

Your Ref: TPIP/06750/2023
Our Ref : CI/TPD23005729/N

26 July 2023

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBM 5984K

1. We refer to your request dated 7 March 2023 to conduct a physical inspection of a motorcycle bearing registration number FBM 5984K (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 5 March 2023.
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 23 July 2023 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 at the time of our inspection was due to a bent key.
5. The Motorcycle was observed to have sustained minor damages all around. The body parts that were found to have been damaged include its windshield, front cowling, headlight assembly, brake levers, side mirrors, handlebar ends, handlebar, side cowlings, right bottom cowling, right rear side cover and exhaust muffler shield, amongst others as a result of the accident. See photos 1 – 15 below.



Photo 1 shows the speedometer gauge of the Motorcycle where the mileage recorded at the time of our inspection was 62, 525km (circled).



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



Photo 4 shows a general view of the left body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.



Photo 5 shows a general view of the rear portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its windshield, front cowling, headlight assembly, brake levers, side mirrors, handlebar ends, handlebar, side cowlings, right bottom cowling, right rear side cover and exhaust muffler shield, amongst others as a result of the accident



Photo 6 shows a closer view of the cracked windshield and front cowling of the Motorcycle at the time of our inspection



Photo 7 shows a closer view of the missing headlight assembly (arrowed) which was amongst the body parts at the front body of the Motorcycle that had sustained damage at the time of our inspection.



Photo 8 shows a closer view of the right side mirror, right handlebar end and front brake lever of the Motorcycle which were observed to be damaged at the time of our inspection (arrowed).



Photo 9 shows a closer view of the left side mirror, left handlebar end and rear brake lever of the Motorcycle which were observed to be damaged at the time of our inspection (arrowed).



Photo 10 shows the cracked right side cowling of the Motorcycle at the time of our inspection.



Photo 11 shows the cracked left side cowling of the Motorcycle at the time of our inspection.



Photo 12 shows a close-up view of the cracked right bottom cowling of the Motorcycle at the time of our inspection.



Photo 13 shows a closer view of the cracked right rear side cover of the Motorcycle at the time of our inspection (circled).



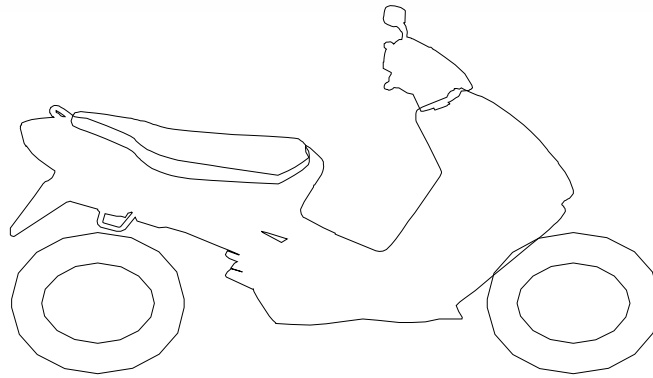
Photo 14 shows a closer view of the grazed exhaust muffler heat shield of the Motorcycle at the time of our inspection (circled).



Photo 15 shows a closer view of the bent handlebar of the Motorcycle at the time of our inspection (arrowed).

Tyres and Wheel Rims

6. At the time of our inspection, the Motorcycle's front tyre was observed to be in serviceable condition. The tread pattern of the front tyre was clearly visible. 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. The 2 tyres were both observed to be sufficiently inflated for vehicular operation. However the rear tyre was observed to be bald. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Mitas 100/90 - 14 (0mm)

Mitas 90/90 - 14 (3mm)

7. 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 16 & 17 below.



Photo 16 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 3mm. 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 17 shows the condition of the Motorcycle's rear tyre. The rear tyre was observed to be bald. 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

8. Upon examination of the Motorcycle's engine area, we had observed that the various engine related parts and components were intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the engine area of the Motorcycle.
9. The drive train cover of the Motorcycle had sustained damages of grazing nature as a result of the accident however the engine components were still intact. There was also no visible tear or cut observed on the connecting hoses and cables. The shock absorbers of the Motorcycle were also found to be intact without any misalignment. See photos 18 - 21 below.



Photo 18 shows the radiator of the Motorcycle at the time of our inspection. The radiator was found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the radiator of the Motorcycle.



Photo 19 shows the drive train cover of the Motorcycle which had sustained damages of grazing nature at the time of our inspection (circled) however the engine components were still intact.



Photo 20 shows the left shock absorber of the Motorcycle which was found to be intact without any misalignment.



Photo 21 shows the right shock absorber of the Motorcycle which was found to be intact without any misalignment.

Steering System & Braking System

10. For this case, we were not able to conduct any test(s) on the steering system of the Motorcycle due to the damage of its front forks. The front forks were found to be bent as a result of the accident.
11. 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 and brake lever revealed all to be intact and without damage. There was also no leakage of brake fluid observed along the front brake hose. This was from the respective front brake fluid reservoir to the front brake caliper of the Motorcycle. The brake fluid for the front brake was observed to be of sufficient level for operating purposes and without any contamination. There was also no visible tear or cut observed on the connecting hoses and cables.

12. Static brake tests conducted on the Motorcycle had appeared to indicate that the brake system of the Motorcycle was not in serviceable condition. There was no resistance felt (spongy like feel) upon pressing the front brake lever. This would indicate that there may be a leakage of pressure/vacuum in the front braking system.
13. For this case, we were not able to carry out any operational tests to the steering system and braking system of the Motorcycle due to the damage of the front forks, which had rendered the Motorcycle immobile for the operational tests. We were not able to push the Motorcycle manually forward and backward, simulating movement of the Motorcycle, for the operational tests. See photos 22 – 29 below.



Photo 22 shows the front forks of the Motorcycle. The front forks were observed to be bent (arrowed) as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.



Photo 23 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 24 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes and without contamination.

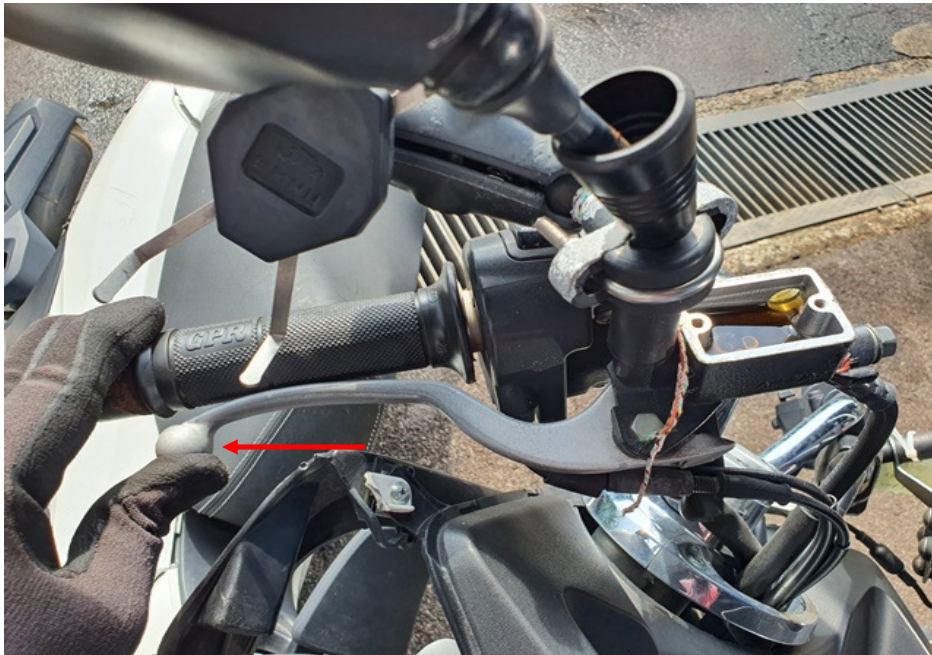


Photo 25 shows the front brake lever being depressed. There was no resistance felt (spongy like feel) upon pressing the front brake lever (arrowed). This would indicate that there may be a leakage of pressure/vacuum in the front brake system.



Photo 26 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

14. For this particular case, we were unable to determine whether there was any possible mechanical failure to the Motorcycle that may have contributed to the accident. This was mainly due to the extent of damage that it had sustained. Its steering system and front braking system were damaged as a result of the accident. However basing on our physical inspection of the Motorcycle, it appears that the rear braking system of the Motorcycle was in serviceable condition.
15. The front tyre of the Motorcycle was found to be in a 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 tyres. Both tyres were sufficiently inflated for vehicular operation. The front tyre had remaining tread depth of approximately 3mm. However the rear tyre was observed to be bald.

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