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Your Ref: TP/IP/27739/2020 17th August 2020
Our Ref : CI/TPD20008426/P

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

MECHANICAL INSPECTION REPORT OF MOTOR CAR SKD 6335T

1. I refer to your request on 3th August 2020 to conduct a physical inspection of a Motor Car bearing registration number SKD 6335T (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 21st July 2020.

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 17th August 2020 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 86,540km.

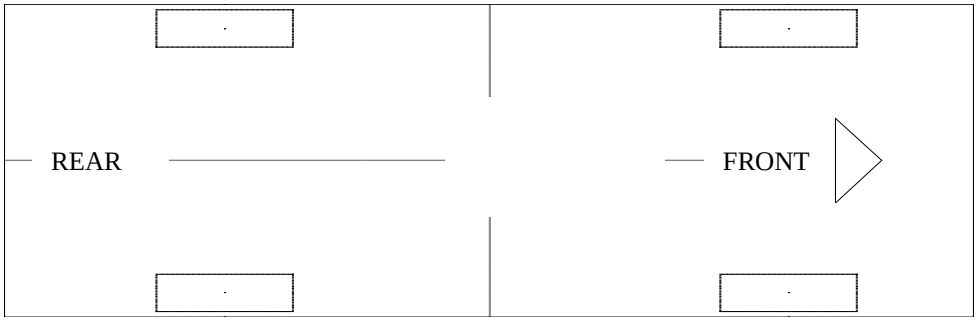
5. The Motor Car was observed to have sustained damage all around. Its front bonnet, front bumper, both front headlamps, its left and right body panels, its rear windscreen, both rear tail lamps and rear bumper were amongst the body parts that were damaged as a result of the accident. The Supplemental Restraint System (SRS) was activated as a result of the accident.

Tyres and Wheel Rims

6. Both right front and rear tyres and rims was observed to be damaged. However, the condition of the Motor Car's 2 other 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 4 tyres were recorded as follows:-

Bridgestone 225/45R17 (4.6mm)

Bridgestone 225/45R17 (5.1mm)



Bridgestone 225/45R17 (6mm) (Cut)

Bridgestone 225/45R17 (5.2mm) (Cut)

7. The 4 tyres were observed to be wrapped around standard alloy wheel rims. See photo 1 – 16 below.

Photo 1 shows the mileage of the Motor Car at the time of my inspection. The mileage observed was 86,540km.

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 all around. Its front bonnet, front bumper, both front headlamps, its left and right body panels, its rear windscreen, both rear tail lamps and rear bumper were 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 2 shows a close up view of the Motor Car's front body at the time of my inspection. Its front bonnet (circled), front bumper (red arrow), both front headlamps (yellow arrow) were amongst the body parts that were damaged as a result of the accident.

Photo 3 shows the general view of the Motor Car's right body at the time of my inspection. The Motor Car was observed to have sustained damage on its right body panels were amongst the body parts that were damaged as a result of the accident.

Photo 4 shows the close view of the Motor Car's right body at the time of my inspection. The Motor Car was observed to have sustained damage on its right body panels (circled) were amongst the body parts that were damaged as a result of the accident.

Photo 5 shows the general view of the Motor Car's left body at the time of my inspection. The Motor Car was observed to have sustained damage on its right body panels were amongst the body parts that were damaged as a result of the accident.

Photo 6 shows the close view of the Motor Car's left body at the time of my inspection. The Motor Car was observed to have sustained damage on its right body panels (circled) were amongst the body parts that were damaged as a result of the accident.

Photo 7 shows the general view of the Motor Car's rear body at the time of my inspection, its rear windscreen, both rear tail lamps and rear bumper were amongst the body parts that were damaged as a result of the accident.

Photo 8 shows the close up view of the Motor Car's rear body at the time of my inspection, its rear left tail lamp (arrowed) and rear bumper (circled) were amongst the body parts that were damaged as a result of the accident.

Photo 9 shows the general view of the Motor Car's rear body at the time of my inspection, its rear windscreen (circled) and rear right tail lamp (arrowed) were amongst the body parts that were damaged as a result of the accident.

Photo 10 shows the condition of the front right tyre of the Motor Car, which was observed to be in unserviceable condition as it was damaged (arrowed) as a result of the accident with remaining tread depth of approximately 5.2mm.

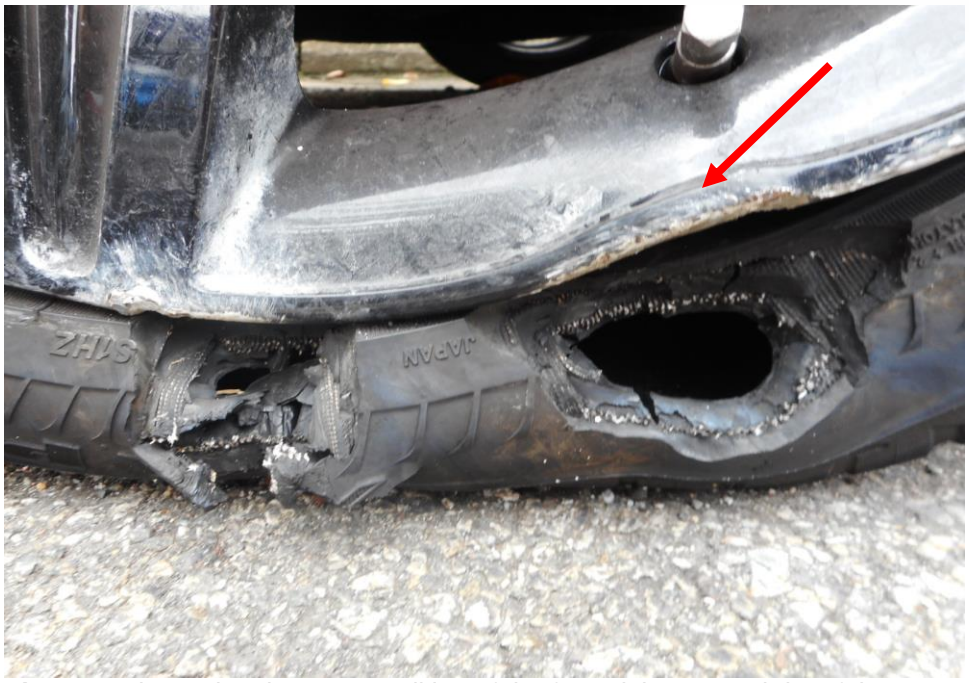


Photo 11 shows the close up condition of the front right tyre and rim of the Motor Car, which was observed that rim (arrowed) had likely caused cut on the tyre in the midst of the accident due to the impact it sustained from the collision.

Photo 12 shows the condition of the rear right tyre of the Motor Car, which was observed to be in unserviceable condition as it was damaged (arrowed) as a result of the accident with remaining tread depth of approximately 6mm.

Photo 13 shows the close up condition of the rear right tyre and rim of the Motor Car, which was observed that rim (arrowed) had likely caused cut on the tyre in the midst of the accident due to the impact it sustained from the collision.

Photo 14 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 4.6mm. 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 2 left tyres.

Photo 15 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 5.1mm. 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 2 left tyres.

Photo 16 shows the deployment of the Supplemental Restraint System (SRS) airbag in the Motor Car as a result of the accident.

Engine Compartment & Operating Fluids

8. We were unable to raise the front bonnet of the Motor car to conduct the examination of the Motor Car's engine compartment because the damage caused by the accident had resulted in the damages to the lock mechanism of the bonnet and the structure of the engine compartment. (unable to open) See photo 17 below

Photo 17 shows a close up view of the damaged front bonnet lock mechanism and the structure of the engine compartment of the Motor Car at the time of my inspection resulting it unable to open a result of the accident. (circled) (Unable to open)

Braking System & Steering System

9. For this inspection, I was not able to conduct any tests on the steering system of the Motor Car due to the Motor Car running on electric power steering (EPS) which requires the Motor Car to be started and ignition system was damaged as a result of the accident. (Unable to be started)

Braking System & Steering System

10. Static brake tests conducted on the Motor Car revealed no abnormality. The brake booster had responded well to the various tests conducted. There was also no abnormal movement of the brake pedal when it was depressed. In general, the static brake tests had suggested that there was no internal leakage of pressure/vacuum in the braking system of the Motor Car.

11. 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. However, the front right tie rod was observed to be damaged as a result of the accident. See photo 18 - 23 below.

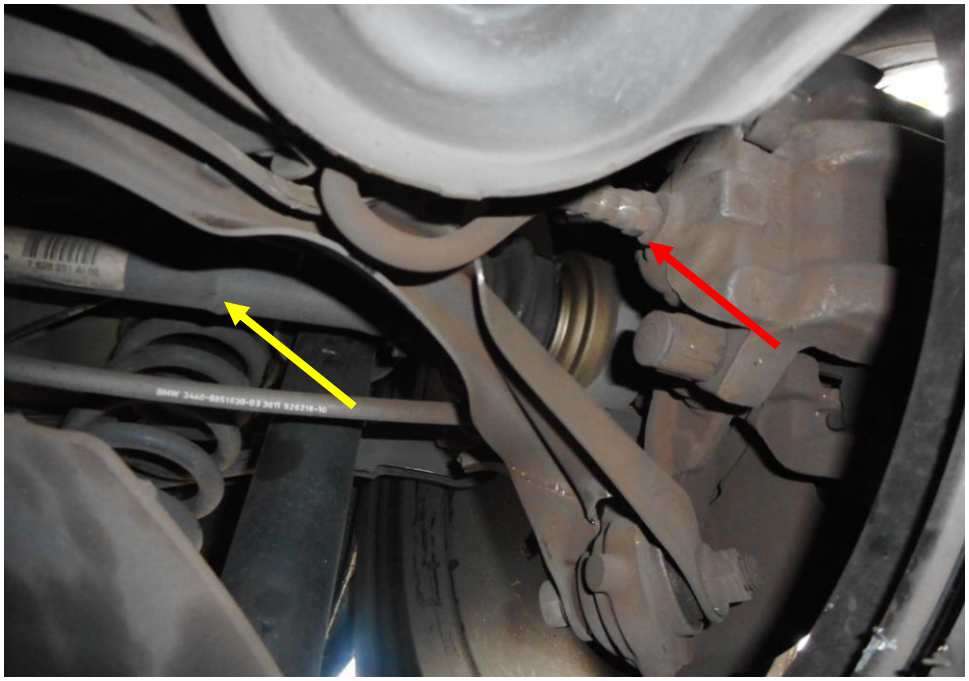


Photo 18 shows the brake hose/pipe (arrowed) at the rear right wheel of the Motor Car. No leakage of brake fluid was observed and drive shaft (yellow arrow) Visual examination of the various components of the braking system like the drum brake, brake booster, brake pedal , drive shaft etc. had revealed all to be intact and without visible damage.

Photo 19 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.

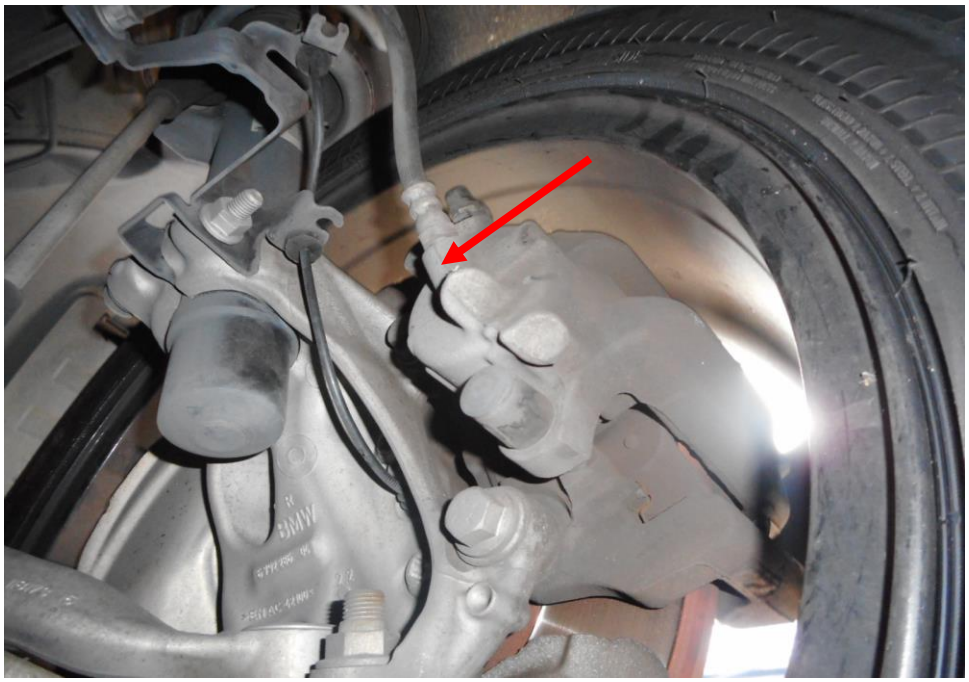


Photo 20 shows the brake hose/pipe (arrowed) at the front right wheel of the Motor Car. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Car. Static tests of the Motor Car's braking system had indicated that there was no internal leakage of pressure/vacuum. The undercarriage components of the Motor Car were also all found to be intact and without any visible damage.

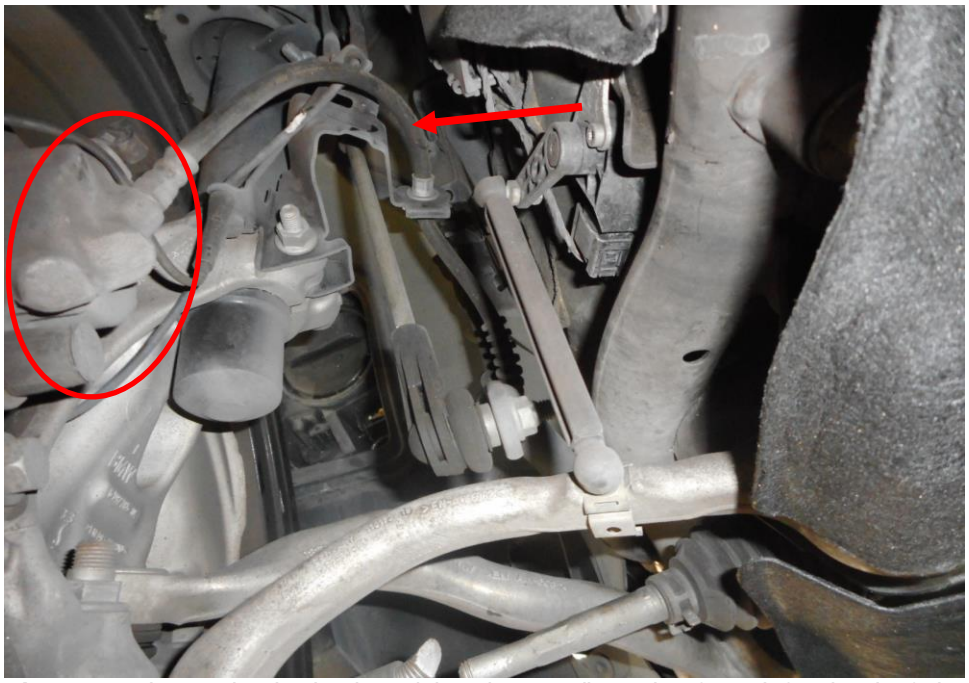


Photo 21 shows the brake hose/pipe (arrowed) at the front left wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the brake caliper (circled), brake booster, brake pedal etc had revealed all to be intact and without visible damage.

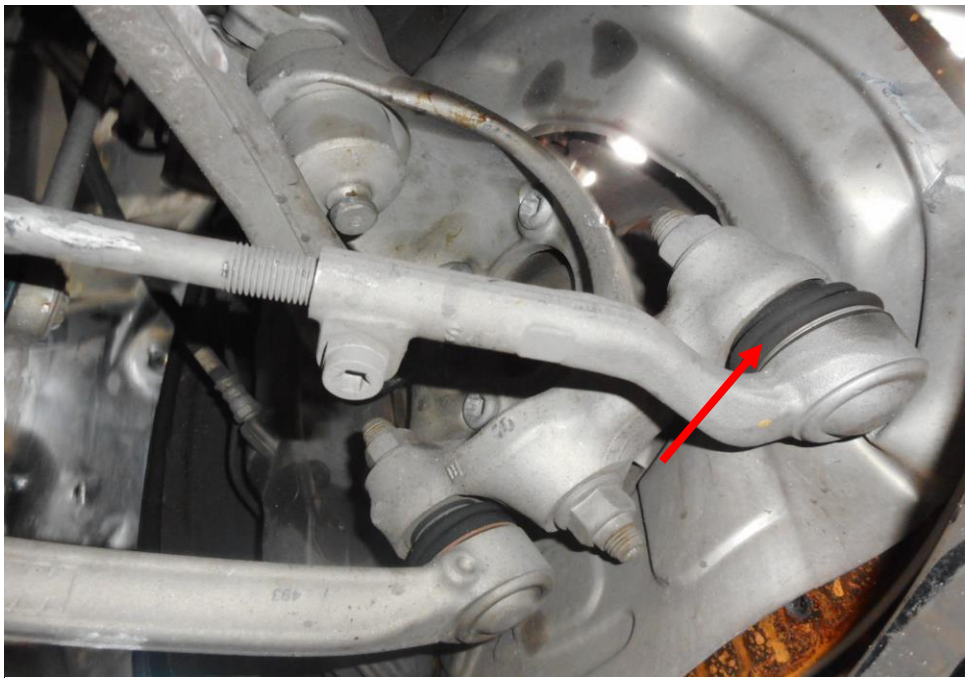


Photo 22 shows the various undercarriage components at the front right wheel of the Motor Car, in particular the steering tie rod (red arrow). The various steering components were all found to be intact, suggesting that the steering system of the Motor Car was likely to be in serviceable condition at the material time of accident. There was also no sign of fluid stain observed on the various undercarriage components at the front left wheel of the Motor Car.

Photo 23 shows the various undercarriage components at the front left wheel of the Motor Car, the steering tie rod (red arrow) was observed to be damaged as a result of the accident.

Electronic Safety / Warning Indicators

12. The Motor Car's Motor Car's automatic self-test of the functionality of its various electronic operating systems was not able to be conducted as there was damaged ignition system and engine system as a result of the accident. (unable to be started)

Seat Belts

13. The Front right, 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. See photo 24 & 25 below.

Photo 24 shows that the seat belt on the right seat were able to be fastened securely into the respective pre-tensioners that were fitted at the sides of each seat.

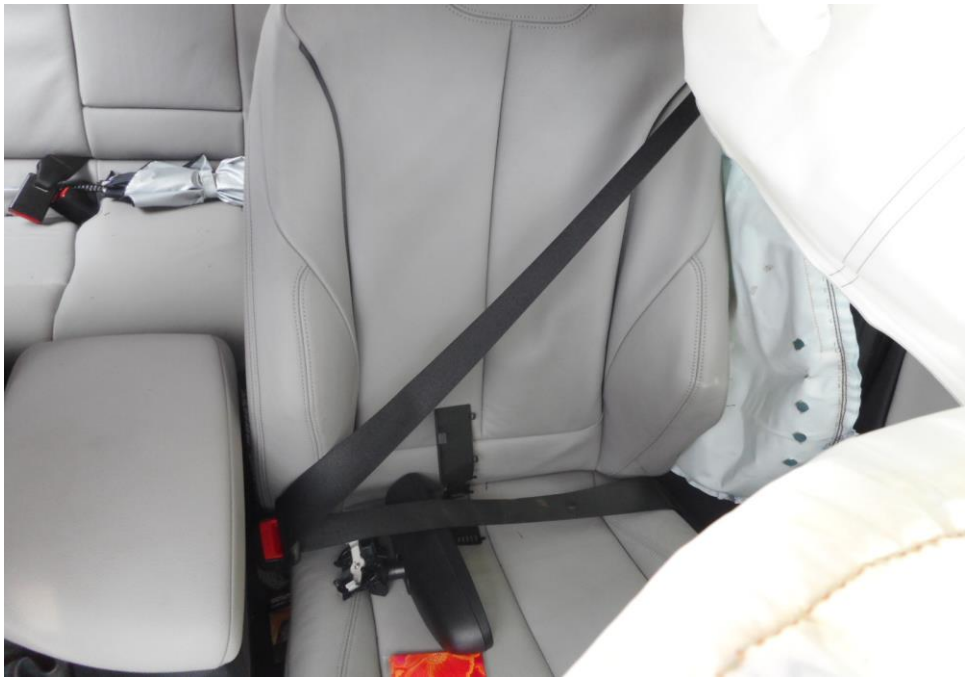


Photo 25 shows that the seat belt on the left seat were able to be fastened securely into the respective pre-tensioners that were fitted at the sides of each seat.

Operational Behaviour of the Motor Car

14. A 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 (Unable to be started. Steering system of the Motor Car damage as a result of the accident.).

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. 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.

16. However static brake tests able to be conducted and In general our visual inspection of the mechanical components of the Motor Car's braking system appear to suggest that its braking system was in serviceable condition at the material time of accident and there was no leakage found at the braking components of the Motor Car.

17. The damaged to the front right and rear right tyres of the Motor Car were observed to be caused by the rims of Motor Car itself due to the impact sustained from the collision which caused the rims to cut through the tyre wall as a result of the accident. Refer to photo 11 & 13 above.

18. The front right and rear right tyres of the Motor Car were observed to be damaged, however both the left 2 tyres were 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 2 tyres. The 4 tyres were also observed to with remaining tread depth of approximately 4.6mm to 6mm.

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