

Your Ref: TP/IP/56801/2018
Our Ref : CI/TPD18019474/Z

07th February 2019

Fatal Accident Investigation Team

Traffic Police Department
Singapore Police Force
10 Ubi Avenue 3
Singapore 408865

MECHANICAL INSPECTION REPORT OF MOTOR TAXI SHB 9945J

1. We refer to your request on 19th October 2018 to conduct a physical inspection of a motor taxi bearing registration number SHB 9945J (herein referred to as "**Motor Taxi**"), which was involved in a fatal road traffic accident on 04th October 2018.
2. The objective of the inspection is to determine if there was any possible mechanical failure to the Motor Taxi that may have contributed to the accident.
3. Following the request, we had carried out a physical inspection of the Motor Taxi on 19th November 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 unavailability of the ignition key at time of our inspection.
5. The Motor taxi had sustained a relatively minor impact damages that was confined to its rear left portion. Its rear left bumper was observed to be pushed inwards and its rear bonnet was found misaligned due to the accident's collision impact.
6. This was likely due to the consistency of the accident's case facts that the driver of a Motor Taxi (SHB 9945J) had accidentally step onto the accelerator instead of the footbrake, resulted the Motor Taxi to surge forward, side-swipe onto the right Motor Car, crashed through the gantry barrier, collided onto the rear left portion of Motor Taxi (SHB 799Z) and right front side of another white Motor Car before stopping along Gleaneagles Carpark Service Road. See photo 1 to 5 below.

51 UBI AVE 1, #01-25 PAYA UBI INDUSTRIAL PARK, SINGAPORE 408933 TEL : (065) 62563561 FAX : (065) 67414108



Photo 1 shows a general view of the front body of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to be in good condition unaffected by the accident.



Photo 2 shows a general view of the front right body of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to be in good condition unaffected by the accident.

51 UBI AVE 1, #01-25 PAYA UBI INDUSTRIAL PARK, SINGAPORE 408933 TEL : (065) 62563561 FAX : (065) 67414108



Photo 3 shows a general view of the front left body of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to have sustained a relatively minor impact damages that was confined to its frontal portion.



Photo 4 shows a general view of the rear right body of the Motor Taxi at the time of our inspection. The Motor Taxi was observed to have sustained with minor misalignment on the rear bonnet as a result of the accident.



Photo 5 shows a close up view of the rear left of the Motor Taxi at the time of our inspection. The Motor Taxi had sustained extensive impact damages at the rear bumper as a result of the accident.

Tyres and Wheel Rims

7. The condition of the Motor Taxi'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:-

Giti Comfort T20 215/60R16 (5mm)

Giti Comfort T20 215/60R16 (6mm)

<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>
<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>

REAR

FRONT

Giti Comfort T20 215/60R16 (6mm)

Giti Comfort T20 215/60R16 (6mm)

8. The 4 tyres were observed to be wrapped around standard steel wheel rims that were found to be without any significant damage except for some marks of grazing nature on the wheel rims, which are commonly associated to grazing against a road kerb. See photo 6 to 9 below.



Photo 6 shows the condition of the front right tyre of the Motor Taxi, which was observed to be in serviceable condition with remaining tread depth of approximately 6mm. There was no tear, cut or burst mark(s) on the outer and the inner sidewalls.



Photo 7 shows the condition of the front left tyre of the Motor Taxi, which was observed to be in serviceable condition with remaining tread depth of approximately 6mm. The tyre, which was wrapped around alloy wheel rim, was also observed to be sufficiently inflated for vehicular operation.



Photo 8 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 5mm.



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 6mm.

Engine Compartment & Operating Fluids

9. Upon examination of the engine compartment of the Motor Taxi, 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.
10. Further investigation 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 Taxi.
11. Our subsequent checks on the underside of the Motor Taxi revealed fluid stain observed to be pre-existed prior the accident looking at the dust accumulated with it. Our checks on the engine fluid had also indicated that the engine fluid was of sufficient level for operational purposes, and without contamination. Visually, the various undercarriage components of the Motor Taxi were all observed to be intact and without any visible damage. See photo 10 – 14 below.



Photo 10 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 11 shows the brake fluid reservoir of the Motor Taxi at the time of our inspection. The brake fluid was observed to be of sufficient level (arrowed) and without any visible contamination.



Photo 12 shows the engine coolant fluid reservoir of the Motor Taxi at the time of our inspection. The engine coolant fluid was observed to be of sufficient level and without any visible contamination.

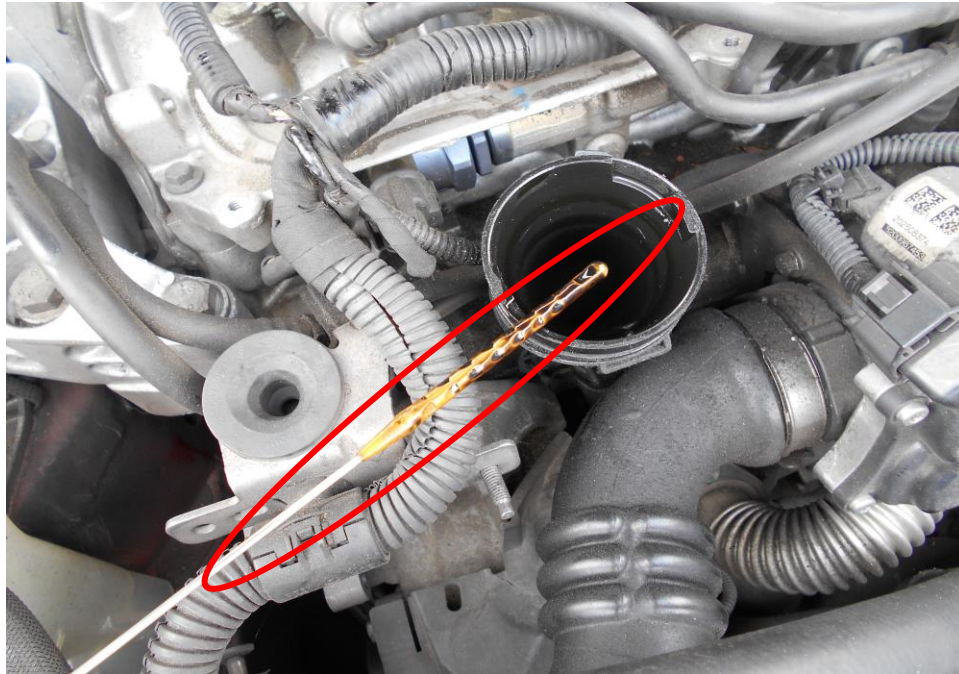


Photo 13 shows the engine oil dip stick of the Motor Taxi at the time of our inspection. The engine oil was observed to be of sufficient level and without any visible contamination.



Photo 14 shows the engine underside of the Motor Taxi engine at the time of our inspection. The engine was observed to be with a pre-existed oil stain prior the accident. This was based on the dust that associated with the fluid stain.

Steering System & Braking System

12. Static brake tests were unable to be conducted on the Motor Taxi due to the unavailability of the ignition key at time of our inspection. Hence, inspection was only based on visual and on accessible areas only. The braking system of the Motor Taxi was likely to be in serviceable condition at the material time. Our visual inspection of the various mechanical components of the Motor Taxi's braking system revealed all to be intact without visible damage. This was also taking into consideration that the brake fluid was of sufficient level, and also that there was no sign(s) of brake fluid leakage along the brake hoses and brake pipes visually.
13. Static test on the steering system of the Motor Taxi were unable to be conducted on the Motor Taxi due to the unavailability of the ignition key at time of our inspection. Hence, inspection was only based on visual and on accessible areas only. Our visual examination of the various steering components which had included the steering rack and pinion, tie rods, tie rod ends and ball joints revealed that these components were all generally in good condition. See photo 15 - 18 below.

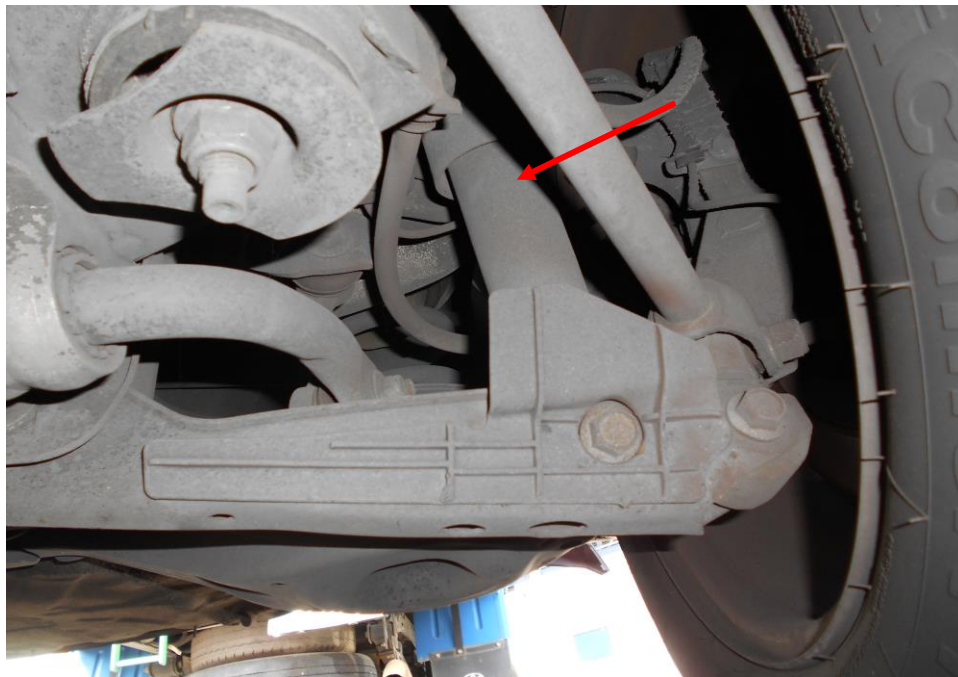


Photo 15 shows the brake hose (arrowed) at the rear left wheel of the Motor Taxi. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Taxi. Our visual inspection of the various mechanical components of the Motor Taxi's braking system revealed all to be intact without visible damage.



Photo 16 shows the brake hose (arrowed) 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. Our visual inspection of the various mechanical components of the Motor Taxi's braking system revealed all to be intact without visible damage.



Photo 17 shows the various undercarriage components at the front right wheel of the Motor Taxi, in particular the steering tie rod (arrowed). The various steering components were all found to be intact, suggesting that the steering system of the Motor Taxi was likely to be in serviceable condition.



Photo 18 shows the various undercarriage components at the front left wheel of the Motor Taxi. We did not observe any leakage of brake fluid (arrowed) at the time of our inspection of the Motor Taxi. Our visual inspection of the various mechanical components of the Motor Taxi's braking system revealed all to be intact and without visible damage, indicating that the braking system was likely to be in serviceable condition at the material time of accident.

Electronic Safety / Warning Indicators

14. The Motor Taxi's automatic self-test of the functionality of its various electronic operating systems like the Stability Control, Power Steering Warning Light, Anti-Brake Lock System (ABS) and Supplemental Restraint System (SRS) were unable to be conducted on the Motor Taxi due to the unavailability of the ignition key at time of our inspection. Hence, inspection was only based on visual and on accessible areas only.

Operational Behaviour of the Motor Taxi

15. An operational test of the Motor Taxi, to primarily determine whether there was any abnormality to its engine system, its transmission system and braking system were unable to be conducted on the Motor Taxi due to the unavailability of the ignition key at time of our inspection. Hence, inspection was only based on visual and on accessible areas only.

Conclusion

16. At the time of our inspection of the Motor Taxi, its steering system and braking system could not be tested as the Motor Taxi's engine could not be started due to the unavailability of the ignition key at time of our inspection. Hence, inspection was only based on visual and on accessible areas only. However basing purely on our observations, it would appear that the steering system and braking system of the Motor Taxi were in serviceable condition. This is taking into consideration that all the various mechanical components were found to be intact and undamaged.
17. The observations gathered from our physical inspection of the Motor Taxi had indicated no evidence to suggest possible mechanical failure to the Motor Taxi that may have contributed to the accident.
18. The 4 tyres of the Motor Taxi 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 5mm to 6mm each.
19. Our findings were based solely on a static and visual inspection of the Motor Taxi. No operational test could be carried out to the Motor Taxi due to the unavailability of the ignition key at time of our inspection. Hence, inspection was only based on visual and on accessible areas only.

Rohaizal A. Rahim

Technical Investigator

Ang Bryan Tani

AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA

Senior Technical Investigator

Technical Investigation & Reconstructionist (SAE-A)

DISCLAIMER OF LIABILITY TO THIRD PARTIES:- This Report is made solely for the use and benefit of the Client named on the front page of this Report. No liability or responsibility whatsoever, in contract or tort, is accepted to any third party who may rely on the Report wholly or in part. Any third party acting or relying on this Report, in whole or in part, does so at his or her own risk.