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Our Ref : CI/TPD20001850/N

9 March 2020

**Fatal Accident Investigation Team**

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

**INSPECTION REPORT OF MOTORCYCLE FY 7959K**

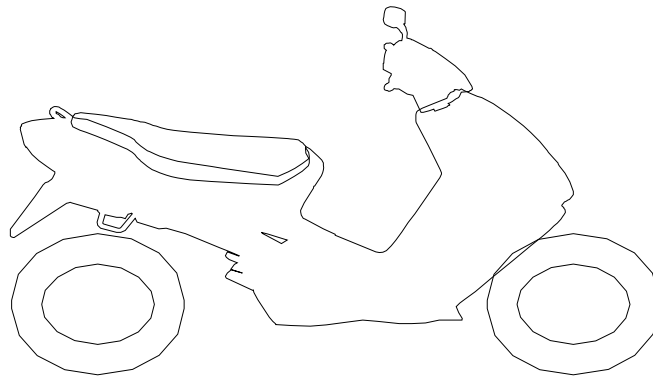
1. We refer to your request dated 3 February 2020 to conduct a physical inspection of a motorcycle bearing registration number FY 7959K (herein referred to as “**Motorcycle**”), which was involved in a fatal road traffic accident on 19 November 2019.
2. The purpose of this inspection is to primarily determine if there was any possible mechanical failure to the Motorcycle that may have contributed to the accident.
3. Following the request, we had carried out a physical inspection of the Motorcycle on 9 March 2020 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 Motorcycle could not be recorded at the time of our inspection due to a damaged speedometer display.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its headlight assembly, front mudguard, front number plate, IU unit, left side mirror, left handlebar end, left cowling, left front footrest, exhaust muffler and top box, amongst others.

**Tyres and Wheel Rims**

6. The condition of the 2 tyres of the Motorcycle was observed to be in serviceable condition. We did not observe any tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the 2 tyres. Both the tyres were observed to be sufficiently inflated for vehicular operation.
7. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Michelin 80/90 - 17 (3mm)

Michelin 70/90 - 17 (4mm)

8. The 2 tyres were wrapped around alloy wheel rims. At the time of our inspection, we did not observe any visible damage on the front and rear wheel rim of the Motorcycle. See photos 1 – 12 below.



**Photo 1** shows the speedometer gauge of the Motorcycle. The mileage of the Motorcycle could not be recorded at the time of our inspection due to a damaged speedometer display (circled).



**Photo 2** shows a general view of the right body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.



**Photo 3** shows a general view of the left front body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around. Amongst the body parts that were found to have been damaged include its headlight assembly, front mudguard, front number plate, IU unit, left side mirror, left handlebar end, left cowling, left front footrest, exhaust muffler and top box, amongst others.



**Photo 4** shows a closer view of the headlight assembly and IU Unit (arrowed) which were amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.





**Photo 5** shows a closer view of the front mudguard (circled) and front number plate (arrowed) which were amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.



**Photo 6** shows a closer view of the left handlebar end as well as the left side mirror (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 7** shows a closer view of the left cowling of the Motorcycle that had sustained damage as a result of the accident (arrowed).



**Photo 8** shows a closer view of the left front footrest (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.





**Photo 9** shows a close up view of the exhaust muffler and exhaust muffler heat shield (circled) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 10** shows the top box of the Motorcycle which was observed to have sustained damages of grazing nature as a result of the accident.



**Photo 11** shows the condition of the Motorcycle's front tyre. The front tyre was observed to be in serviceable condition with remaining tread depth of approximately 4mm. There was no tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the front tyre.



**Photo 12** shows the condition of the Motorcycle's rear tyre. The rear tyre was observed to be in serviceable condition with remaining tread depth of approximately 3mm. The tyre was also observed to be sufficiently inflated for vehicular operation. We did not observe any tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the rear tyre.



**Engine & Drive Train**

9. Upon examination of the Motorcycle's engine area, we had observed that the various engine related parts and components of the Motorcycle were intact with no visible damage. There was no fluid leak and/or fluid stain found around the engine area of the Motorcycle.
10. The gear chain of the Motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 13 – 16 below.



**Photo 13** shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.



**Photo 14** shows the right side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the right engine area of the Motorcycle.



**Photo 15** shows the general view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.



**Photo 16** shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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

11. Our checks on the various steering components of the Motorcycle revealed that its steering system was in serviceable condition. Its front fork was found to be intact and undamaged. Turning the handle bar towards the left and right also did not produce any abnormal free play and/or resistance.
12. The brake system of the Motorcycle was of a semi-hydraulic type, where hydraulic (brake fluid) pressure controls the brake for the front wheel while the brake for the rear wheel is controlled by mechanical means (cables and springs). Our visual examination of the various components in the brake system, like the brake disc, brake caliper, drum, brake lever and brake foot pedal, revealed all to be intact and without damage. There was also no leakage of brake fluid observed along the brake hose. This was from the respective brake fluid reservoir to the front brake caliper of the Motorcycle. There was also no visible tear or cut observed on the connecting hoses and cables. However we were unable to remove the front brake reservoir cover to examine whether the brake fluid was of sufficient level and without contamination for operational purposes due to a worn out screw.



13. Static brake tests conducted on the Motorcycle had appear to indicate that the front braking system of the Motorcycle was not in serviceable condition. There was no resistance felt (spongy like feel) upon pressing the brake lever. This would indicate that there may be a leakage of pressure/vacuum in the front brake system.
14. We subsequently carried out an operational test of the Motorcycle's braking system. This was done by manually pushing the Motorcycle forward and backward, simulating the Motorcycle in motion, and thereafter engaging the front brake and rear brake of the Motorcycle. At the end of the short operational test, we did not observe any abnormal behaviour of the Motorcycle's rear braking system. The rear wheel of the Motorcycle was able to stop rotating immediately upon stepping on the brake pedal. However we observed that the front wheel of the Motorcycle was unable to stop rotating upon depressing the brake lever.
15. In general, the observations gathered during the brake test had indicated that the rear braking system of the Motorcycle was in serviceable condition. See photos 17 – 23 below.



**Photo 17** shows the front fork (arrowed) of the Motorcycle. The front fork and fork bracket of the Motorcycle were both found to be intact and undamaged. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. The steering system of the Motorcycle was in serviceable condition at the time of our inspection.



**Photo 18** shows the front wheel of the Motorcycle turned towards its full left. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.



**Photo 19** shows the front wheel of the Motorcycle turned towards its full right. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.





**Photo 20** shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

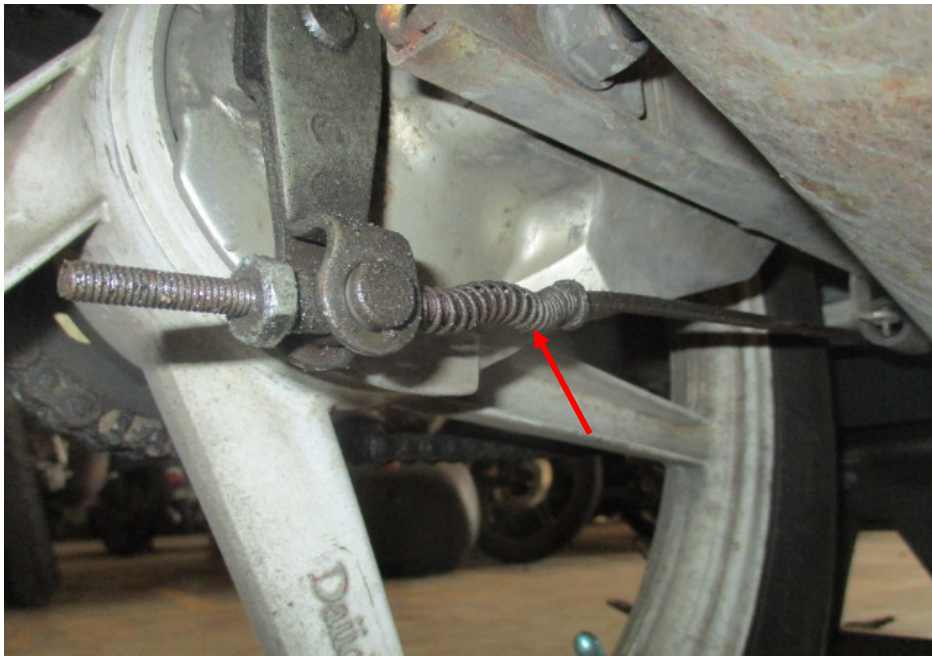


**Photo 21** shows the brake fluid reservoir cover for the front brake of the Motorcycle. We were unable to examine whether the brake fluid was of sufficient level and without contamination for operational purposes due to the worn out screw (circled).





**Photo 22** shows the front brake lever being depressed. There was no resistance felt (spongy like feel) upon pressing the front brake lever (arrowed). This would indicate that there may be a leakage of pressure/vacuum in the brake system.



**Photo 23** shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of a mechanical type, controlled by the brake foot pedal of the Motorcycle. Our checks of the cable (arrowed), spring and drum which are all part of the components in the rear brake system of the Motorcycle reveal all to be intact and without damage.

## **Conclusion**

16. Basing on our physical inspection of the Motorcycle, it appears that the steering system and rear braking system of the Motorcycle were all in serviceable condition. However the front braking system of the Motorcycle was found not to be in serviceable condition.
17. The 2 tyres of the Motorcycle were 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 2 tyres. The 2 tyres were sufficiently inflated for vehicular operation with remaining tread depth of approximately 4mm and 3mm.

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