

Your Ref: TP/IP/41065/2021  
Our Ref : CI/TPD21011271/P

10<sup>th</sup> November 2021

**General Investigation Team**

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

**MECHANICAL INSPECTION REPORT OF MOTOR TAXI SH 7598D**

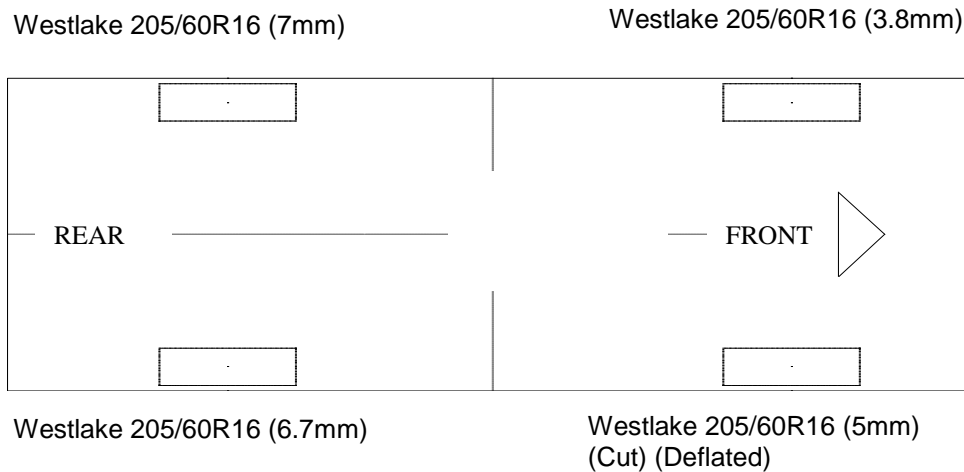
1. I refer to your request on 29<sup>th</sup> October 2021 to conduct a physical inspection of a Motor Taxi bearing registration number SH 7598D (herein referred to as "**Motor Taxi**"), which was involved in a road traffic accident on 28<sup>th</sup> August 2021.
2. The objective of the inspection is to determine if there was any possible mechanical failure to the Motor Taxi that may have contributed to the accident.
3. Following the request, I had carried out a physical inspection of the Motor Taxi on 4<sup>th</sup> November 2021 at the premises of Traffic Police vehicle pound, 517 Airport Road Singapore 539942. I now set out below my observations and comments with respect to this inspection.

**General Condition**

4. The mileage of the Motor Taxi was not recorded as the access to the battery to jumpstart the Motor Taxi was block due to the result of the accident.
5. The Motor Taxi was observed to have sustained damage at its front portion. Its front bonnet, front bumper, front reinforcement panel, front right headlamp and front right fender were amongst the body parts that were damaged as a result of the accident. The Supplemental Restraint System (SRS) was activated as a result of the accident.

## Tyres and Wheel Rims

6. The condition of the Motor Taxi's front right tyre was observed to be cut and deflated as a result of the accident. However, the other 3 tyres was observed to be in serviceable condition. I 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 3 tyres. The 3 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:-



7. The front right tyre and rims was observed to be damaged as a result of the accident. However the other 3 tyres were observed to be wrapped around standard steel wheel rims that were found to be damage as a result of the accident. See photo 1 – 13 below.



**Photo 1** shows the general view of the Motor Taxi's rear body at the time of my inspection. The rear portion of the Motor Taxi was observed to have been unaffected by the accident.



**Photo 2** shows a general view of the Motor Taxi's front body at the time of my inspection. The Motor Taxi was observed to have sustained damage at its front portion. Its front bonnet, front bumper, front reinforcement panel, front right headlamp and front right fender were amongst the body parts that were damaged as a result of the accident. The Supplemental Restraint System (SRS) was activated as a result of the accident.



**Photo 3** shows the close up view of the Motor Taxi's front body at the time of my inspection. The Motor Taxi was observed to have sustained damage at its front portion. Its front bonnet (circled) were amongst the body parts that were damaged as a result of the accident.



**Photo 4** shows the close up view of the Motor Taxi's front body at the time of my inspection. The Motor Taxi was observed to have sustained damage at its front portion. Its front bumper (circled) and front reinforcement panel (arrowed) were amongst the body parts that were damaged as a result of the accident.

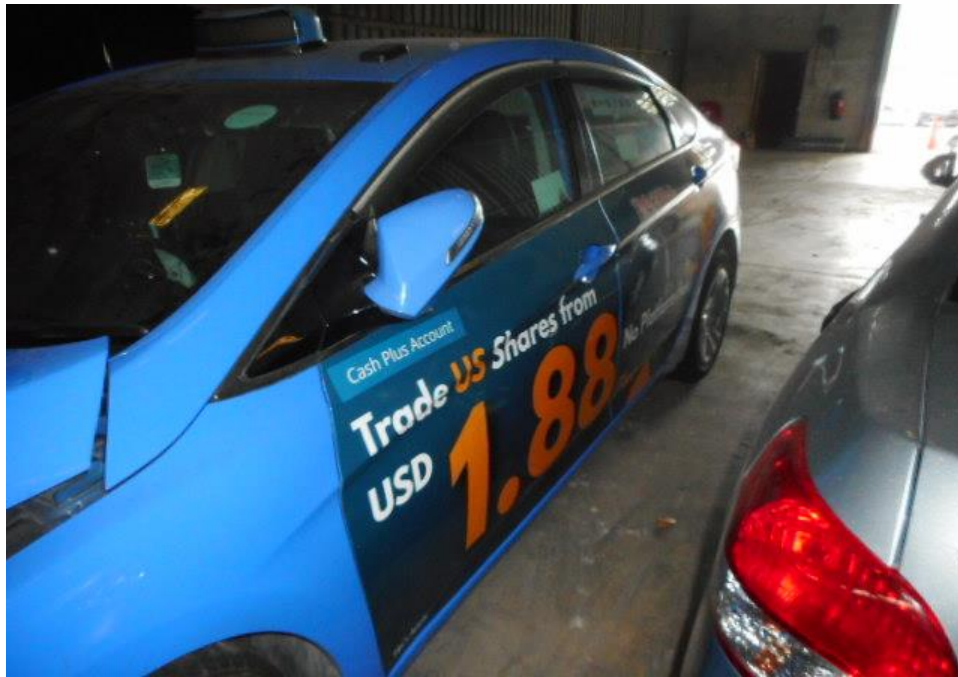




**Photo 5** shows the close up view of the Motor Taxi's front body at the time of my inspection. The Motor Taxi was observed to have sustained damage at its front portion. Its front right fender (red circle) and front left headlamp (yellow circle) were amongst the body parts that were damaged as a result of the accident.



**Photo 6** shows the general view of the Motor Taxi's right body at the time of my inspection. The right portion of the Motor Taxi was observed to have been unaffected by the accident.



**Photo 7** shows a general view of the Motor Taxi's left body at the time of my inspection. The left portion of the Motor Taxi was observed to have been unaffected by the accident.



**Photo 8** shows the condition of the front right tyre of the Motor Taxi, which was observed to be unserviceable condition with remaining tread depth of approximately 5mm. The tyre was observed with cut mark(s) on the inner sidewalls and there was damage observed on the wheel rims as a result of the accident.





**Photo 9** shows the close up view of the condition of the front right tyre of the Motor Taxi, which was observed to be unserviceable condition. The tyre was observed with cut mark(s) on the inner sidewalls and there was damage observed on the wheel rims (circled) as a result of the accident.



**Photo 10** 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 6.7mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).



**Photo 11** 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 7mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).



**Photo 12** 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 3.8mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).





**Photo 13** shows the deployment of the Supplemental Restraint System (SRS) airbag in the Motor Taxi as a result of the accident.

### **Engine Compartment & Operating Fluids**

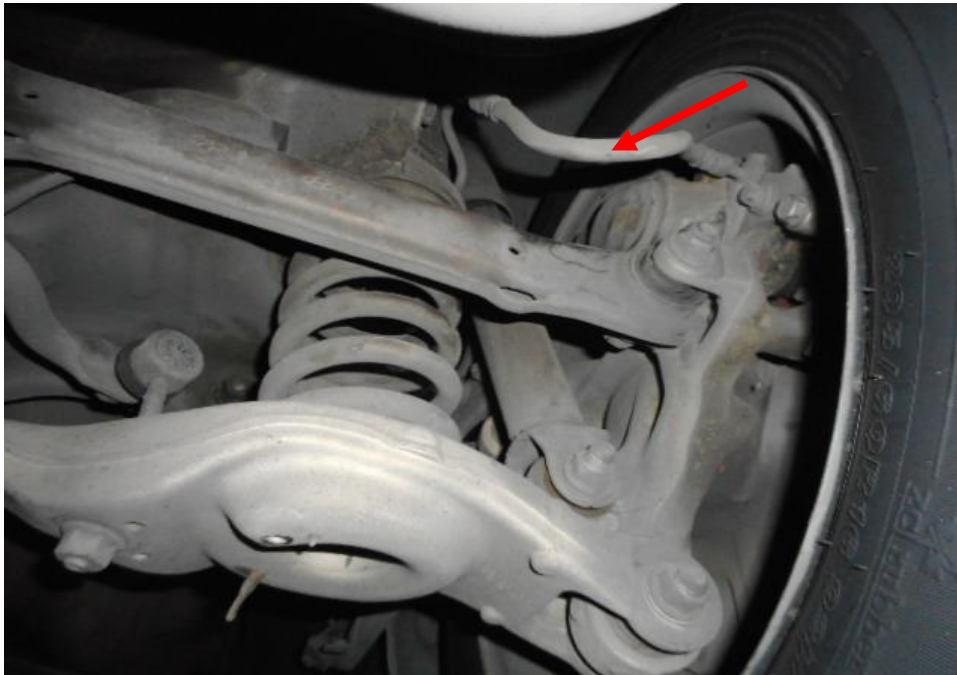
8. We were unable to raise the front bonnet of the Motor Taxi to conduct the examination of the Motor Taxi's engine compartment because the damage caused by the accident had resulted in the damages to the lock mechanism of the bonnet and the structure of the engine compartment. (unable to open)  
See photo 14 below.



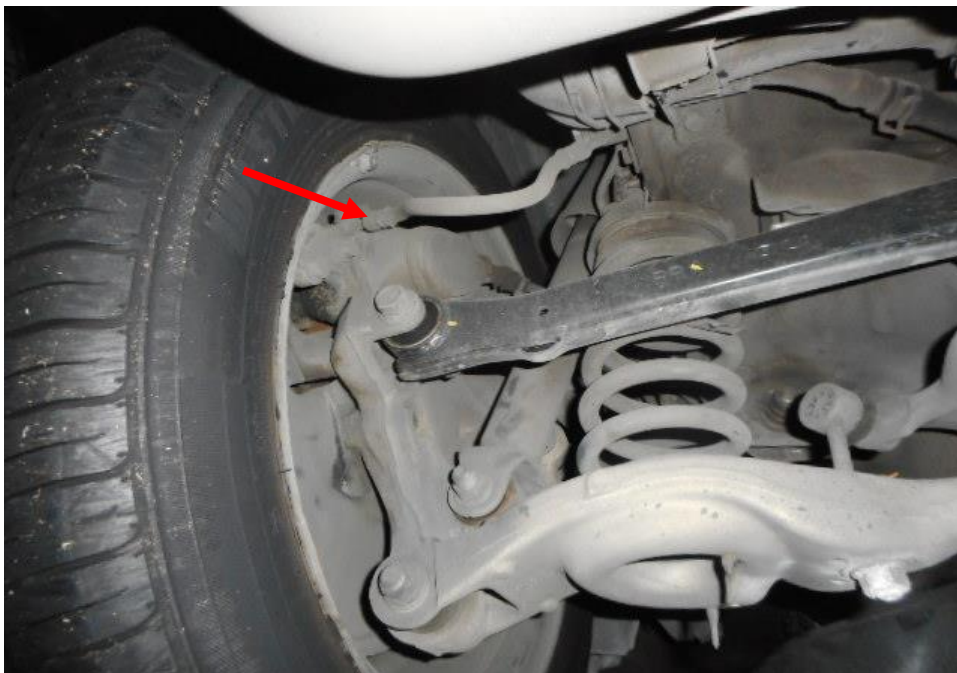
**Photo 14** shows a close up view of the damaged front bonnet lock mechanism and the structure of the engine compartment of the Motor Taxi at the time of my inspection resulting it unable to open a result of the accident. (circled) (Unable to open)

### Braking System & Steering System

9. For this inspection, I was not able to conduct any tests on the steering system of the Motor Taxi due to the Motor Taxi running on electric power steering (EPS) which requires the Motor Taxi to be started as the access to the battery is blocked. (Unable to be started). However, my visual examination of the various steering components which had included the rack and pinion, tie rods, tie rod ends and ball joints had revealed that these components were all generally intact.
10. Static brake tests was not conducted on the Motor Taxi as the engine of the vehicle was unable to be started up. However our the visual inspection to the front left, rear left and right braking components observed to be intact and there was no sign(s) of brake fluid leakage along the brake hoses and brake pipes. See photo 15 - 20 below.



**Photo 15** shows the brake hose/pipe (arrowed) at the rear right wheel of the Motor Taxi. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the drum brake, brake booster, brake pedal etc. had revealed all to be intact and without visible damage.



**Photo 16** shows the brake hose/pipe (arrowed) at the rear left wheel of the Motor Taxi. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Taxi. The undercarriage components of the Motor Taxi were also all found to be intact and without any visible damage.

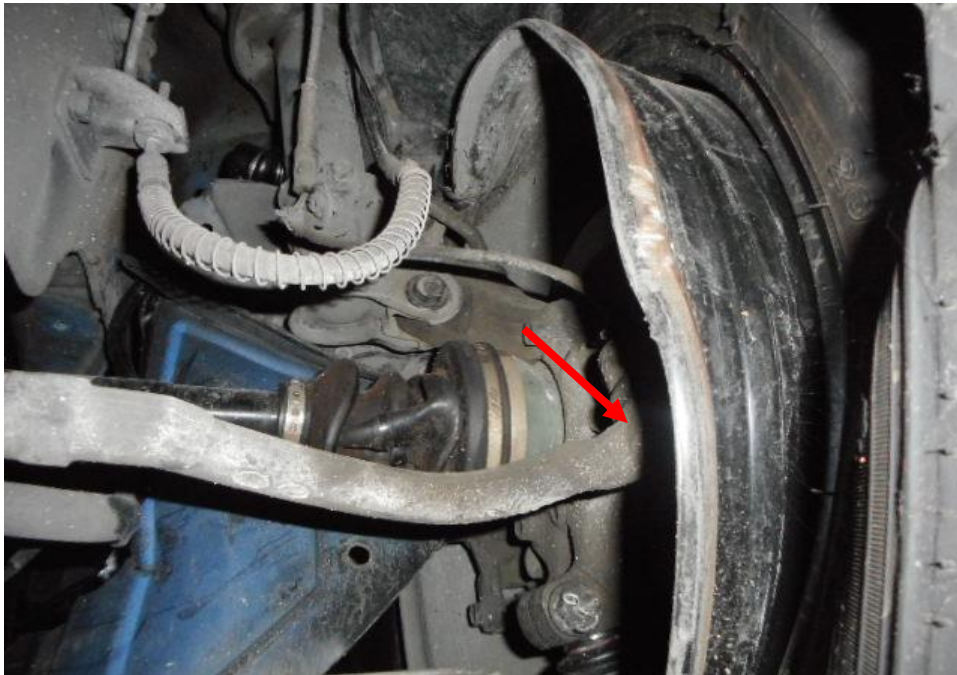




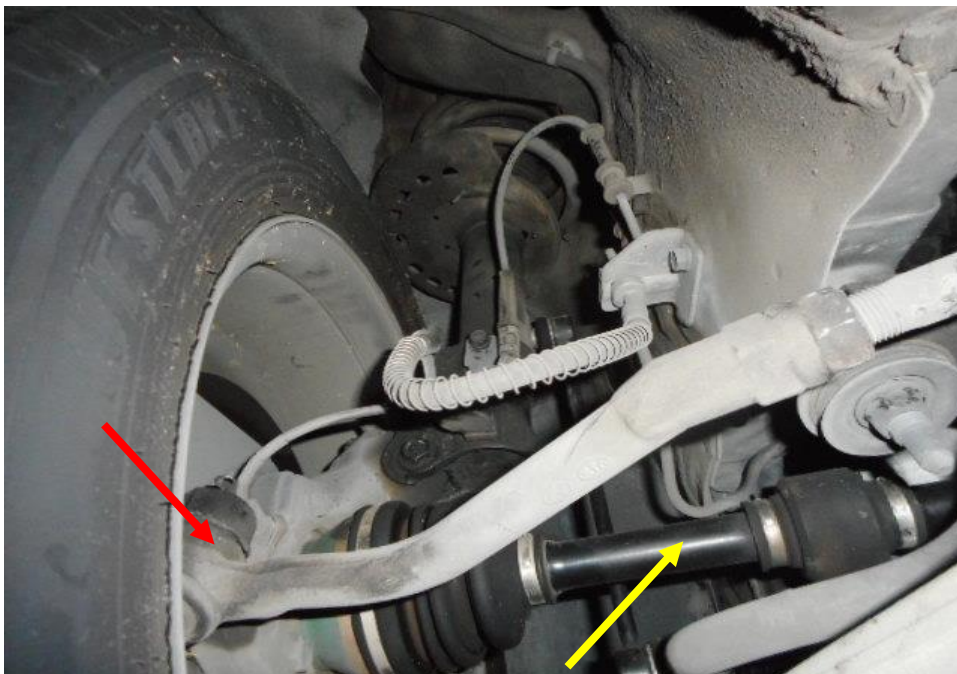
**Photo 17** shows the brake hose/pipe (arrowed) at the front right wheel of the Motor Taxi. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Taxi. The undercarriage components of the Motor Taxi were also all found to be intact and without any visible damage.



**Photo 18** shows the brake hose/pipe (arrowed) at the front left wheel of the Motor Taxi. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the brake caliper (circled), brake booster, brake pedal etc had revealed all to be intact and without visible damage.



**Photo 19** shows the various undercarriage components at the front right wheel of the Motor Taxi, in particular the steering tie rod (red arrow). The various steering components were all found to be intact. There was also no sign of fluid stain observed on the various undercarriage components at the front right wheel of the Motor Taxi.



**Photo 20** shows the various undercarriage components at the front left wheel of the Motor Taxi, in particular the steering tie rod (red arrow) and driveshaft (yellow arrow). The various steering components were all found to be intact. There was also no sign of fluid stain observed on the various undercarriage components at the front right wheel of the Motor Taxi.

### **Electronic Safety / Warning Indicators**

11. The Motor Taxi's automatic self-test of the functionality of its various electronic operating systems was not able to be conducted as the engine was not started up. (unable to be started)

### **Seat Belts**

12. The front right seat belt of the "Motor Taxi" was worn and the left seat belt was not worn at the material time of accident as the respective pre-tensioners that were fitted at the side of each seat was activated upon the material time. See photo 21 and 22 below.



**Photo 21** shows that the seat belt on the right seat was worn at the material time of accident as the safety pre-tensioners was activated at the moment of impact and caused the seat belt to be locked into the last position.





**Photo 22** shows that the seat belt on the left seat was not worn at the material time of accident as the safety pre-tensioners was activated at the moment of impact and caused the seat belt to be locked into the last position.

### **Operational Behaviour of the Motor Taxi**

13. An Operational test to primarily determine whether there was any abnormality to the engine system, transmission system and braking system of the Motor Taxi could not be conducted given the engine of the Motor Taxi was unable to be started up.

### **Conclusion**

14. For this particular case, I was unable to determine whether there was any possible mechanical failure to the Motor Taxi that may have contributed to the accident. The extent of damage that it had sustained had prevented me from Taxi carrying out any operational test(s).
15. However, in general our visual inspection of the mechanical components of the Motor Taxi's braking and steering system was intact and there was no leakage or damaged found at these components of the Motor Taxi.

16. The front right tyre and wheel rim of the Motor Taxi were found to be cut and deflated as a result of the accident. However, the other 3 tyres were found to be serviceable condition as I 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 3 tyres. The 4 tyres were also observed with remaining tread depth of approximately 3.8mm to 7mm.

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