thereafter an analysis of all the available information gathered was 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 Honda, Ms Ong Su Ling (herein referred to as "**Ms Ong**") on 18 November 2017 at 1640 hours, she was the 3rd vehicle in line at the carpark of Block 336 Woodlands Avenue 1. The Lorry suddenly reversed and rammed into the front bonnet of the Honda despite Ms Ong's attempts to alert the driver with her car horn. Ms Ong also mentioned that there was a worker sitting at the back of the Lorry who tried to signal the driver to stop after Ms Ong sounded the horn but the driver just continued reversing.
6. The driver of the Lorry, Mr Ang Kok Thye (herein referred to as "**Mr Ang**"), on the other hand, had stated in his Accident Statement at the aforementioned date, location and time that he was waiting in queue to enter the said carpark when the driver of the Honda claimed that he had reversed and hit the front portion of the Honda. Mr Ang mentioned that there was no collision at all.

Damage to the Honda

7. From the photographs taken during the Pre- Repair Survey conducted by LKK Auto Consultants Pte. Ltd. 4 days after the accident, we note that the Honda had sustained damages to its front portion, significantly to its front bumper and bonnet. We observed cracks on the front bumper grille and graze marks on the front bumper chrome moulding. We noticed there was a dent on the front right portion of the front bonnet. There were also graze marks on the centre portion of the front bonnet. However we also noted that there was no misalignment of the front bumper at its corner edges. See photos 1 - 7 below.



Photo 1 shows the general view of the front of the Honda at the time of the Pre-
Repair Survey conducted by LKK Auto Consultants Pte. Ltd. which was taken 4
days after the accident. We note that the Honda had sustained damages to its
front portion, significantly to its front bumper and front bonnet.



Photo 2 shows a closer view of the cracks on the front bumper grille (arrowed) and the graze marks on the top left portion of the front bumper chrome moulding (circled).



Photo 3 shows the dent on the front right portion of the front bonnet (arrowed). There were also graze marks on the centre portion of the front bonnet (circled).



Photo 4 shows a close up view of the dent on the front right portion of the Honda's front bonnet (arrowed).



Photo 5 shows a close up view of the graze marks on the centre portion of the Honda's front bonnet (circled).



Photo 6 shows a close up view of the right corner edge of the front bumper of the Honda. We observed that there was no misalignment at the corner edges (red arrows).



Photo 7 shows a close up view of the left corner edge of the front bumper of the Honda. We observed that there was a slight misalignment at the corner edges (red arrows).

Damage to the Lorry

8. Based on the circumstances of the case contained in the Singapore Accident Statement, the driver of the Lorry stated that there was no collision between the Involved Motor Vehicles. Our review of the photographs showing the Lorry 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 rear portion of the Lorry. See photos 8 & 9 below.



Photo 8 shows a general view of the rear portion of the Lorry at the time of reporting, which was taken a week after the accident. Based on the circumstances of the case contained in the Singapore Accident Statement, the driver of the Lorry stated that there was no collision between the Involved Motor Vehicles



Photo 9 shows a general right view of the rear portion of the Lorry at the time of reporting, which was taken a week after the accident. Our review of the photographs showing the Lorry 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 body parts at the rear portion of the Lorry.

Technical Analysis

9. The rear profile of the Lorry was of a flat type profile (due to its rear tailgate). However this flat profile had commenced at a certain height above ground level. In the event of a collision, the Honda would have went below the Lorry given the flat rear profile of the Lorry. This is due to the lower height and non-flat front profile of the Honda.
10. Since the rear of the Lorry would have underrun the front of the Honda, it would have come into direct contact with the rear wooden strip which is directly below the tailgate. This is also supported by the height measurement test that we had carried out. See photos 10 & 11 below.



Photo 10 shows the height measurement being conducted on the frontal portion of the Honda (using a similar make and model). The height above ground level of the cracked front bumper grille was measured to be approximately 69cm. The height above ground level of the top left portion of the front bumper chrome moulding where the graze marks were found was measured to be approximately 75cm. The height above ground level of the front bonnet where the dent was found was measured to be approximately 84cm. The graze marks found on the centre portion of the front bonnet were measured to be above 84cm above ground level.



Photo 11 shows the height measurement being conducted on the rear portion of the Lorry (using a similar make and model). The bodypart at 69cm above ground was the lower portion of the rear wooden strip. The bodypart at 75cm above ground was the upper portion of the rear wooden strip. The bodypart at 84cm above ground was the bottom portion of the rear tailgate hinge.

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

- a) the height above ground level of the cracked front bumper grille of the Honda was measured to be approximately 69cm;
- b) the height above ground level of the top left portion of the Honda's front bumper chrome moulding where the graze marks were found was measured to be approximately 75cm;
- c) the height above ground level of the Honda's front bonnet where the dent was found was measured to be approximately 84cm;
- d) the graze marks found on the centre portion of the Honda's front bonnet were measured to be above 84cm above ground level;
- e) the bodypart at 69cm above ground was the lower portion of the Lorry's rear wooden strip;

- f) the bodypart at 75cm above ground was the upper portion of the Lorry's rear wooden strip;
- g) the bodypart at 84cm above ground was the bottom portion of the Lorry's rear tailgate hinge;
- h) Basing on our height measurement as well as the profile of the Honda and the Lorry as discussed in paragraph 9, the damages to the front bonnet of the Honda were likely to be caused by the collision with the tailgate of the Lorry.

Conclusion

- 12. 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 front of the Honda and the rear of the Lorry at the material time.
- 13. The impact force from the contact was relatively minor. The damage to the front bonnet of the Honda was caused by the tailgate of the Lorry. Upon contact, the tailgate of the Lorry had compressed against the front bonnet of the Honda, creating the dent and graze marks on the Honda's front bonnet.
- 14. Both damages are corresponding to their respective heights and are consistent to their nature of contact. However we are unlikely to determine which accident scenario is more probable.



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