

Your Ref: TP/IP/12091/2021  
Our Ref : CI/TPD21003850/P

29<sup>th</sup> March 2021

**General Investigation Team**

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

**MECHANICAL INSPECTION REPORT OF MOTOR CAR SLF 8012P**

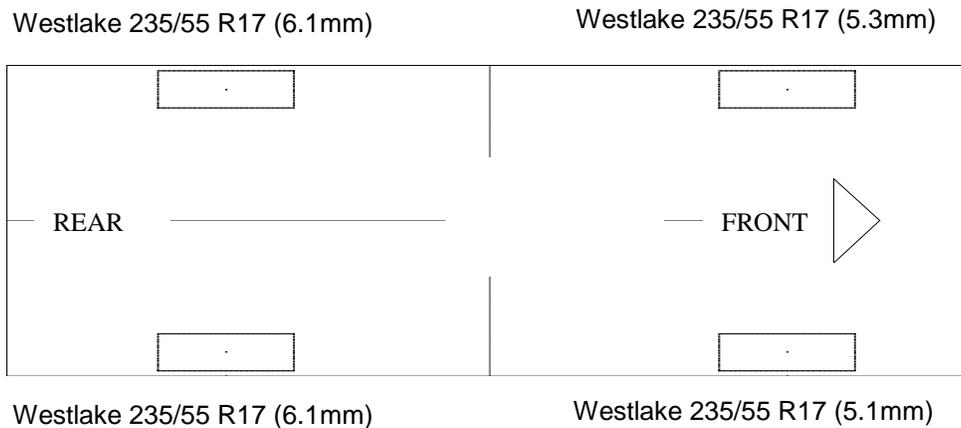
1. I refer to your request on 25<sup>th</sup> March 2021 to conduct a physical inspection of a Motor car bearing registration number SLF 8012P (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 8<sup>th</sup> March 2021.
2. The objective of the inspection is to determine if there was any possible mechanical failure to the Motor car that may have contributed to the accident.
3. Following the request, I had carried out a physical inspection of the Motor Car on 29<sup>th</sup> March 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 car was not recorded due to damage to the ignition system and engine system as a result of the accident.
5. The Motor car was observed to have sustained extensive damage at its front portion. Its front windscreen, front bonnet, front bumper, front left fender was amongst the body parts and various components in the engine compartments were also damaged as a result of the accident.

### Tyres and Wheel Rims

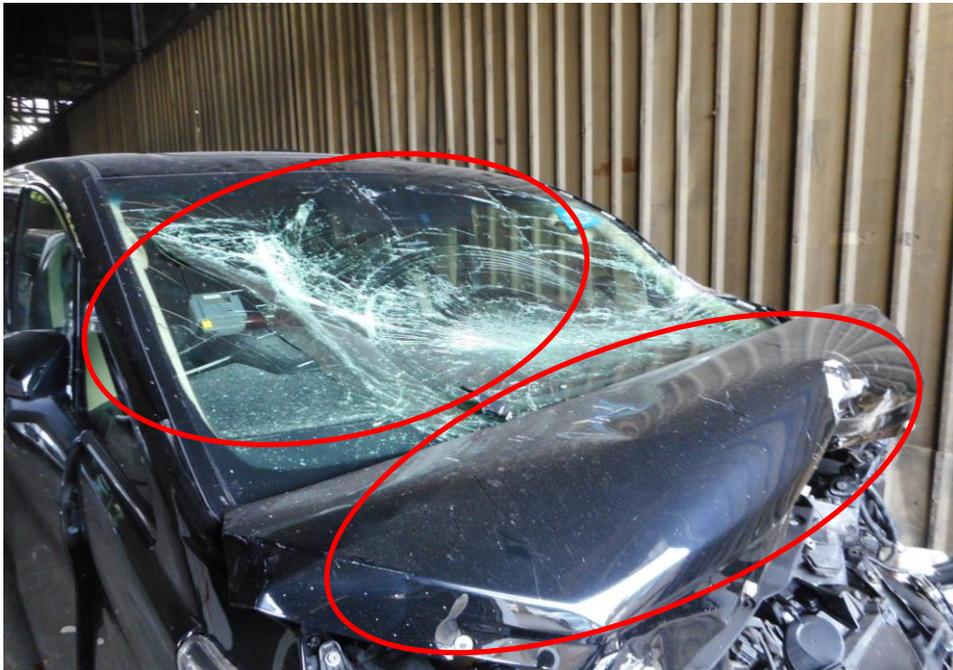
6. The 4 tyres of the Motor Car were observed to be in serviceable condition and sufficiently inflated for vehicular operation. I did not find any tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 4 tyres. The tyre brand, tyre size and remaining tread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



7. The 4 tyres were observed to be wrapped around standard alloy wheel rims that were found to be without any damage. See photo 1 – 13 below.



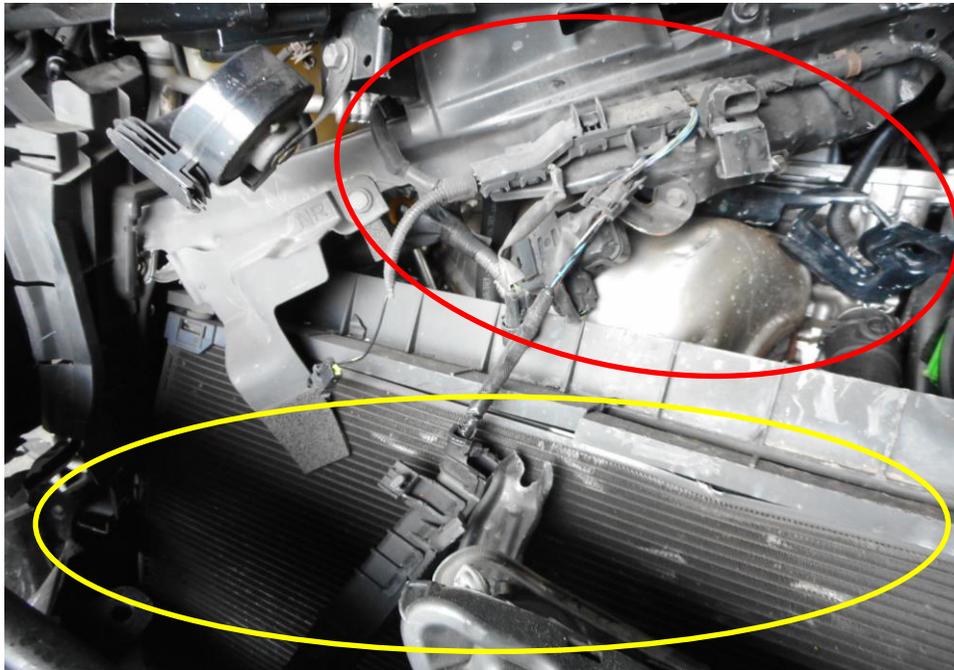
**Photo 1** shows a general view of the Motor Car's front body at the time of my inspection. The Motor car was observed to have sustained extensive damage at its front portion. Its front windscreen, front bonnet, front bumper, front left fender was amongst the body parts and various components in the engine compartments were also damaged as a result of the accident



**Photo 2** shows the close up view of the Motor Car's front body at the time of my inspection. The Motor car was observed to have sustained damage at its front portion. Its front windscreen (red circle) and front bonnet (yellow circle) was amongst the body parts and various components in the engine compartments were also damaged as a result of the accident.



**Photo 3** shows the general view of the Motor Car's front body at the time of my inspection. The Motor car was observed to have sustained damage at its front portion. Its engine and its ignition system was amongst the various components in the engine compartments were also damaged as a result of the accident.



**Photo 4** shows the close up view of the Motor Car's front body at the time of my inspection. The Motor car was observed to have sustained damage at its front portion. Its engine (red circle) and engine radiator (yellow circle) was amongst the various components in the engine compartments were also damaged as a result of the accident.



**Photo 5** shows the close up view of the Motor Car's front body at the time of my inspection. The Motor car ignition system (circled) was amongst the various components in the engine compartments were also damaged as a result of the accident.



**Photo 6** shows the close up view of the Motor Car's right body at the time of my inspection. The Motor car was observed to have sustained damage at its fright portion. Its front left fender (circled) was damaged as a result of the accident.

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



**Photo 8** shows a general view of the Motor Car's left body at the time of my inspection. The left portion of the Motor Car was observed to have been undamaged by the accident.

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**Photo 9** shows a general view of the Motor Car's rear body at the time of my inspection. The rear portion of the Motor Car was observed to have been undamaged by the accident.



**Photo 10** 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 5.1mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).

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**Photo 11** 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 6.1mm. 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 rear left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.1mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).



**Photo 13** 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 5.3mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).

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

8. We were unable conduct check on the engine compartment and operating fluids as this components were all damaged as a result of the accident at the time of our inspection.

### **Braking System & Steering System**

9. For this inspection, I was not able to conduct any tests on the steering system of the Motor Car due to the Motor Car running on electric power steering (EPS) which requires the Motor Car to be started and ignition system was damaged as a result of the accident. (Unable to be started)

10. Static brake tests conducted on the Motor Car revealed no abnormality. The brake booster had responded well to the various tests conducted. There was also no abnormal movement of the brake pedal when it was depressed. In general, the static brake tests had suggested that there was no internal leakage of pressure/vacuum in the braking system of the Motor Car.
11. My visual examination of the various steering and braking components which had included the rack and pinion, tie rods, tie rod ends and ball joints, brake hoses and brake pipes had revealed that these components were all generally intact. See photo 14 - 19 below.



**Photo 14** shows the brake hose/pipe (arrowed) at the rear left wheel of the Motor Car. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Car. Static tests of the Motor Car's braking system had indicated that there was no internal leakage of pressure/vacuum. The undercarriage components of the Motor Car were also all found to be intact and without any visible damage.



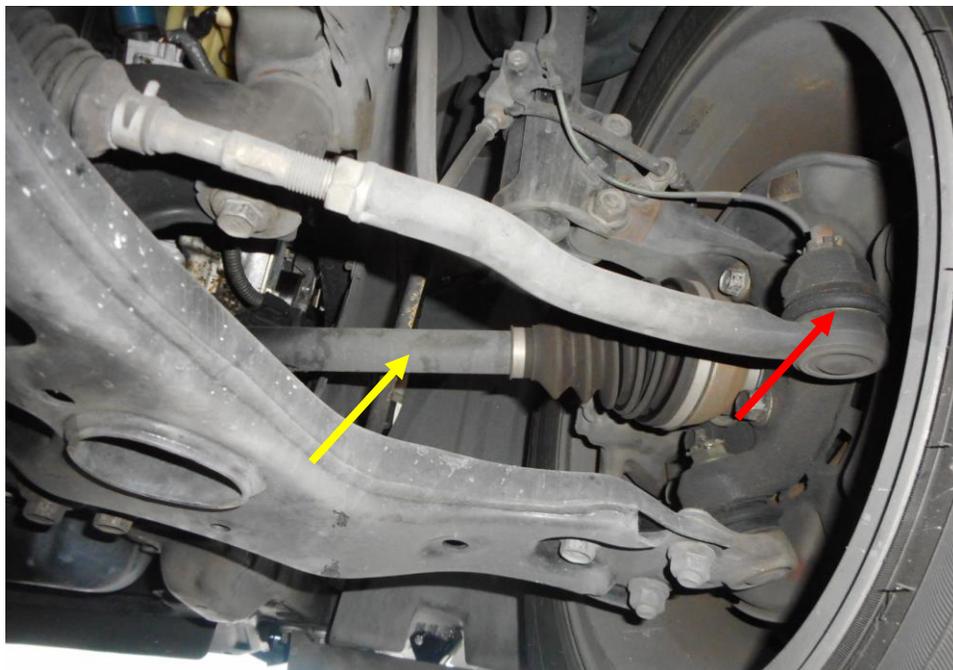
**Photo 15** shows the brake hose/pipe (arrowed) at the front right wheel of the Motor Car. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Car. Static tests of the Motor Car's braking system had indicated that there was no internal leakage of pressure/vacuum. The undercarriage components of the Motor Car were also all found to be intact and without any visible damage.



**Photo 16** shows the brake hose/pipe (arrowed) at the front right wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the brake caliper (circled) brake pedal etc had revealed all to be intact and without visible damage at the time of accident. There was also no sign of fluid stain(s) observed on the various undercarriage components.



**Photo 17** shows the brake hose/pipe (arrowed) at the front left wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the brake caliper (circled), brake pedal etc had revealed all to be intact and without visible damage at the time of accident. There was also no sign of fluid stain(s) observed on the various undercarriage components.



**Photo 18** shows the various undercarriage components at the front right wheel of the Motor Car, in particular the steering tie rod end (arrowed) and drive shaft (yellow arrow). The various steering components were all found to be intact, suggesting that the steering system of the Motor Car was likely to be in serviceable condition at the material time of accident. There was also no sign of fluid stain(s) observed on the various undercarriage components.



**Photo 19** shows the various undercarriage components at the front left wheel of the Motor Car, in particular the steering tie rod end (arrowed). The various steering components were all found to be intact, suggesting that the steering system of the Motor Car was likely to be in serviceable condition at the material time of accident. There was also no sign of fluid stain(s) observed on the various undercarriage components.

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

12. The Motor Car's automatic self-test of the functionality of its various electronic operating systems was not able to be conducted as there was damaged ignition system and engine system as a result of the accident. (unable to be started)

### **Seat Belts**

13. The front left, rear right and rear left and right seat belts of the "Motor Car" were tested and all the seat belts were able to be fastened securely into the respective pre-tensioners that were fitted at the sides of each seat.

## Operational Behaviour of the Motor Car

14. Operational test to primarily determine whether there was any abnormality to the engine system, transmission system and braking system of the Motor Car could not be conducted given the extent of damage that it had sustained (Major systems of the Motor Car damage as a result of the accident.).

## Conclusion

15. For this particular case, I was unable to determine whether there was any possible mechanical failure to the Motor Car that may have contributed to the accident. The extent of damage that it had sustained had prevented me from carrying out any operational test(s) and/or static test(s) to its engine system, transmission system, steering system and suspension system.

16. However static brake tests able to be conducted and in general our visual inspection of the mechanical components of the Motor Car's braking system appear to suggest that its braking system was in serviceable condition at the material time of accident and there was no leakage found at the braking components of the Motor Car.

17. The 4 tyres fitted on the Motor Car were also found 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 4 tyres. The 4 tyres were also observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 5.1mm – 6.1mm.



**Sherwin Beh**

*Technical Investigator*



**Ang Bryan Tani**

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