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Your Ref: TP/IP/28409/2022
Our Ref : CI/TPD23003230/P

6th April 2023

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

MECHANICAL INSPECTION REPORT OF MOTOR CAR SKP 5498A

1. I refer to your request on 7th March 2023 to conduct a physical inspection of a Motor car bearing registration number SKP 5498A (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 19th October 2023.

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 31st March 2023 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.

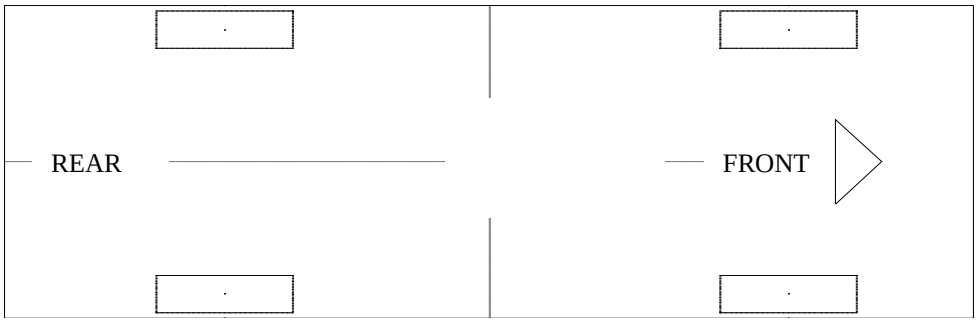
General Condition

4. The mileage of the Motor Car at the time of my inspection was 280,154km. However, the engine of the Motor Car was unable to be jumpstarted up despite multiple attempts in jumpstarting, as the gearbox was stuck in position D for the gear selector, and that had prevented the engine of the vehicle to be started up. As a safety feature, the engine of the Motor Car can only be stated up when the gearbox is in position P for the gear selector.

5. The Motor car was observed to have sustained damage at its front and right portion. Its front bonnet, front bumper, front right fender, front right headlamp and right doors was amongst the body parts that were damaged as a result of the accident. The Supplemental Restraint System (SRS) was activated as a result of the accident.

Tyres and Wheel Rims

6. The Motor Car's front right tyre and wheel rim was observed to be deflated and rims damaged as a result of the accident. However, the other 3 tyres and wheel rims 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 3 tyres. The front left, rear left and right tyres were 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 front right tyre and wheel rim was observed to be damaged as a result of the accident, however the front left, rear left and right tyres were observed to be wrapped around alloy wheel rims that were found to be without any damages. See photo 1 – 14 below.

Photo 1 shows the mileage of the Motor Car at the time of my inspection. The mileage observed was 280,154km.

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 and right portion. Its front bonnet, front bumper, front right fender, front right headlamp and right doors was amongst the body parts that were damaged as a result of the accident. The Supplemental Restraint System (SRS) was activated 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 bumper (red circle) and its front right headlamp (yellow circle) was 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 bonnet (red circle) and its front right fender (yellow circle) was damaged as a result of the accident.

Photo 5 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 doors was damaged as a result of the accident.

Photo 6 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 doors (circled) was damaged as a result of the accident.

Photo 7 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 8 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 9 shows the condition of the front right tyre and wheel rim of the Motor Car, which was observed to be damaged and deflated as a result of the accident with remaining tread depth of approximately 3.8mm.

Photo 10 shows the close up condition of the front right wheel rim of the Motor Car, which was observed to be damaged as a result of the accident

Photo 11 shows the close up condition of the front right wheel rim of the Motor Car, which was observed to be damaged as a result of the accident with remaining tread depth of approximately 3.8mm.

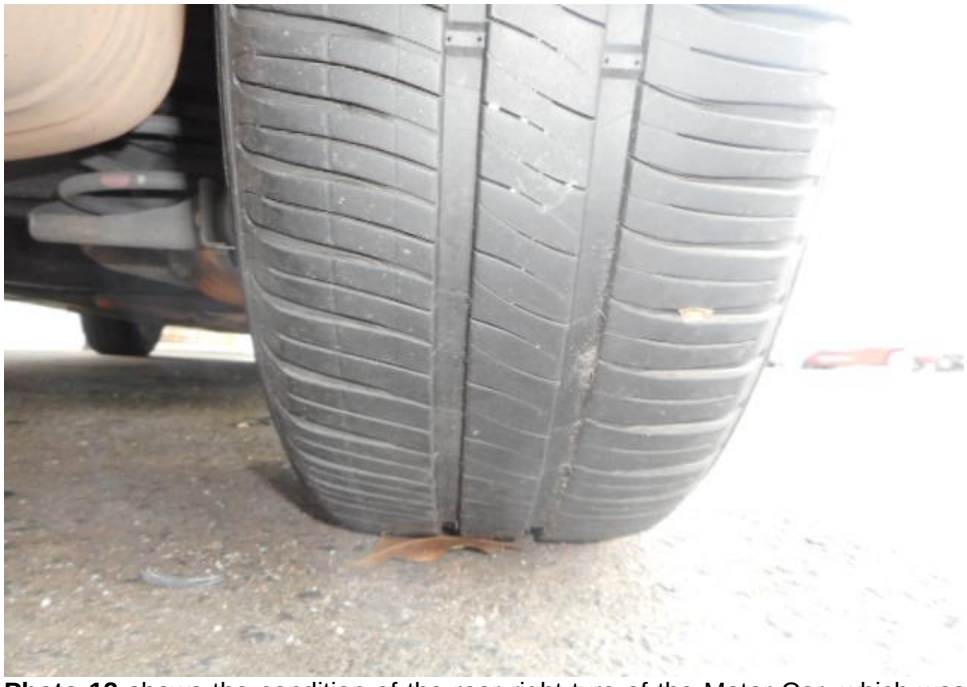


Photo 12 shows the condition of the rear right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 5.5m. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).

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 4.4mm. 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 3.2mm. 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 only the engine oil to be insufficient. However, all the other parts and components inside the engine compartment was observed to be intact and unaffected by the accident. The brake fluid 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 15 -19 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 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 17 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 18 shows the engine oil level dipstick 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 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 static brake and steering tests on the steering and braking system of the Motor Car due to the Motor Car running on electric power steering (EPS) and braking system which requires the Motor Car to be started, however the gear selector for the gearbox is stuck in D position and cannot shifted into P position causing the engine unable to be started up. (Unable to be started)

12. My visual examination of the various steering components had revealed that the right steering tie rod was bent and the driveshaft of the front right wheel was damaged was a result of the accident. However, the other steering components of the left wheel were all generally intact.

13. However, visually the braking components which had included the brake hoses and brake pipes had revealed that these components were all generally intact. The brake fluid was of sufficient level, and also that there was no sign(s) of brake fluid leakage along the brake hoses and brake pipes. See photo 20 - 25 below.

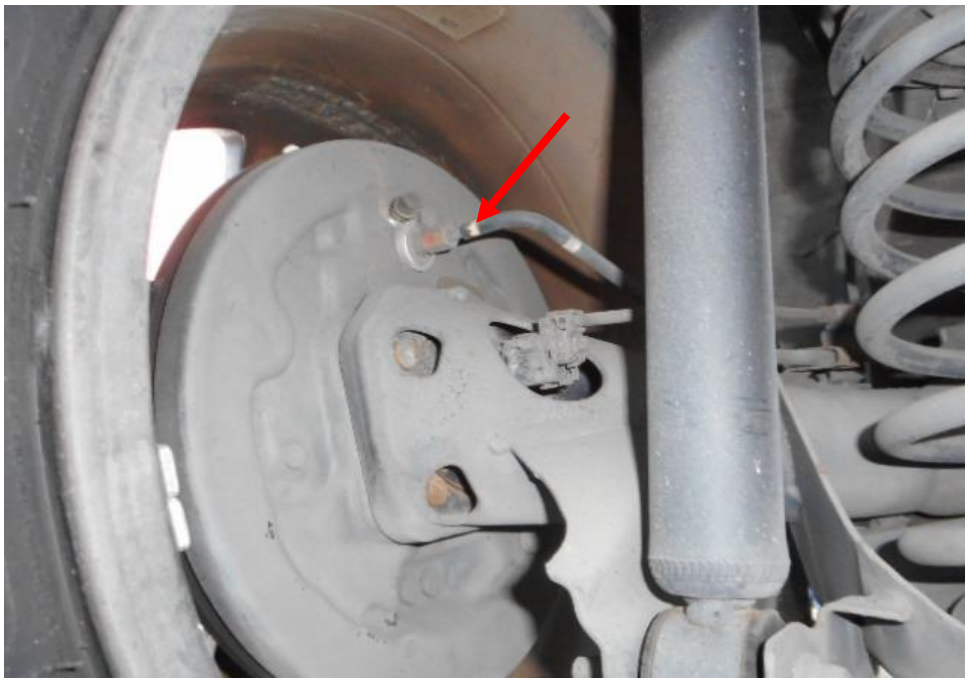


Photo 20 shows the brake hose/pipe (arrowed) at the rear left wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the drum brake, brake booster, brake pedal etc. had revealed all to be intact and without visible damage.

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 of the braking system like the drum brake, brake booster, brake pedal etc. had revealed all to be intact and without visible damage.

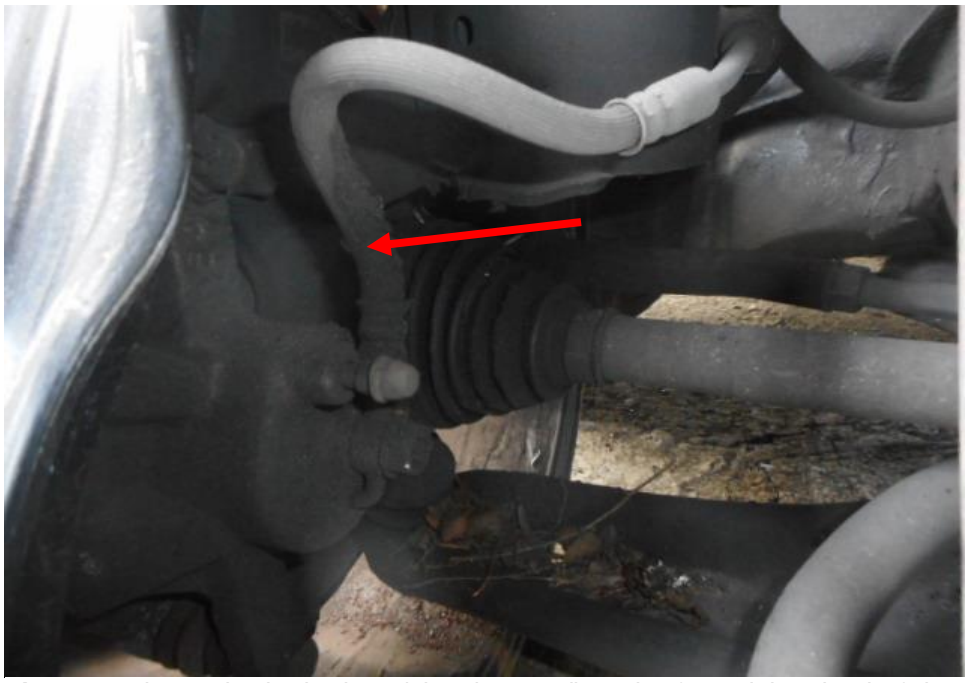


Photo 22 shows the brake hose/pipe (arrowed) at the front right wheel of the Motor Car. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Car. However, we observed old fluid stain on the brake caplier.

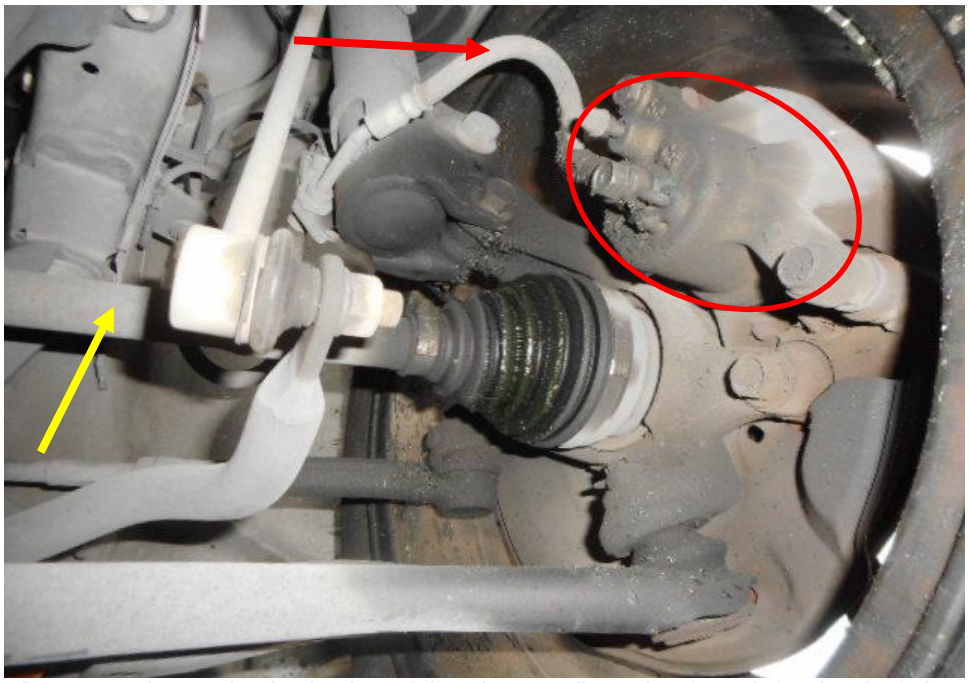


Photo 23 shows the brake hose/pipe (arrowed) at the front left wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the brake caliper (red circle) and the driveshaft (yellow arrow). The brake booster, brake pedal etc had revealed all to be intact and without visible damage. However, we observed old fluid stain on the brake caplier.

Photo 24 shows the various undercarriage components at the front left wheel of the Motor Car, in particular the steering tie rod was observed to be damaged as a result of the accident (arrowed).

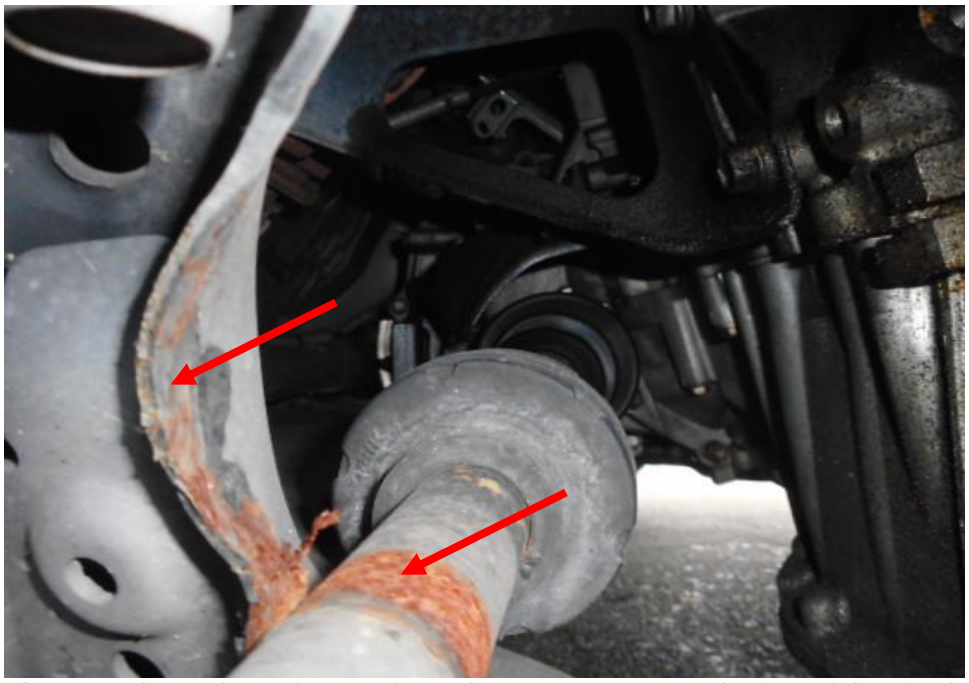


Photo 25 shows the various undercarriage components at the front right wheel of the Motor Car, in particular the driveshaft (arrowed) was observed to be damaged due to the induced impact as a result of the accident.

Electronic Safety / Warning Indicators

14. The Motor Car's automatic self-test of the functionality of its various electronic operating systems was not able to be conducted as the gearbox was stuck in position D for the gear selector, and that had prevented the engine of the vehicle to be started up. As a safety feature, the engine of the Motor Car can only be stated up when the gearbox is in position P for the gear selector.

Seat Belts

15. The front right, front left, rear right and rear 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

16. 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 engine of the Motor Car was unable to be started up.

Conclusion

17. 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, braking system, transmission system, steering system and suspension system.

18. However, our visual inspection of the mechanical components of the Motor Car's braking system appear to suggest that its braking system, the components were all intact and unaffected by the accident and there was no leakage found at the braking components of the Motor Car.

19. The Motor Car's front right tyres was observed to be deflated and wheel rims damaged as a result of the accident. The front left, rear left and right tyres of the Motor Car were found to be in serviceable condition. The front left, both rear tyres found without damages. The front left, rear left and right tyres were observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 3.2mm to 5mm and the front right tyre with remaining tread depth of approximately 3.8mm.

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