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22nd September 2021

General Investigation Team

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

MECHANICAL INSPECTION REPORT OF MOTOR CAR SJM 7807G

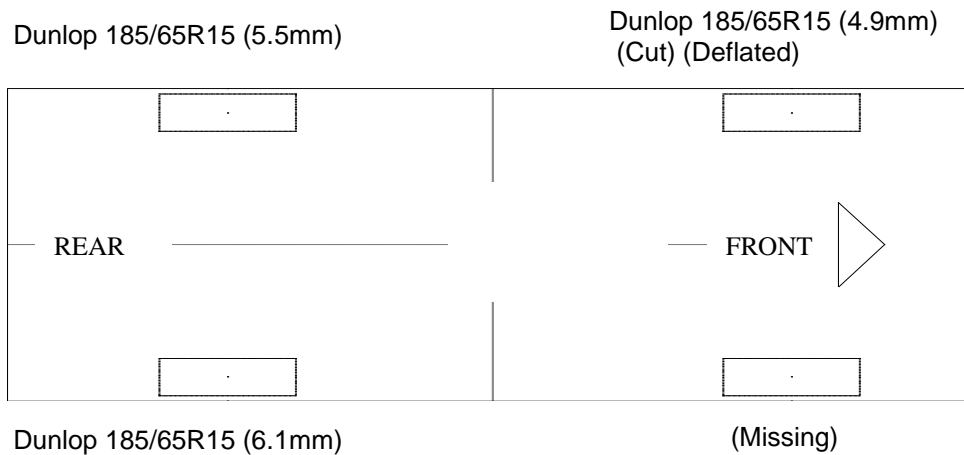
1. I refer to your request on 22nd September 2021 to conduct a physical inspection of a Motor Car bearing registration number SJM 7807G (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 10th September 2021.
2. The objective of the inspection is to determine if 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 28th September 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 at the time of my inspection as the dashboard was damaged as result of the accident.
5. The Motor Car was observed to have sustained damage at its front, left, right and roof portion. Its front and rear windscreen, front bumper, front right headlight, right door panels, left body panel and roof panel were amongst the body parts that were damaged as a result of the accident. The Supplemental Restraint System airbag was deployed as a result of the accident.

Tyres and Wheel Rims

6. The condition of the Motor Car's front right tyre and wheel rim was observed to be missing and its front left tyre was also observed to be damaged as a result of the accident. However, the other 2 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 2 tyres. The 2 tyres were also observed to be sufficiently inflated for vehicular operation. The tyre brand, tyre size and remaining tread depth of the 3 tyres were recorded as follows:-



7. The front left tyre and rims was observed to be damaged and the front right tyre and wheel rims was observed to be missing as a result of the accident. However the other 2 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 – 15 below.



Photo 1 shows the general view of the Motor Car's rear body at the time of my inspection. The Motor Car was observed to have sustained damage at its rear portion. Its rear windscreen and roof panel were amongst the body parts that were damaged as a result of the accident.



Photo 2 shows the close up view of the Motor Car's rear body at the time of my inspection. The Motor Car was observed to have sustained damage at its rear portion. Its rear windscreen (circled) and roof panel (arrowed) were amongst the body parts that were damaged as a result of the accident.



Photo 3 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 bumper, front right headlight were amongst the body parts that were 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 front windscreen (circled) were amongst the body parts that were 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 was observed to have sustained damage at its front portion. Its front bumper (circled) and front right headlight (arrowed) were amongst the body parts that were damaged as a result of the accident.

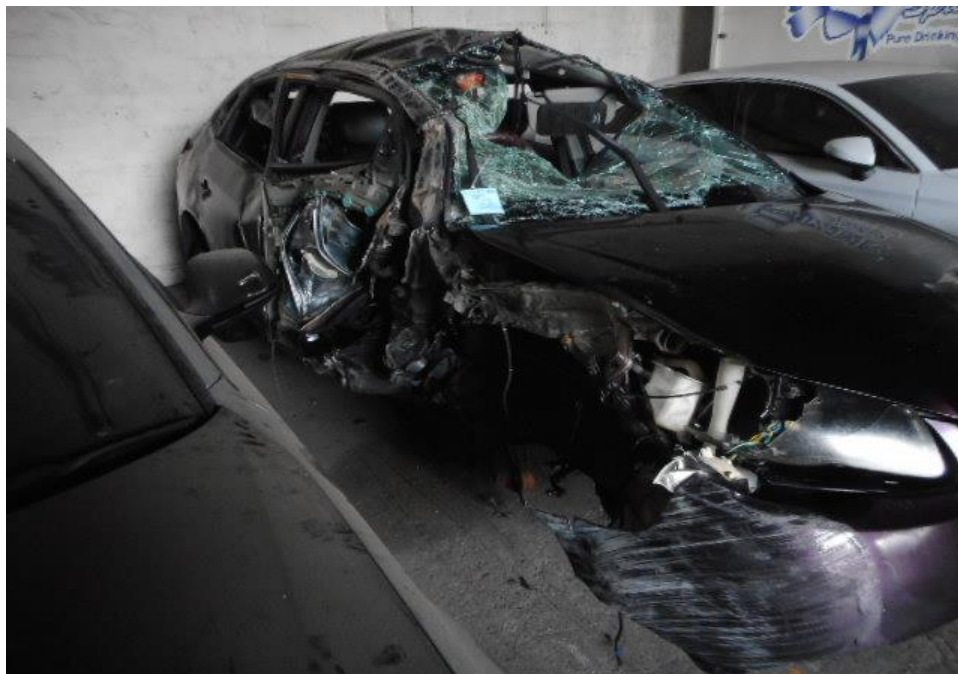


Photo 6 shows a general view of the Motor Car's right body at the time of my inspection. The Motor Car was observed to have sustained damage at its right portion. Its right body panels were amongst the body parts that were damaged as a result of the accident.



Photo 7 shows a 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 right portion. Its right body panels (circled) were amongst the body parts that were damaged as a result of the accident.



Photo 8 shows a 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 right portion. Its right body panels (circled) were amongst the body parts that were damaged as a result of the accident.



Photo 9 shows a general 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 front portion. Its right body panel were amongst the body parts that were damaged as a result of the accident.



Photo 10 shows a general 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 front portion. Its right body panel were amongst the body parts that were damaged as a result of the accident.



Photo 11 shows the airbag (circled) of the Supplemental Restraint System in the Motor Car's was deployed as a result of the accident at the time of my inspection.



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 observed with cut marks and wheel rim damage as a result of the accident, however it was observed to be sufficiently inflated for vehicular operation



Photo 13 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 5.5mm. The tyre was observed with cut marks and wheel rim damage as a result of the accident, however it was observed to be sufficiently inflated for vehicular operation



Photo 14 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 4.9mm. The tyre was observed with cut marks and wheel rim damage as a result of the accident, however it was observed to be sufficiently inflated for vehicular operation



Photo 15 shows the close up view of the condition of the front left tyre of the Motor Car, which was observed to be unserviceable condition. The tyre was observed with cut mark(s) on the outer sidewalls and there was damage observed on the wheel rims (circled) as a result of the accident.

Engine Compartment & Operating Fluids

8. Upon examination of the engine compartment of the Motor Car, I had observed coolant reservoir inside the engine compartment to be damaged as a result of the accident. The engine oil and were all found to be of sufficient level for operating purposes. Visually, there was also no contamination found to these fluids. However the engine coolant and the brake fluid some observed to be insufficient as a result of the damaged coolant reservoir of the missing brake system of the front right wheel as a result of the accident.
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 16 – 20 below.



Photo 16 shows a general view of the Motor Car's engine compartment. The coolant reservoir was observed to be damaged as a result of the accident. However the other 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 17 shows the brake fluid reservoir of the Motor Car at the time of my inspection. The brake fluid was observed to be of insufficient level (arrowed) as a result of the missing braking system of the front right braking system due to the result of the accident.



Photo 18 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 19 shows checks being carried out to the engine coolant of the Motor Car at the time of my inspection. The coolant was observed to be of insufficient level as a result of the damaged coolant reservoir (arrowed) as the result of the accident.



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. Static brake tests was not conducted on the Motor Car as the front right braking system was missing as a result of the accident. 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 .
12. Static test on the steering system of the Motor Car was not conducted as we observed that the front right driveshaft and the tie rod was missing as a result of the accident. However, my visual examination of the other various steering components which had included the steering rack and pinion, the right tie rod ends and ball joints of the front left side revealed that these components were all generally intact. See photo 21 - 26 below.



Photo 21 shows the brake hose/pipe (arrowed) at the rear right wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components revealed to be intact and without visible damage.



Photo 22 shows the brake hose/pipe (arrowed) at the rear left wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components revealed to be intact and without visible damage.



Photo 23 shows the missing front right braking system due to the result of the accident.



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) revealed to be intact and without visible damage.



Photo 25 shows the various undercarriage components at the front left wheel of the Motor Car, in particular the steering tie rod (red arrow) and the driveshaft (yellow arrow). The various steering components were all found to be intact and undamaged by the accident.

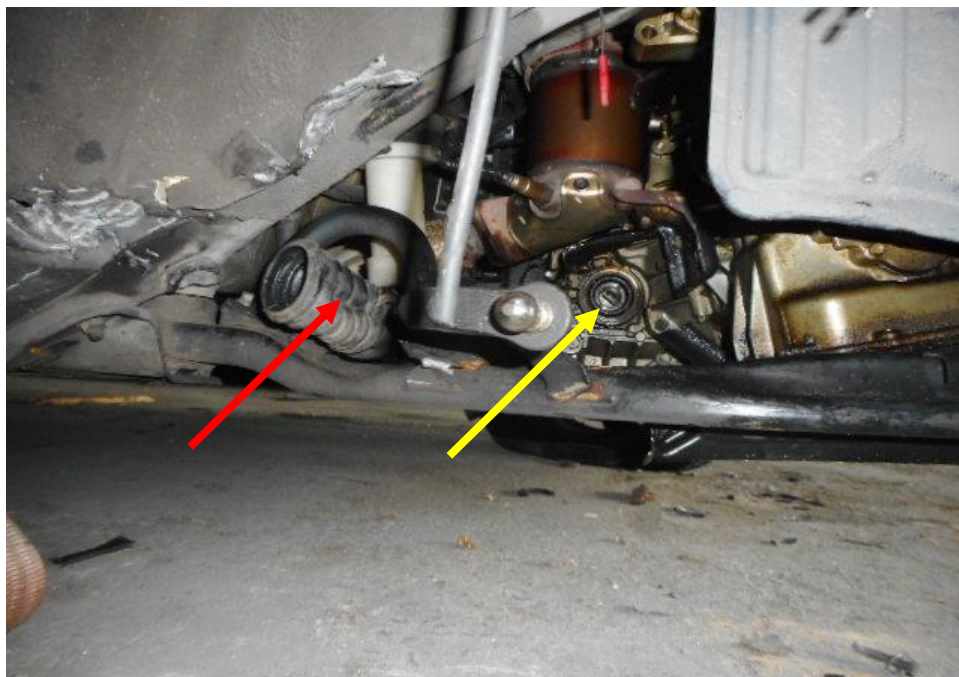


Photo 26 shows the various undercarriage components at the front right wheel of the Motor Car, in particular the steering tie rod (red arrow) and the right driveshaft (yellow arrow). The various steering components were all found to be missing as a result of the accident.

Electronic Safety / Warning Indicators

13. The Motor Car's automatic self-test of the functionality of its electronic operating systems was not conducted as the driver's door was jammed as a result of the accident.

Seat Belts

14. The front left and front right seat belts of the "Motor Car" were tested and both the seat belts were worn at the material time of accident, as the respective pre-tensioners that were fitted at the side of the seat were activated upon the material time. See photo 27 and 28 below.



Photo 27 shows that the seat belt on the front right seat was worn at the material time of accident as the safety pre-tensioners were activated at the moment of impact and caused the seat belt to be locked into the last position.



Photo 28 shows that the seat belt on the front left 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.

Operational Behaviour of the Motor Car

15. An operational test by driving the Motor Car 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 its front right driveshaft and tie rod, its missing front right tyre and rims had prevented me from carrying out any operational test(s).

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).

17. The front left tyre of the Motor Car were found to be damaged and the front right tyre and wheel rim was observed to be missing as a result of the accident. However, the other rear 2 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 2 tyres. The 3 tyres were also observed with remaining tread depth of approximately 4.9mm to 6.1mm.



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