



Your Ref: TP/IP/09681/2017  
Our Ref : CI/TPD18004126/Z

05<sup>th</sup> March 2018

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

### **MECHANICAL INSPECTION REPORT OF MOTOR CAR SKA 2010Y**

1. We refer to your request on 21<sup>st</sup> February 2018 to conduct a physical inspection of a motor car bearing registration number SKA 2010Y (herein referred to as "**Motor Car**"), which was involved in a road traffic accident on 11<sup>th</sup> February 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 27<sup>th</sup> February 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 not recorded due to the Motor Car's system malfunction likely due to the accidents collision impact.
5. The Motor Car had sustained a relatively minor impact damages that was confined to its frontal, front left & front right portion. its front left bumper was observed to be dented & misalignment; its front left hand bonnet was observed to have sustained minor dents; its lower bumper was noted to be dented, its left side fender & it's right side fender was observed to be dented.
6. This was likely due to the consistency of the accident's case facts that was involved in an accident at Block 601A Jurong West Street 62. She claimed that she was not able to steer her steering wheel and the Motor Car continued to surge forward despite her applying brake. See photo 1 to 7 below.



**Photo 1** shows the mileage of the Motor Car at the time of our inspection was not recorded due to the Motor Car's system malfunction likely due to the accidents collision impact.



**Photo 2** shows a general view of the front body of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained relatively minor damages at the frontal, front left & front right portion.



**Photo 3** 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 have sustained relatively minor damages at the frontal, front left & front right portion.



**Photo 4** shows a general view of the front left body of the Motor Car at the time of our inspection. The Motor Car was observed to have sustained minor damages at the left frontal portion.





**Photo 5** shows a close up view of the front left side fender of the Motor Car at the time of our inspection. It had sustained damages likely due to the accident.



**Photo 6** shows a close up view of the front left lower bumper of the Motor Car at the time of our inspection. It had sustained damages likely due to the accident.

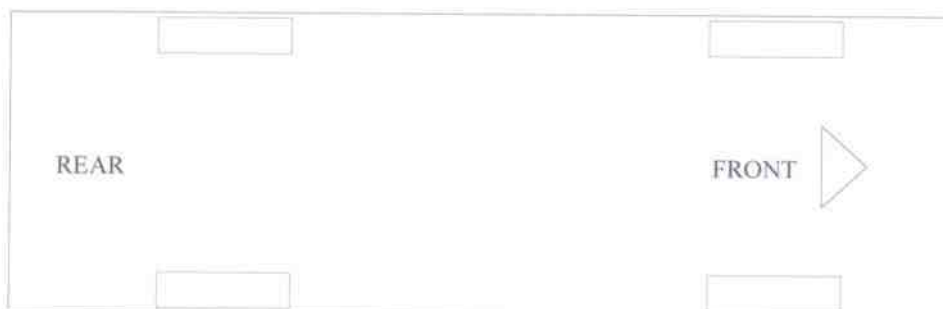


Photo 7 shows a general view of the rear body of the Motor Car at the time of our inspection. The Motor Car was observed to be in good general condition.

### Tyres and Wheel Rims

7. The condition of the Motor Car's 4 tyres were 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 tyre brand, tyre size and remaining tread depth of the 4 tyres were recorded as follows:-

Dunlop ENA Save EC300+ 215/60R17 (7mm)      Dunlop ENA Save EC300+ 215/60R17 (7mm)



Dunlop ENA Save EC300+ 215/60R17 (7mm)      Dunlop ENA Save EC300+ 215/60R17 (6mm)

8. The 4 tyres were observed to be wrapped around alloy wheel rims that were found to be without any significant damage at time of our inspection. See photo 8 – 11 below.



**Photo 8** 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 7mm. The tyre was also observed to be sufficiently inflated for vehicular operation.



**Photo 9** 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 6mm. The tyre 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 7mm. The tyre was also observed to be sufficiently inflated for vehicular operation.



**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 7mm. The tyre was also observed to be sufficiently inflated for vehicular operation.

### **Engine Compartment & Operating Fluids**

9. For this particular case, we were unable to conduct a thorough examination of the engine compartment of the Motor Car due to the accident's impact. The front bonnet was observed to be buckled inwards hence jammed the locking device which located at the front portion. Therefore the front bonnet was unable to be lifted up.
10. However, we were only able to conduct inspection on a limited accessible area. We can visually observed from the side opening front bonnet caused by the accident's impact that some visible parts and components inside the engine compartment to be intact and unaffected by the accident. Fluid component such as brake fluid was visible and found to be of sufficient level for operating purposes. Visually, there was also no contamination found to this fluid.
11. 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.
12. 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 – 16 below.





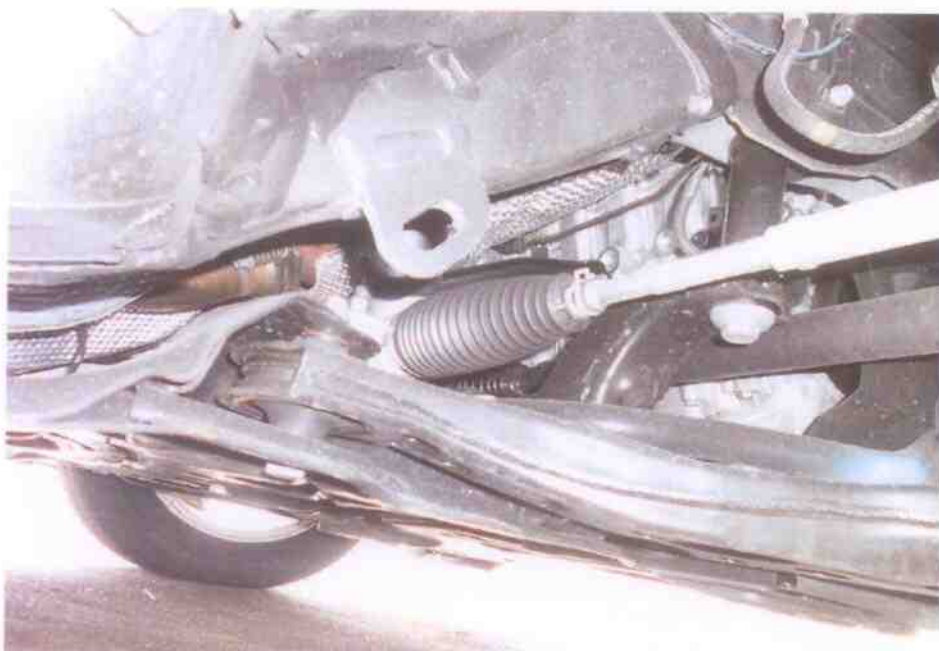
**Photo 12** shows we had observed from the right side opening caused by the accident's impact that some visible parts and components inside the engine compartment to be intact and unaffected by the accident.



**Photo 13** shows we had observed from the left side opening caused by the accident's impact that some visible parts and components inside the engine compartment to be intact and unaffected by the accident. Fluid component such as brake fluid was visible and found to be of sufficient level for operating purposes. Visually, there was also no contamination found to this fluid.



**Photo 14** shows 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.



**Photo 15** shows 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.



**Photo 16** shows 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.

### **Steering System & Braking System**

13. 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.
14. Static test on the steering system of the Motor Car was unable to be conducted due to the system malfunction (engine can't start) likely due to the result of the accident. 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 17 - 22 below.





**Photo 17** shows the brake hose (arrowed) at the rear left wheel 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.



**Photo 18** shows the brake hose (arrowed) at the front right wheel of the Motor Car. Our visual inspection of the various mechanical components of the Motor Car's braking system, including its brake calliper, 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.



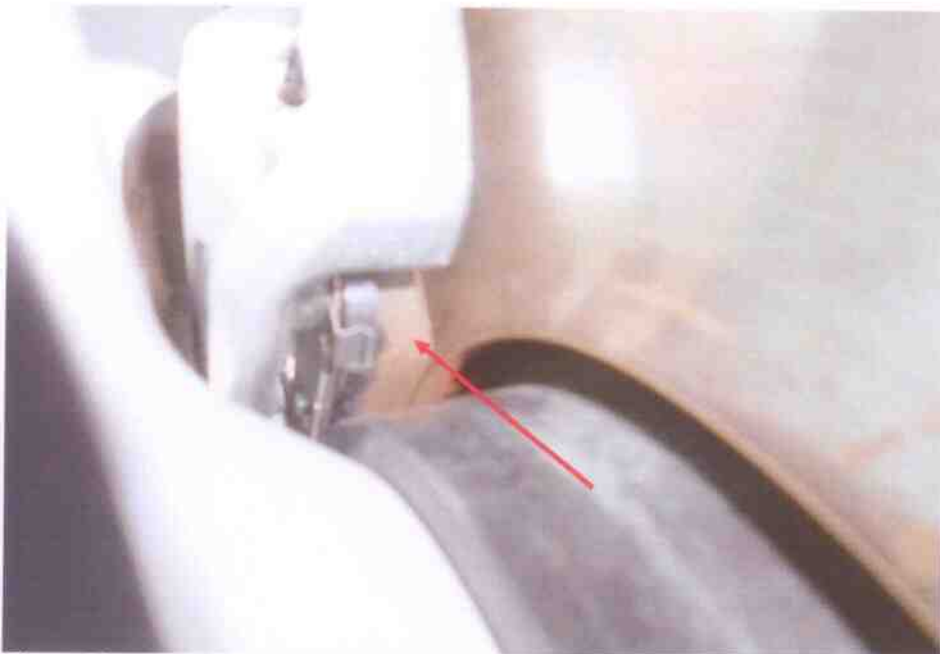
**Photo 19** shows the various undercarriage components at the front left wheel of the Motor Car, in particular the steering tie rod (arrowed). The various steering components were all found to be intact, suggesting that the steering system of the Motor Car was likely to be in serviceable condition.



**Photo 20** shows the various undercarriage components 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 and without visible damage, indicating that the braking system was likely to be in serviceable condition at the material time of accident.



**Photo 21** shows the front right brake pad of the Motor Car. It was observed to be in serviceable condition looking at the thickness of the brake pad at time of our inspection.



**Photo 22** shows the front left brake pad of the Motor Car. It was observed to be in serviceable condition looking at the thickness of the brake pad at time of our inspection.



### Electronic Safety / Warning Indicators

15. The Motor Car's automatic self-test of the functionality of its various electronic operating systems such as the Anti-Brake Lock System (ABS) and Supplemental Restraint System (SRS) were unable to initialize at time of our inspection. Warning indicators were observed to be lighted up upon pressing on the start button but no cranking of engine was observed. It was observed to be stuck to the 'Reverse Mode' even after we shifted to other modes. This indicates that the Motor Car electronic systems were malfunction likely due to the accident's collision impact. See photo 23 & 25 below.



**Photo 23** shows the warning indicators were observed to be lighted up upon pressing on the start button but no cranking of engine was observed. It was observed to be stuck to the 'Reverse Mode' even after we shifted to other modes. This indicates that the Motor Car electronic systems were malfunction likely due to the accident's collision impact.



**Photo 24** shows the reverse camera showed the rear view upon pressing on the start button but no cranking of engine was observed. It was observed to be stuck to the 'Reverse Mode' even after we shifted to other modes. This indicates that the Motor Car electronic systems were malfunction likely due to the accident's collision impact.



**Photo 25** shows the gear knob was shifted to the 'Parking Mode' but the indicator still showed the 'Reverse mode'. Upon pressing on the start button but no cranking of engine was observed. It was observed to be stuck to the 'Reverse Mode' even after we shifted to other modes. This indicates that the Motor Car electronic systems were malfunction likely due to the accident's collision impact.

### **Operational Behaviour of the Motor Car**

16. An 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 unable to be carried out. This was mainly due to the malfunctioning of the Motor Car's electronics system which hindered the systems to be in operational mode.

### **Conclusion**

17. At the time of our inspection of the Motor Car, its steering system and braking system could not be tested as the Motor Car's engine could not be started due to a flat battery. However basing purely on our observations, it would appear that the steering system and braking system of the Motor Car were in serviceable condition. This is taking into consideration that all the various mechanical components were found to be intact and undamaged.
18. The observations gathered from our physical inspection of the Motor Car had indicated no evidence to suggest possible mechanical failure to the Motor Car that may have contributed to the accident.
19. The 4 tyres of the Motor Car were also found to be in serviceable condition. There was no 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 sufficiently inflated for vehicular operation with remaining tread depth of approximately 6mm each.



20. Our findings were based solely on a static and visual inspection of the Motor Car. No operational test could be carried out to the Motor Car due to it was unable to be started at time of inspection.



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