



Your Ref: TP/IP/20925/2018
Our Ref : CI/TPD18011338/Z

16th January 2019

Drink Driving Investigation Team
Traffic Police Department
Singapore Police Force
10 Ubi Avenue 3
Singapore 408865

MECHANICAL INSPECTION REPORT OF MOTOR CAR SJV 9541L

1. We refer to your request on 08th June 2018 to conduct a physical inspection of a motor car bearing registration number SJV 9541L (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 31st March 2018.
2. The purpose of this inspection is to primarily determine if there was any possible mechanical failure to the Motor Car that may have contributed to the accident.
3. Following the request, we carried out a physical inspection of the Motor Car on 06th July 2018 at the premises of Traffic Police vehicle pound, 517 Airport Road Singapore 539942. We now set out below our observations and comments with respect to this inspection.

General Condition

4. The mileage of the Motor Car at the time of our inspection was not recorded due to the damages sustained as a result of the accident.
5. The Motor Car had sustained extensive impact damage at its frontal left (severe) & right portion. The impact force was significant, causing the various parts and components of the Motor Car to be damaged. This had included its steering system, which were amongst the multiple parts and components that were pushed from the front left side of the Motor Car.

6. Other body parts that were damaged had included the front left & right lower bumper, left side headlamp, front grille and left & right side fenders amongst others as a result of the accident.
7. This was likely to be with the consistency of the accident's case facts that on 31st March 2018 at about 1813hrs, the said Motor Car was travelling along Jalan Kelabu Asap when the driver claimed that his vehicle steering wheel got locked causing him to lost control of his vehicle and collided onto 3 parked vehicles. See photo 1 to 10 below.



Photo 1 shows a general view of the frontal portion of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained extensive impact damage at its frontal left & right portion. The impact force was significant, causing the various parts and components to be damaged as a result of the accident.



Photo 2 shows a general view of the front right portion of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained damages caused by the accident's impact.



Photo 3 shows a semi close-up view of the front right portion of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained damages caused by the accident's impact.



Photo 4 shows the damages at the front right side wheel & front lower right bumper of the Motor Car. Such damages were likely caused by road kerb grazing at the material time of the accident.



Photo 5 shows a close-up view of the damages at the front right side wheel of the Motor Car. Such damages were likely caused by road kerb grazing at the material time of the accident.



Photo 6 shows a general view of the front left portion of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained extensive impact damage at its front left portion.



Photo 7 shows a closer view of the damage sustained on the left portion of the Motor Car. The impact force was significant, causing the left portion of the Motor Car to be pushed inwards as a result of the accident.



Photo 8 shows a closer view of the damage sustained on the front left of the Motor Car. The impact force was significant, causing the various parts and components such as front bumper, front grille amongst others to be damaged due to the accident's collision impact.



Photo 9 shows a general view of the rear right portion of the Motor Car at the time of our inspection. The rear right portion was observed to be in good condition unaffected by the accident.



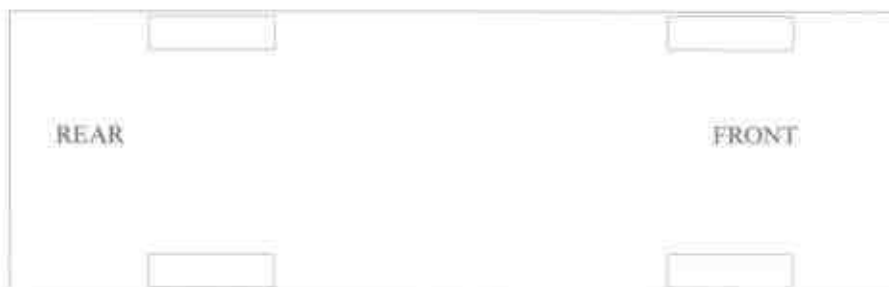
Photo 10 shows a general view of the rear left portion of the Motor Car at the time of our inspection. The rear left portion was observed to be in good condition unaffected by the accident.

Tyres and Wheel Rims

8. The condition of the Motor Car's 4 tyres was observed to be in serviceable condition. We did not find any tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 4 tyres. The 4 tyres were also observed to be sufficiently inflated for vehicular operation. The tyre brand, tyre size and remaining tread depth of the 4 tyres were recorded as follows:-

Continental 285/35ZR20 (3mm)

Azenis 245/35ZR20 (5mm)



Continental 285/35ZR20 (3mm)

Azenis 245/35ZR20 (5mm)

9. The 4 tyres were observed to be wrapped around alloy wheel rims that were found to be without any significant damage apart for some relatively minor kerb grazing type of damage on the alloy rims. See photo 11 – 14 below.



Photo 11 shows the condition of the front right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 4mm. There was no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of this tyre.



Photo 12 shows the condition of the front left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 5mm. There was no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of this tyre, which was also sufficiently inflated for vehicular operation.



Photo 13 shows the condition of the rear right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 3mm. There was also no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of this tyre.



Photo 14 shows the condition of the rear left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 3mm. There was also no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of this tyre.

Engine Compartment & Operating Fluids

10. Upon examination of the engine compartment of the Motor Car, we had observed all the parts and components inside the engine compartment to be intact and unaffected by the accident. The brake fluid, engine oil and engine coolant were all found to be of sufficient level for operating purposes. Visually, there was also no contamination found to these fluids.
11. Further examination of the engine compartment revealed no sign(s) or indication(s) of fluid leakage and/or fluid stain within the engine compartment of the Motor Car.
12. Our subsequent checks on the underside of the Motor Car also revealed no fluid stain. Visually, the various undercarriage components of the Motor Car were all observed to be intact and without any visible damage. See photo 15 – 18 below.



Photo 15 shows a general view of the Motor Car's engine compartment. The various parts and components inside the engine compartment were unaffected by the accident. There was also no sign(s) or indication(s) of fluid leakage and/or fluid stain within the engine compartment.



Photo 16 shows the close up view of the power steering fluid that was seen with sufficient level not affected by the accident's impact



Photo 17 shows the close up view of the brake fluid that was seen with sufficient level not affected by the accident's impact.



Photo 18 shows the engine oil dip stick of the Motor Car at the time of our inspection. The engine oil was observed to be of sufficient level and without any visible contamination.

Steering System & Braking System

13. We were not able to conduct any tests on the steering system of the Motor Car. This was due to the damages sustained as a result of the accident, as well as damage to several mechanical components of the steering system. See photo 19 & 22 below.



Photo 19 shows the misalignment at the front left wheel of the Motor Car.



Photo 20 shows the dislodged upper arm that was observed to be damaged likely due to the accident's impact.



Photo 21 shows the correct alignment at the front right side wheel of the Motor Car. However, further investigation found broken supporting part (upper arm) likely due to the accident's collision impact.



Photo 22 shows the front right side wheel upper arm that was observed to be broken/damaged likely due to the accident's impact.

14. As for the braking system, our investigation reveals that there was no brake fluid leakage or damages to its supporting components. The brake hoses, brake booster, brake callipers and brake fluid reservoir was found to be intact and unaffected by the accident's impact. The brake fluid was noted to be of sufficient level without any contamination for operational purposes at time of our inspection. See photo 23 - 26 below.



Photo 23 shows the braking components at the front left wheel of the Motor Taxi. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Car.



Photo 24 shows the braking components at the front right wheel of the Motor Car. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Car.



Photo 25 shows the braking components at the rear right wheel of the Motor Car. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Car.



Photo 26 shows the braking components at the rear right wheel of the Motor Car. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Car.

Electronic Safety / Warning Indicators

15. The Motor Car's automatic self-test of the functionality of its various operating systems like the Anti-Brake Lock System (ABS) and Supplemental Restraint System (SRS) during cranking of the engine was not able to be initiated as the engine of the Motor Car could not be started due to damage sustained as a result of the accident.

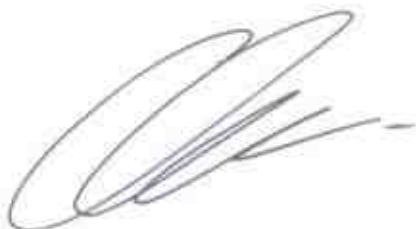
Operational Behaviour of the Motor Car

16. No operational test to primarily determine whether there was any abnormality to the engine system and steering system of the Motor Car could be conducted given the extent of damage that it had sustained.

Conclusion

17. For this particular case, we were unable to determine whether there was any possible mechanical failure to the Motor Car that may have contributed to the accident. This was mainly due to the extent of damage that it had sustained. Its engine system and steering system were damaged as a result of the accident.
18. However, for the claims on the steering wheel locked. We based on the accident's case fact that after making a right turn into Jalan Kelabu Asap from Jalan Merah Saga. The driver was able to travel straight along Jalan Kelabu Asap without any abnormalities until it reaches near to parking lot no. 5 when it collided onto the parked vehicles which are about 100 metres away from the junction of Jalan Merah Saga & Jalan Kelabu Asap. In our opinion, the steering system was in a serviceable condition at the material time of the accident taking into consideration of the power steering fluid was still at a sufficient level for operational purposes and that the Motor Car was able to travel straight normally for a reasonable period of time and distance prior to the accident, after he had made the right turn into Jalan Kelabu Asap.
19. Furthermore, there were damages found on the left front & right front of the Motor Car, with the left front being caused by collision with the parked Motor Car along the left side of Jalan Kelabu Asap.
20. The damage on the front right was likely caused by the Motor Car grazing against the road kerb along the right of Jalan Kelabu Asap. As the damage pattern of the front right wheel rim is that of powdery residue that is normally associated to grazing concrete object such as road kerb. This would have also occurred before the Motor Car's collision with the parked vehicles given its final rest position.
21. Hence if this was the case, than the steering wheel would not have been in a locked position as the driver was able to steer left (normal driver's reaction) after grazing the road kerb along the right of Jalan Kelabu Asap before colliding into the parked vehicles.
22. The 4 tyres of the Motor Car were also found to be in serviceable condition. There was no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 4 tyres. The 4 tyres were sufficiently inflated for vehicular operation with remaining tread depth of approximately 3mm to 5mm each.

23. Our findings were based solely on a static and visual inspection of the Motor Car. No operational test could be carried out to the Motor Car given the extent of damage that it had sustained as a result of the accident.



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