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Our Ref : CI/TPD18016728/Z

14th September 2018

Fatal Accident Investigation Team

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

MECHANICAL INSPECTION REPORT OF MOTOR CAR SJX 1293U

1. We refer to your request on 13th September 2018 to conduct a physical inspection of a motor Car bearing registration number SJX 1293U (herein referred to as "**Motor Car**"), which was involved in a fatal road traffic accident on 08th September 2018.
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, we had carried out a physical inspection of the Motor Car on 13th September 2018 at the premises of Traffic Police vehicle pound, 517 Airport Road Singapore 539942. We now set out below our observations and comments with respect to this inspection.

General Condition

4. The mileage of the Motor Car at the time of our inspection was recorded at 132319km.
5. The Motor Car had sustained a relatively minor impact damages that was confined to its rear portion. Its rear number plate was observed to be damaged; its left bumper was buckled; its rear windshield was shattered; its rear tail lamp was cracked; its boot lid was misaligned & its rear exhaust muffler was observed to be pushed inwards due to the accident's collision impact.
6. This was likely due to the consistency of the accident's case facts that a motorcycle (FBA 2368) was travelling along BKE near 9.5 marker towards Johor Baharu Malaysia on lane 1 of a 3 lanes road. The motorcyclist had collided into the rear portion of a Motor Car (SJX 1293U) and fell to the left and landed lane 1 & 2. See photo 1 to 7 below.



Photo 1 shows the mileage of the Motor Car at the time of our inspection was recorded at 132319km.



Photo 2 shows a general view of the front right body of the Motor Car at the time of our inspection. The Motor Car was observed to be in good condition unaffected by the accident.



Photo 3 shows a general view of the rear body of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained impact damages that were confined to its rear left portion.



Photo 4 shows a general view of the rear left body of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained impact damages that were confined to its rear left portion.



Photo 5 shows a close-up view of the dislodged rear bumper as a result of the accident.



Photo 6 shows a close up view of the rear windshield that was shattered due to the accident's impact.



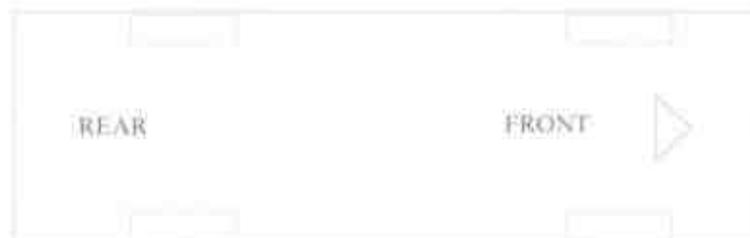
Photo 7 shows a close up view of the rear portion of the Motor Car at the time of our inspection. The Motor Car had sustained damages as a result of the accident.

Tyres and Wheel Rims

7. The condition of the Motor Car's 4 tyres was observed to be in serviceable condition, we 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 remaining tread depth of the 4 tyres was approximately between 4 & 5mm. The tyre brand, tyre size and remaining tread depth of the 4 tyres were recorded as follows:-

Michelin Energy XM2
205/60R16 (5mm)

Falken ZIEX ZE914
205/60R16 (4mm)



Michelin Energy XM2
205/60R16 (5mm)

Falken ZIEX ZE914
205/60R16 (4mm)

8. The 4 tyres were observed to be wrapped around alloy wheel rims that were found to be without any significant damage except for some marks of grazing nature on the wheel rims, which are commonly associated to grazing against a road kerb. See photo 8 to 11 below.



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 4mm. The tyre, which was wrapped around alloy wheel rim, was also observed to be sufficiently inflated for vehicular operation.



Photo 9 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 4mm. The tyre, which was wrapped around alloy wheel rim, was also observed to be sufficiently inflated for vehicular operation.



Photo 10 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 5mm.



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 5mm.

Engine Compartment & Operating Fluids

9. Upon examination of the engine compartment of the Motor Car, we 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.
10. Further investigation 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.
11. Our subsequent checks on the underside of the Motor Car also revealed no fluid stain. Visually, the various undercarriage components of the Motor Car were all observed to be intact and without any visible damage. See photo 12 to 15 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 fresh 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 our inspection. The brake fluid was observed to be of sufficient level (arrowed) and without any visible contamination.



Photo 14 shows the engine coolant fluid reservoir of the Motor Car at the time of our inspection. The engine coolant fluid was observed to be of sufficient level and without any visible contamination.



Photo 15 shows the engine oil dip stick of the Motor Car at the time of our inspection. The engine oil was observed to be of sufficient level and without any visible contamination.

Steering System & Braking System

12. The mechanical components of the Motor Car's steering system and braking system were all found to be visually intact and undamaged. Our visual examination of the various steering components, which had included the rack and pinion, tie rods, tie rod ends and ball joints, revealed that these components were all generally in good condition. Components of the braking system like the brake master pump, brake booster, brake callipers and brake hoses amongst others were also found to be without any damage upon our visual inspection.
13. Static test on the steering system of the Motor Car also revealed no abnormality to the steering system. We did not experience any abnormal free play and/or other resistance when turning the steering wheel left and right to full lock positions. Our visual examination of the various steering components which had included the steering rack and pinion, tie rods, tie rod ends and ball joints revealed that these components were all generally in good condition. See photo 16 - 19 below.



Photo 16 shows the brake hose (arrowed) at the rear left wheel of the Motor Car. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Car. Our visual inspection of the various mechanical components of the Motor Car's braking system revealed all to be intact without visible damage.

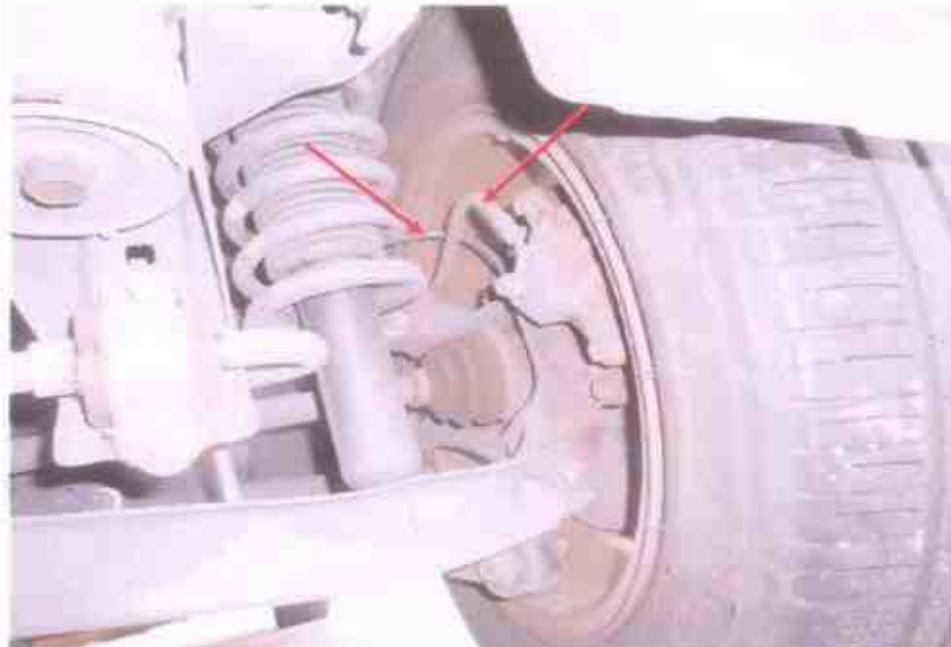


Photo 17 shows the brake hose (arrowed) at the rear right wheel of the Motor Car. We did not observe any leakage of brake fluid at the time of our inspection of the Motor Car. Our visual inspection of the various mechanical components of the Motor Car's braking system revealed all to be intact without visible damage.

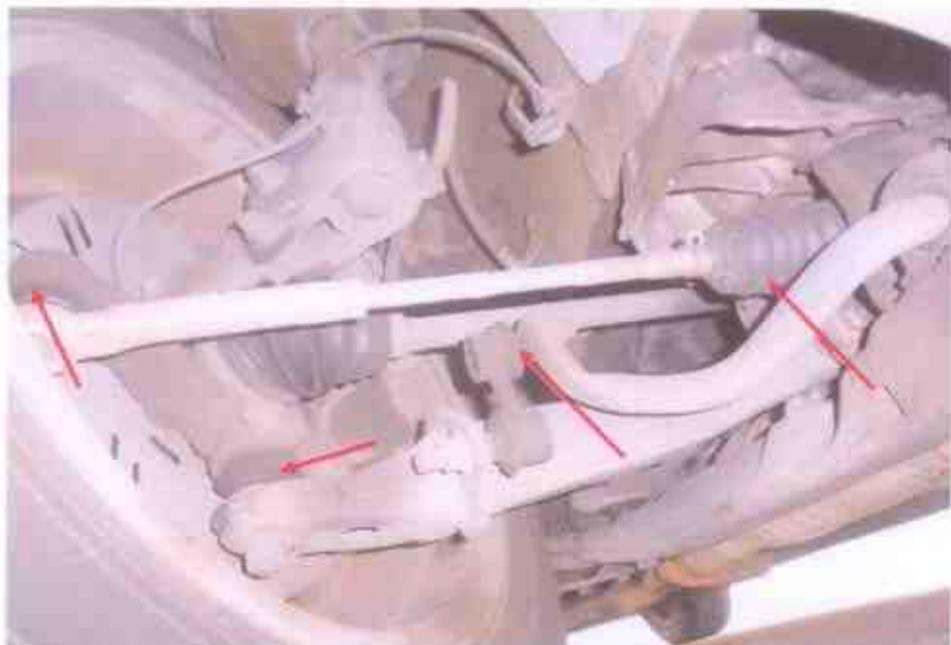


Photo 18 shows the various undercarriage components at the front right wheel of the Motor Car, in particular the steering tie rod (arrowed). The various steering components were all found to be intact, suggesting that the steering system of the Motor Car was likely to be in serviceable condition.

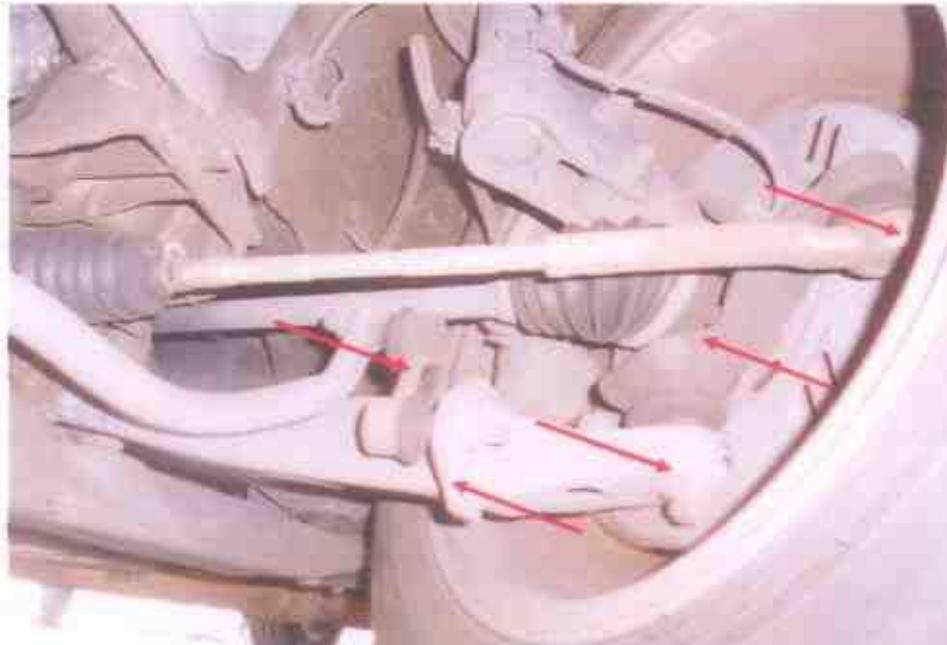


Photo 19 shows the various undercarriage components at the front left wheel of the Motor Car. We did not observe any leakage of brake fluid (arrowed) at the time of our inspection of the Motor Car. Our visual inspection of the various mechanical components of the Motor Car's braking system revealed all to be intact and without visible damage, indicating that the braking system was likely to be in serviceable condition at the material time of accident.

Electronic Safety / Warning Indicators

14. The Motor Car's automatic self-test of the functionality of its various electronic operating systems like the Anti-Brake Lock System (ABS), Engine check light, Engine fluid check light, Battery check light and Supplemental Restraint System (SRS) during cranking of the engine had indicated that these systems were in working condition and without abnormality. This can be established from the warning lights disappearing from the instrument panel after the self-test. See photo 20 & 21 below.



Photo 20 shows the warning lights for the various electronic operating systems of the Motor Car appearing on its instrument panel during the self-test when the engine is cranked, in particular the ABS light and SRS light.



Photo 21 shows no warning lights illuminated on the instrument panel of the Motor Car after the engine was cranked. This would suggest that there was no abnormality to the various electronic operating systems of the Motor Car, like the ABS and SRS.

Operational Behaviour of the Motor Taxi

15. A short operational test of the Motor Car, to primarily determine whether there was any abnormality to its engine system, its transmission system and braking system was subsequently carried out.
16. During the operational test, the transmission system of the Motor Car was able to be shifted to drive mode and reverse mode without any difficulty. There were no abnormal sounds heard and/or abnormal behaviour of the Motor Car's engine system. It was able to move forward and backward normally. The braking system was also found to be in working condition as the Motor Car was able to slow down and come to a complete stop upon depressing of the brake pedal. See photo 22 to 23 below.



Photo 22 shows we conducted an operational test on the Motor Car. Drive mode were engaged at time of our test. There was no abnormality observed at time of testing.



Photo 23 shows we conducted an operational test on the Motor Car. Drive mode, Reverse mode & Neutral mode were engaged at time of our test. Brake pedal was also engaged to a complete stop. There was no abnormality observed at time of testing.

Conclusion

17. From our physical inspection of the Motor Car, it appears that its engine system, transmission system, steering system and braking system were all in serviceable condition. We did not find any evidence(s) to suggest that there was possible mechanical failure to the Motor Car that may have caused and/or contributed to the accident.
18. A short operational test of the Motor Car, which we had conducted, did not produce any sign(s) or symptom(s) to suggest that there was any abnormality to its engine system, its transmission system and braking system.

19. The Motor Car's 4 tyres was observed to be in serviceable condition, we 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 remaining tread depth of the 4 tyres was approximately between 4 & 5mm.



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