

Your Ref: TP/IP/45327/2021
Our Ref : CI/TPD21011279/P

23rd November 2021

General Investigation Team

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

MECHANICAL INSPECTION REPORT OF MOTOR CAR SJZ 7606B

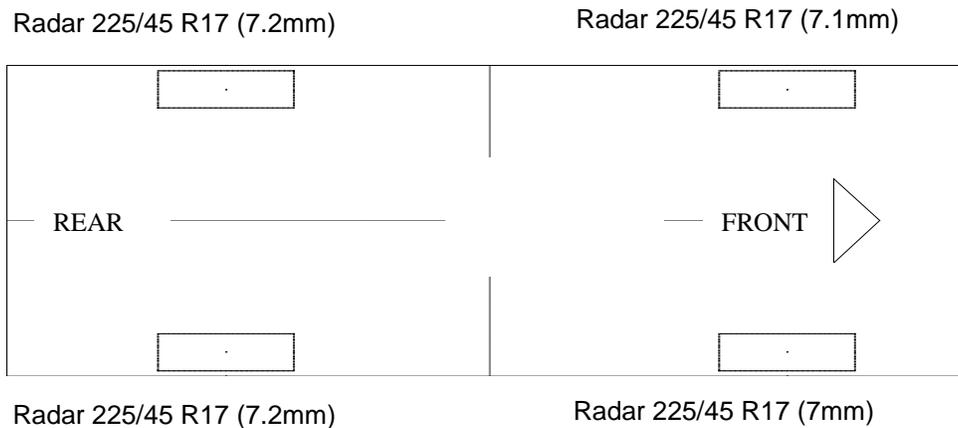
1. I refer to your request on 29th November 2021 to conduct a physical inspection of a Motor car bearing registration number SJZ 7606B (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 22th September 2021.
2. The objective of the inspection is to determine if there 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 22nd 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 car was not recorded due to damage to the ignition system as a result of the accident.
5. The Motor car was observed to have sustained damage at its front and right portion. Its front windscreen, front bonnet, both front headlamps, both front fenders, front bumper and right door panel 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 – 14 below.



Photo 1 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 2 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 damage at its front portion. Its front windscreen, front bonnet, both front headlamps, both front fenders, front bumper, 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 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 bonnet (circled) and front windscreen (arrowed) was amongst the body parts and various components in the engine compartments were also damaged as a result of the accident.



Photo 4 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 front bumper (arrowed) and front right fender (circled) was amongst the body parts and various components in the engine compartments were also damaged as a result of the accident.



Photo 5 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 front left fender (circled) was amongst the body parts and 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 front body at the time of my inspection. The Motor car was observed to have sustained damage at its front portion. Its ignition system battery (circled) was amongst the various components in the engine compartments were also damaged as a result of the accident.



Photo 7 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 radiator (circled) was amongst the various components in the engine compartments were also damaged as a result of the accident.

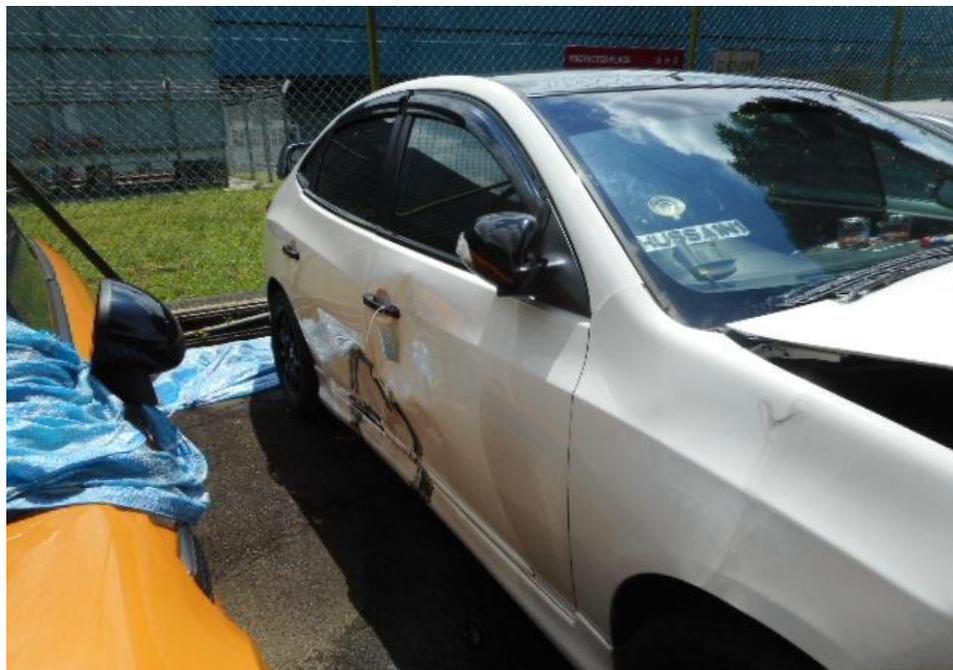


Photo 8 shows a general view of the Motor Car's right body at the time of my inspection. The right portion door panel of the Motor Car was observed to have been damaged by the accident.



Photo 9 shows a close up view of the Motor Car's right body at the time of my inspection. The right portion door panel (circled) of the Motor Car was observed to have been damaged by the accident.



Photo 10 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.



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 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 rear right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 7.2mm. 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 rear left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 7.2mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).

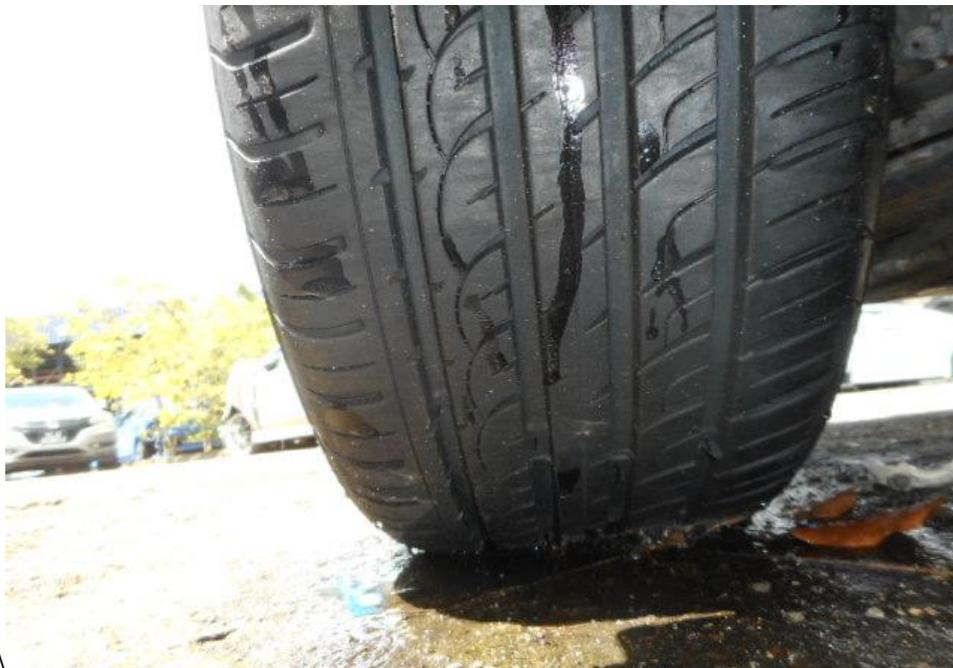


Photo 14 shows the condition of the front left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 7.1mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).

Engine Compartment & Operating Fluids

8. Upon examination of the engine compartment of the Motor Car, I had observed all the parts and components inside the engine compartment to be intact and unaffected by the accident. The brake fluid was observed to be insufficient as the brake reservoir was observed to be damaged and the engine coolant was unable to be observed as the engine radiator was damaged and blocked as a result of the accident. However, the engine oil were found to be of sufficient level for operating purposes. Visually, there was also no contamination found to this fluids.
9. 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.
10. My subsequent checks on the underside of the Motor Car also revealed no sign(s) or indication(s) of fluid leak and/or fluid stain(s). Visually, the various undercarriage components of the Motor Car were all observed to be intact and without any visible damage. See photo 15 – 20 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 brake fluid reservoir of the Motor Car at the time of my inspection. The brake fluid reservoir was observed to be damaged and the brake fluid was observed to be of insufficient level.



Photo 17 shows the brake fluid reservoir of the Motor Car at the time of my inspection. The brake fluid reservoir was observed to be damaged and the brake fluid was observed to be of insufficient level (arrowed)



Photo 18 shows checks being carried out to the engine coolant of the Motor Car at the time of my inspection. The engine coolant was unable to be observed as the engine radiator was blocked (arrowed) as the result of the accident.

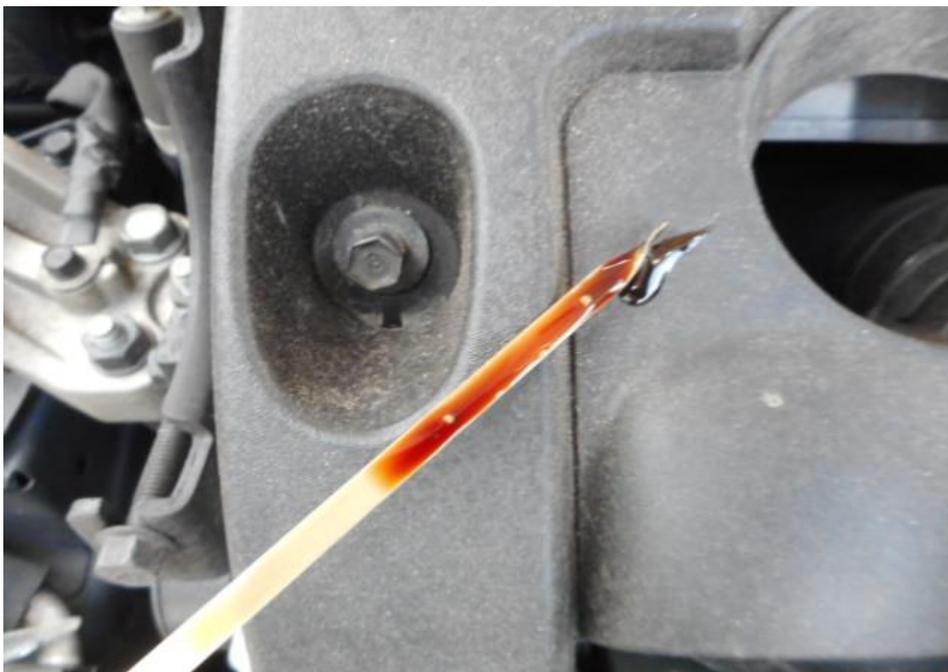


Photo 19 shows the engine oil dip stick of the Motor Car at the time of my inspection. The engine oil was observed to be of sufficient level and without any visible contamination.



Photo 20 shows the undercarriage of the Motor Car, at the area where the engine housing and transmission housing are located. I did not find any sign(s) or indication(s) of fluid leak and/or fluid stain(s) on the underside of the Motor Car.

Braking System & Steering System

11. For this inspection, I was not able to conduct any tests on the steering and braking system of the Motor Car due to the Motor Car running on power steering and brake booster which requires the Motor Car engine to be started up, however the engine was unable to be started up despite multiple attempts in jumpstarting it. (Engine unable to be started up)
12. 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 21 - 26 below.



Photo 21 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 22 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 23 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 24 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 25 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 26 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

13. The Motor Car's automatic self-test of the functionality of its electronic operating systems was not tested as the Motor Car was unable to be started up despite multiple time in jumpstarting it.

Seat Belts

14. The Front right and front left 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

15. 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 to the engine radiator and the front right fender. (unable to move)

Conclusion

16. 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.

17. In general our visual inspection of the mechanical components of the Motor Car's braking and steering system appear to be intact and there was no leakage found at the braking and steering components of the Motor Car.

18. 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 7mm – 7.2mm.



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