



Your Ref: TP/IP/53769/2018
Our Ref : CI/TPD18018438/Z

19th December 2018

Fatal Accident Investigation Team
Traffic Police Department
Singapore Police Force
10 Ubi Avenue 3
Singapore 408865

MECHANICAL INSPECTION REPORT OF MOTOR TAXI SHC 7938M

1. We refer to your request on 27th September 2018 to conduct a physical inspection of a motor taxi bearing registration number SHC 7938M (herein referred to as "**Motor Taxi**"), which was involved in a fatal road traffic accident on 19th September 2018.
2. The purpose of this inspection is to primarily determine if there was any possible mechanical failure to the Motor Taxi that may have contributed to the accident.
3. Following the request, we carried out a physical inspection of the Motor Taxi on 26th October 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 Taxi at the time of our inspection was not recorded due to the damages sustained as a result of the accident.
5. The Motor Taxi had sustained extensive impact damage at its frontal left & right portion, left portion (severe) & rear portion. The impact force was significant, causing the various parts and components of the Motor Taxi to be damaged. This had included its steering system and body structure, which were amongst the multiple parts and components that were pushed from the left side of the Motor Taxi.

6. Other body parts that were damaged had included a corrugated front left & right lower bumper, buckled front left side fenders, buckled front bonnet, corrugated roof, shattered front & rear windshield, missing front left headlamp amongst others. The interior compartment was not affected by the accident.
7. This was likely due to the consistency of the accident case facts that on 19th September 2018 at 1554hrs, motorcycle JSH9356 was travelling along Sungei Kadut Avenue towards Woodlands Road when a Motor Taxi SHC 7938M from the opposite direction lost control, mounted the kerb and collided onto a Motor Lorry GBD 2447L and the said motorcycle which was travelling on the opposite direction. See photo 1 to 6 below.



Photo 1 shows a general view of the frontal left portion of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to have sustained extensive impact damage at its frontal, left & rear 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 rear left portion of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to have sustained extensive impact damage at its front right portion.



Photo 3 shows a general view of the front portion of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to have sustained extensive impact damage at its front left & right portion.



Photo 4 shows a closer view of the damage sustained on the left portion of the Motor Taxi. The impact force was significant, causing the left portion of the Motor Taxi to be pushed inwards, towards the right of the Motor Taxi.



Photo 5 shows a closer view of the damage sustained on the front left of the Motor Taxi. The impact force was significant, causing the various parts and components inside the engine compartment to be damaged.



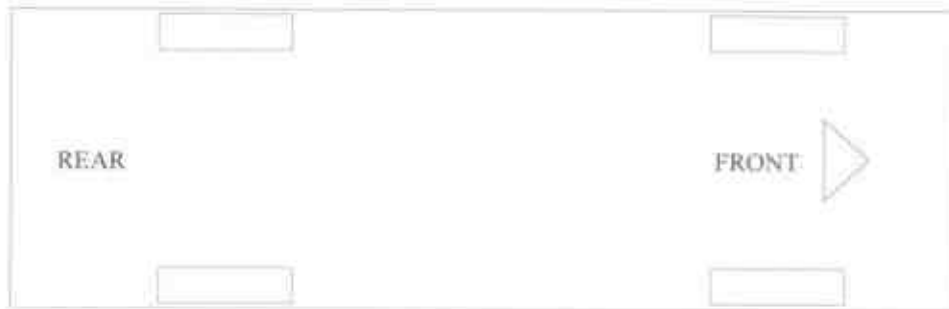
Photo 6 shows a closer view of the damaged rear boot lid. The impact force was significant, causing it to be misaligned due to the accident's impact.

Tyres and Wheel Rims

8. The conditions of the Motor Taxi's 2 rear tyres were 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 2 rear tyres. The 2 rear tyres were also observed to be sufficiently inflated for vehicular operation.
9. As for the 2 front tyres, they were observed to be deflated at the time of our inspection. The 2 front tyres were found to be slipped off out from the steel wheel rims original position likely due to the accident's impact collision. However, 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 2 front tyres.
10. The tyre brand, tyre size and remaining tread depth of the 4 tyres were recorded as follows:-

Triangle 205/60R16 (4mm)

Triangle 205/60R16 (5mm)(Deflated)



Triangle 205/60R16 (4mm)

Triangle 205/60R16 (5mm)(Deflated)

11. The 2 rear tyres were observed to be wrapped around steel wheel rims that were found to be without any significant damage apart for some relatively minor kerb grazing type of damage on the rim covers. As for the 2 front tyres, they were still observed to be wrapped around steel wheel rims despite damages sustained as a result of the accident. See photo 7 – 10 below.



Photo 7 shows the condition of the front right tyre of the Motor Taxi, which was observed to be deflated with remaining tread depth of approximately 5mm. However, 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 8 shows the condition of the front left tyre of the Motor Taxi, which was observed to be deflated with remaining tread depth of approximately 5mm. However, 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 9 shows the condition of the rear right tyre of the Motor Taxi, which was observed to be in serviceable condition with remaining tread depth of approximately 4mm. 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 10 shows the condition of the rear left tyre of the Motor Taxi, which was observed to be in serviceable condition with remaining tread depth of approximately 4mm. 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

12. Upon examination of the engine compartment of the Motor Taxi, we had observed most of the parts and components inside the engine compartment to be intact and undamaged. The brake fluid was found to be of sufficient level for operating purposes. Visually, there was also no contamination found to this fluid. However, engine coolant & engine fluid were observed to be insufficient at time of our inspection.
13. Further examination of the engine compartment revealed that there's sign(s) or indication(s) of fluid leakage and/or fluid stain within the engine compartment undercarriage of the Motor Taxi. We found that the engine undercarriage suffered a severe damaged as a result of the accident.
14. Our subsequent checks on the underside of the Motor Taxi also revealed that there's fluid stain around the engine pan and also fluid stain spill on the ground where the engine pan was located. See photo 11 – 16 below.



Photo 11 shows a general view of the Motor Car's engine compartment. Some of the various parts and components inside the engine compartment were observed to be affected by the accident. There were also sign(s) or indication(s) of fluid leakage and/or fluid stain within the engine compartment.



Photo 12 shows the close up view of the engine coolant that was seen empty affected by the accident's impact.



Photo 13 shows the close up view of the brake fluid that was seen with sufficient level not affected by the accident's impact.



Photo 14 shows the engine oil dip stick of the Motor Taxi at the time of our inspection. The engine oil was observed to be insufficient level as a result of the accident.



Photo 15 shows the undercarriage of the engine area. It was observed to sustained fluid leakage as a result of the accident.



Photo 16 shows the fluid leakage spill on the ground surface.

Steering System & Braking System

15. We were not able to conduct any tests on the steering system of the Motor Taxi. 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 17 & 18 below.



Photo 17 shows the misalignment of the front left wheel of the Motor Taxi.



Photo 18 shows the damaged tie rod of the front right wheel of the Motor Taxi.

16. 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 19 - 22 below.



Photo 19 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 20 shows the braking components at the front right wheel of the Motor Taxi. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Taxi.

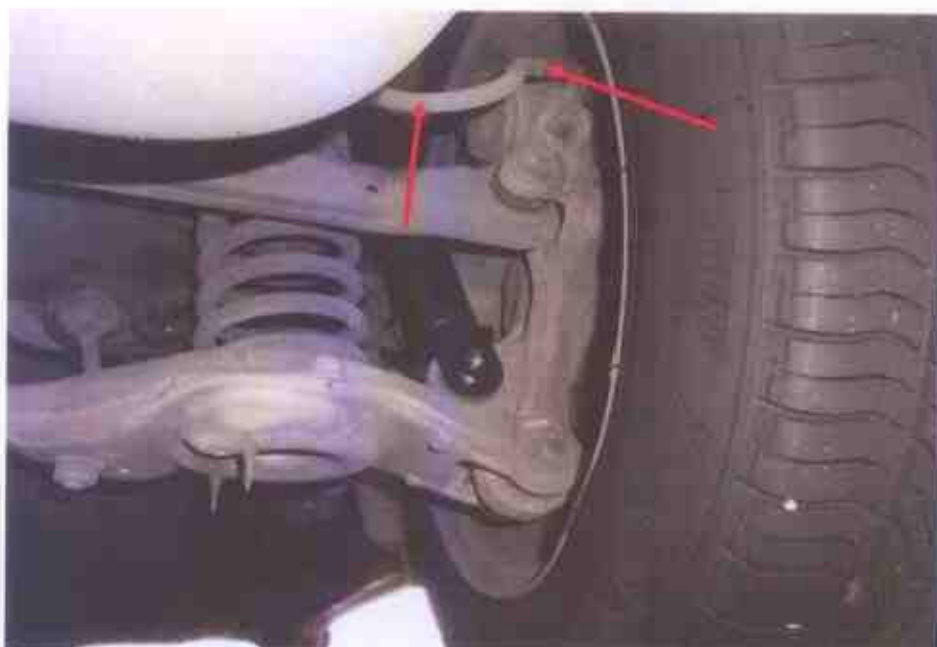


Photo 21 shows the braking components at the rear right wheel of the Motor Taxi. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Taxi.



Photo 22 shows the braking components at the rear left wheel of the Motor Taxi. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Taxi.

Electronic Safety / Warning Indicators

17. 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

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

Conclusion

19. 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.
20. However, from our detailed observation on the braking system, it shows that there's no brake fluid leakage or damages to its supporting components. The brake fluid was noted to be of sufficient level without any contamination for operational purposes at time of our inspection.
21. The conditions of the Motor Taxi's 2 rear tyres were 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 2 rear tyres. The 2 rear tyres were also observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 4mm each.
22. As for the 2 front tyres, they were observed to be deflated at the time of our inspection. The 2 front tyres were found to be slipped off out from the steel wheel rims original position likely due to the accident's impact collision. However, 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 2 front tyres with remaining tread depth of approximately 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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