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Your Ref: TP/IP/10941/2019 03th June 2019
Our Ref : CI/TPD19008263/P

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

MECHANICAL INSPECTION REPORT OF MOTOR CAR SJM 5103S

1. I refer to your request on 29th April 2019 to conduct a physical inspection of a Motor car bearing registration number SJM 5103S (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 23rd February 2019.

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 27th May 2019 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.

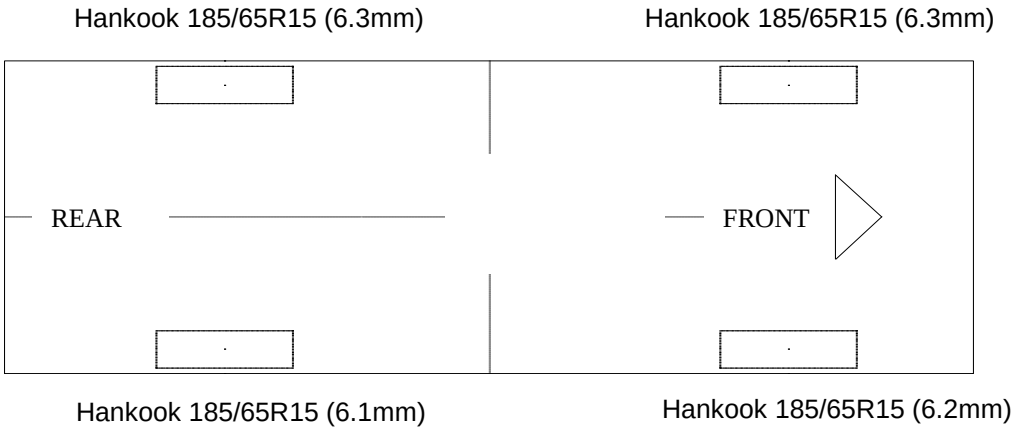
General Condition

4. The mileage of the Motor car at the time of my inspection was 111,421km.

5. The Motor car was observed to have sustained relatively minor damage at its frontal portion. Its front bumper and its front number plate were amongst the body parts that were damaged as a result of the accident.

Tyres and Wheel Rims

6. The condition of the Motor car's 4 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 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:-



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 – 11 below.

Photo 1 shows the mileage of the Motor Car at the time of my inspection. The mileage of the Motor Car at the time of my inspection was recorded to be 111,421km.

Photo 2 shows a general view of the front right body of the Motor Car at the time of my inspection. The Motor car was observed to have sustained relatively minor damage at its frontal portion. Its front bumper and its number plate were amongst the body parts that were damaged as a result of the accident.

Photo 3 shows a close up view of the damaged front bumper (circled) of the Motor Car. It was damaged as a result of the accident. The mileage of the Motor Car at the time of my inspection was recorded to be 111,492km.

Photo 4 shows a close up view of the Motor car's front number plate. Its front number plate (arrowed) was damaged as a result of the accident.

Photo 5 shows a general view of the Motor Car's right side body at the time of my inspection. The right portion of the Motor Car was observed to have been unaffected by the accident.

Photo 6 shows a general view of the Motor Car's left side body at the time of my inspection. The left portion of the Motor Car was observed to have been unaffected by the accident.

Photo 7 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 unaffected by the accident.

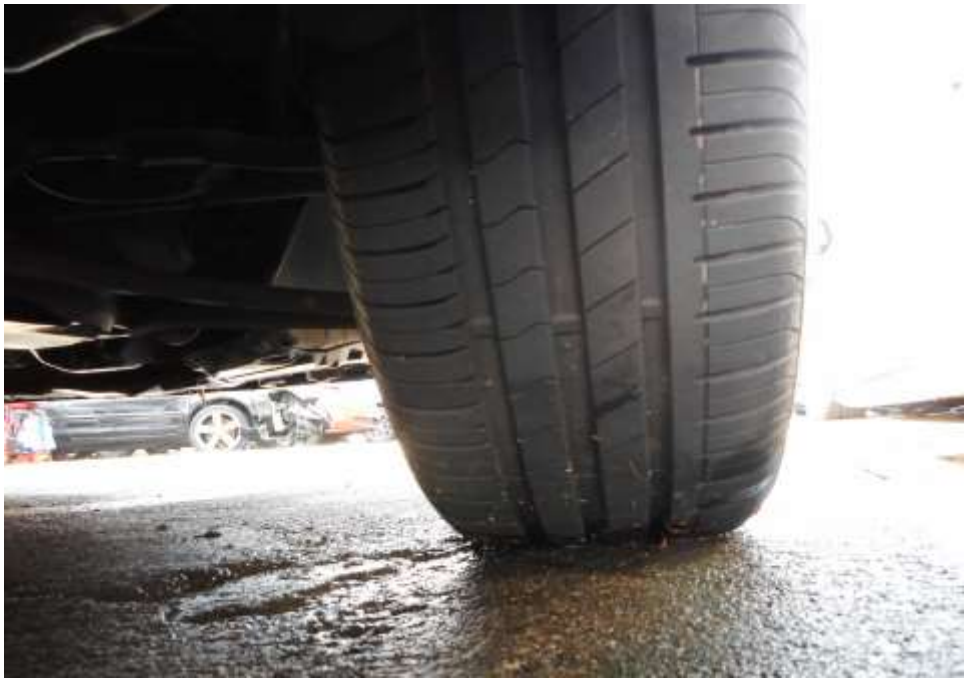


Photo 8 shows the condition of the front right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.2mm. The tyre was sufficiently inflated for vehicular operation with no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread. The 4 tyres of the Motor Car were wrapped around standard alloy wheel rims without any damage.

Photo 9 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).

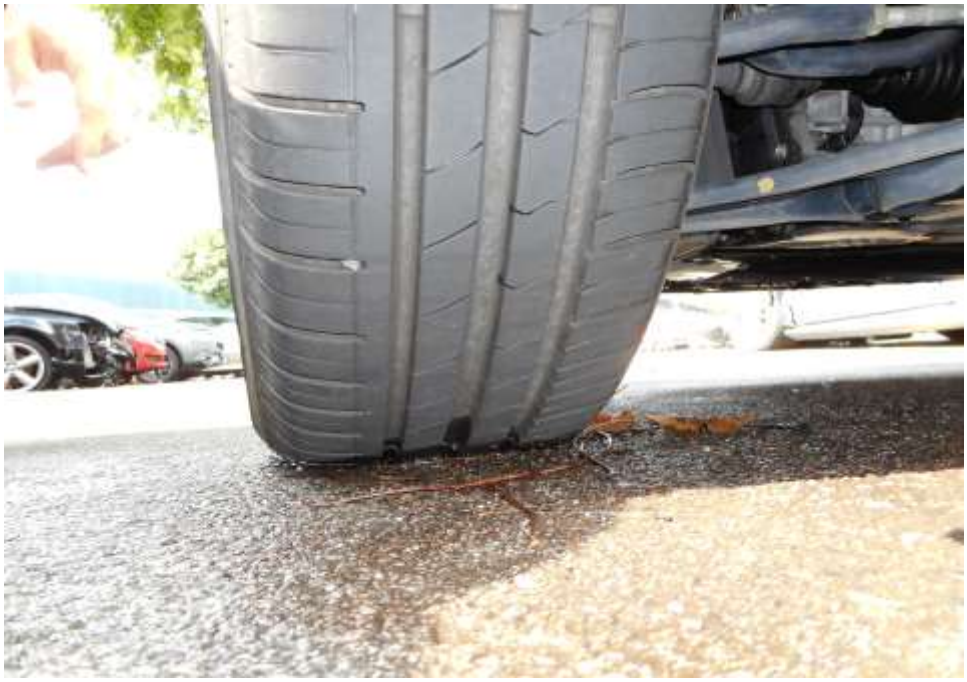


Photo 10 shows the condition of the front left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.3mm. The tyre, which was wrapped around alloy wheel rim, was also observed to be sufficiently inflated for vehicular operation. The 4 tyres of the Motor Car were wrapped around standard alloy wheel rims that were without any significant damage apart for some relatively minor kerb grazing type of damage on the outer side of the wheel rims

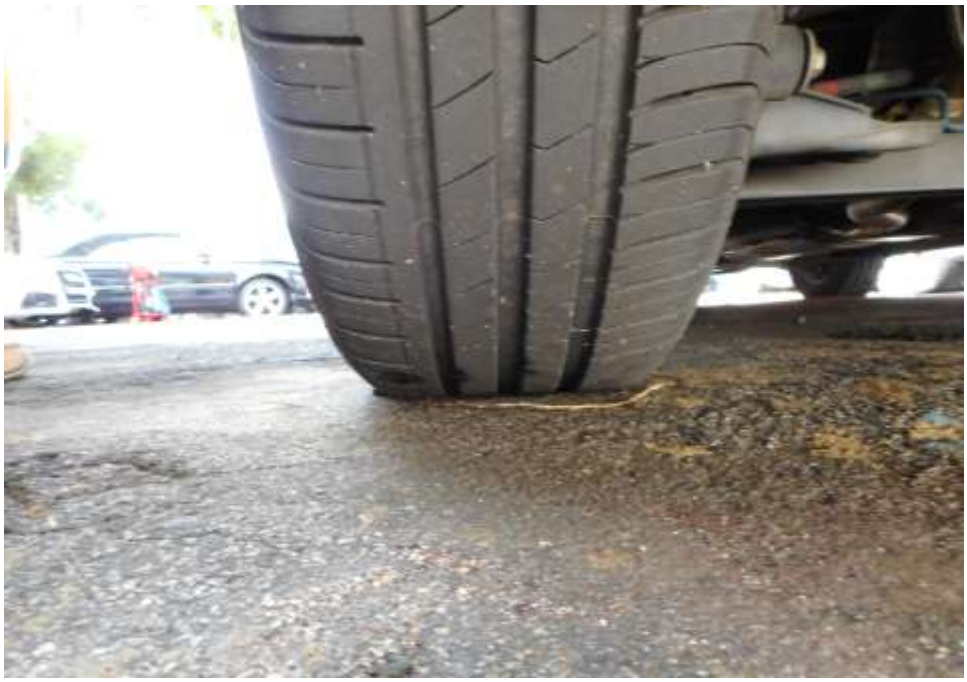


Photo 11 shows the condition of the rear right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.3mm. There was also no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the Motor Car's 4 tyres.

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, 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.

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 12 – 16 below.

Photo 12 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.

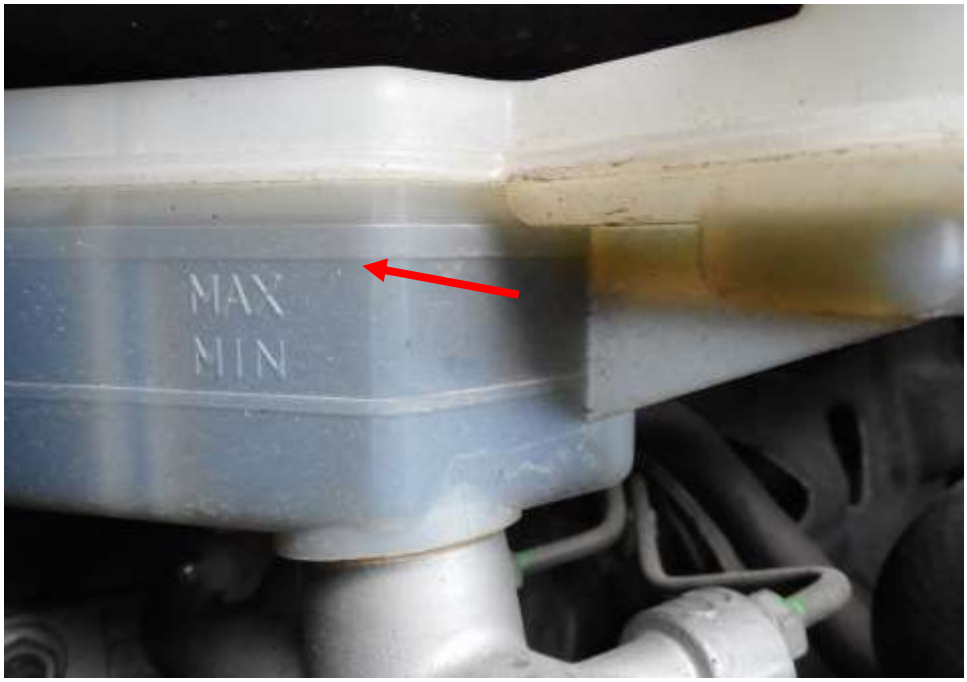


Photo 13 shows the brake fluid reservoir of the Motor Car at the time of my inspection. The brake fluid was observed to be of sufficient level (arrowed) and without any visible contamination.

Photo 14 shows checks being carried out to the engine coolant of the Motor Car at the time of my inspection. The engine coolant was observed to be of sufficient level (arrowed) and without any visible contamination.

Photo 15 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 16 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, the Motor Car's engine could not be cranked despite multiple attempts on jumpstarting it with an external battery pack due to a fault in the ignition system; therefore we were unable to conduct any tests on both the braking and the steering system because its brake servo unit and the electronic power steering motor requires the vehicle's engine to be started to be tested.

12. My visual inspection of the various undamaged mechanical components of the braking system to the other parts like the, brake calipers, brake drum, brake hoses and the various steering components which had included the steering rack and pinion, tie rods, tie rod ends and ball joints are observed to be intact. See photo 17 - 21 below.

Photo 17 shows the jumpstarting process of the Motor Car with an external battery pack. The Motor Car was unable to be cranked due to a fault in the ignition system.

Photo 18 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. The undercarriage components of the Motor Car were also all found to be intact and without any visible damage.

Photo 19 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) revealed to be intact and without visible damage.

Photo 20 shows the various undercarriage components at the front right wheel of the Motor Car, in particular the steering tie rod (arrowed). 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 Car.

Photo 21 shows the various undercarriage components at the front left wheel of the Motor Car , which had included the steering tie rod (red arrow) and front left drive shaft (yellow arrow). The various undercarriage components of the Motor Car were all found to be intact without any visible damage.

Electronic Safety / Warning Indicators

13. 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 cranked due to a fault in the ignition system.

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 due to the Motor Car unable to be cranked due to a fault in the ignition system.

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. Despite multiple attempts in jump starting the Motor Car's engine, a fault in the ignition system had had prevented us from carrying out any operational test(s) and/or static test(s) to its engine system, transmission system, steering system, braking system and suspension system.

16. The 4 tyres of 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 6.1mm to 6.3mm.

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