

Your Ref: TP/IP/03871/2022  
Our Ref : CI/TPD22005260/N

13 June 2022

**Fatal Accident Investigation Team**

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

**INSPECTION REPORT OF MOTORCYCLE FBQ 8087J**

1. We refer to your request dated 30 May 2022 to conduct a physical inspection of a motorcycle bearing registration number FBQ 8087J (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 18 February 2022.
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 13 June 2022 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.

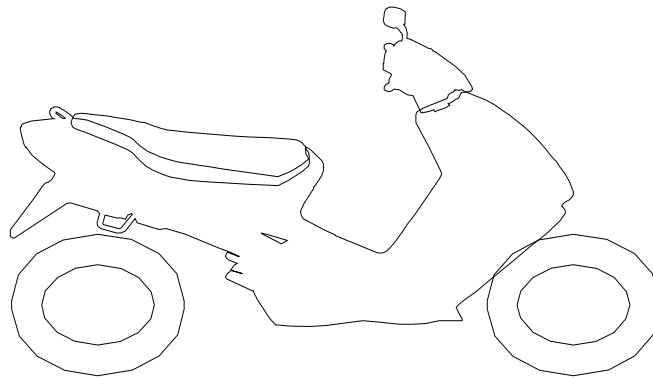
**General Condition**

4. The mileage of the Motorcycle could not be recorded at the time of our inspection due to the damages sustained to the speedometer gauge.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its front cowling, front mudguard, side cowlings, side mirrors, front brake lever, clutch lever, petrol tank, rear side covers and exhaust muffler heat shield, amongst others.

**Tyres and Wheel Rims**

6. The condition of the Motorcycle's 2 tyres was observed to be in serviceable condition. The tread pattern of the 2 tyres 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.

7. The rear tyre was both observed to be sufficiently inflated for vehicular operation. However the front tyre was observed to be deflated. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



IRC 140/70 - 17 (4mm)

IRC 110/70 - 17 (3mm)  
(Deflated)

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 rear wheel rim of the Motorcycle. However we did observe that the front wheel rim was bent. See photos 1 – 22 below.



**Photo 1** shows the damaged speedometer gauge of the Motorcycle as a result of the accident. Hence the mileage of the Motorcycle could not be recorded at the time of our inspection.



**Photo 2** 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.





**Photo 3** 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 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 right body 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 front cowlings, front mudguard, side cowlings, right side mirror, front brake lever, right handlebar end, petrol tank, gear shift pedal, left front footrest, left rear side cover, right rear signal lamp and exhaust muffler heat shield, amongst others.



**Photo 6** shows a closer view of the cracked front mudguard which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.





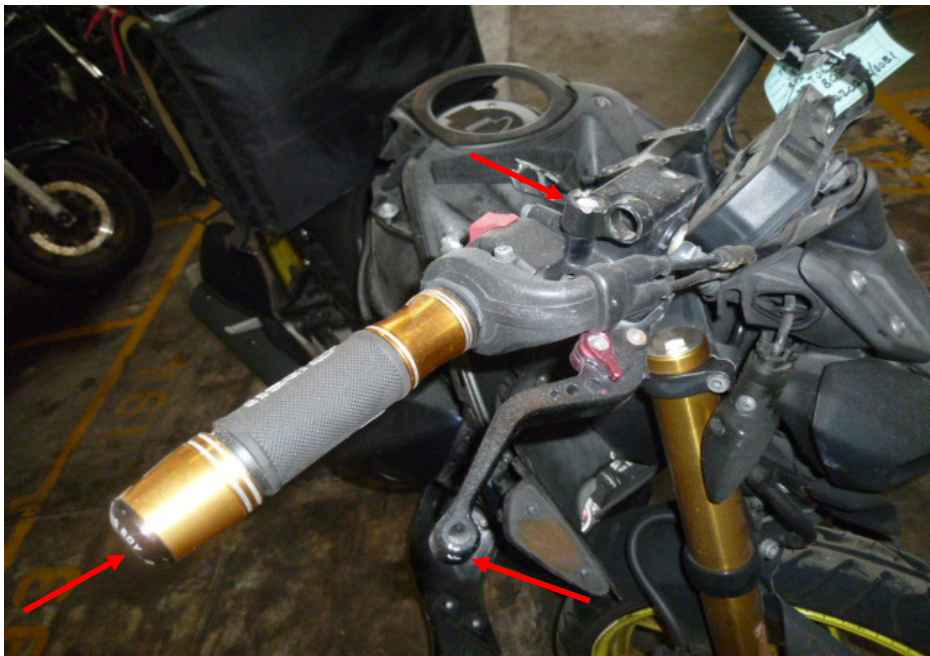
**Photo 7** shows the grazed front cowling (circled) and broken left front signal lamp (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 8** shows a closer view of the cracked right cowling which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 9** shows a closer view of the bent handlebar of the Motorcycle as a result of the accident (arrowed).



**Photo 10** shows the right handlebar end, front brake lever and right side mirror (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.





**Photo 11** shows the left handlebar end, clutch brake lever and left side mirror (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 12** shows a closer view of the cracked belly pan (arrowed) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.





**Photo 13** shows a closer view of the dented petrol tank of the Motorcycle as a result of the accident (arrowed).



**Photo 14** shows a closer view of the grazed left cowling of the Motorcycle as a result of the accident (arrowed).



**Photo 15** shows a closer view of the grazed left rear side cover of the Motorcycle as a result of the accident (arrowed).



**Photo 16** shows a closer view of the grazed right rear side cover of the Motorcycle as a result of the accident (arrowed).





**Photo 17** shows a closer view of the deformed right rear signal lamp (arrowed) and dented rear number plate (circled) of the Motorcycle as a result of the accident.



**Photo 18** shows the gear shift pedal and left front footrest of the Motorcycle that had sustained damage as a result of the accident (arrowed).



**Photo 19** shows the grazed exhaust muffler heat shield of the Motorcycle as a result of the accident (arrowed).



**Photo 20** 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. However the front tyre was observed to be deflated.





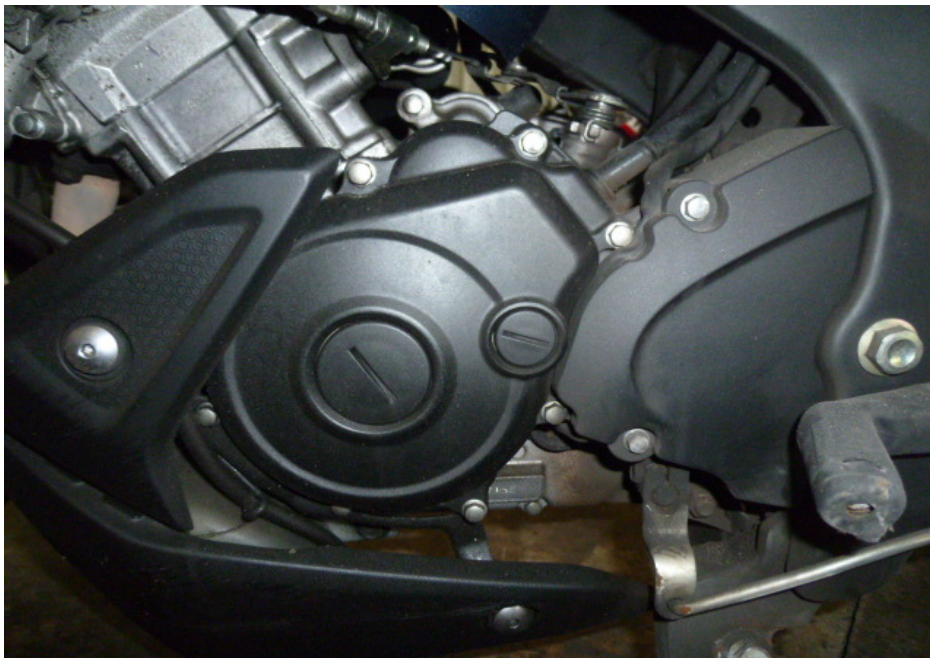
**Photo 21** shows the bent front wheel rim (circled) and deflated front tyre (arrowed) of the Motorcycle at the time of our inspection.



**Photo 22** 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 4mm. 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 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.
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 23 – 26 below.

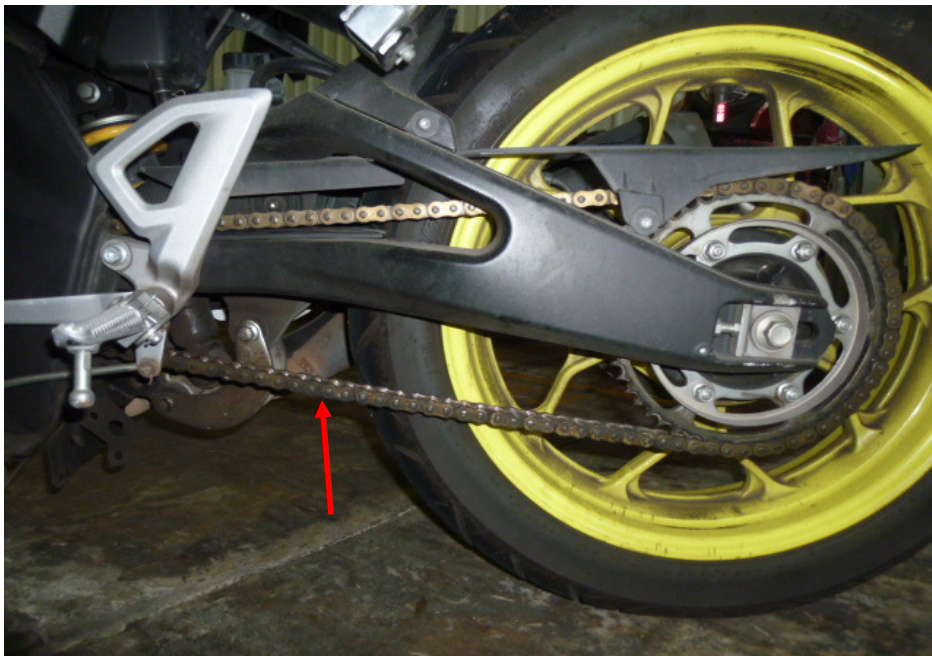


**Photo 23** shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.





**Photo 24** 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 25** shows the general view of the gear chain (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.



**Photo 26** shows a closer view of the gear chain (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 assembly was found to be intact. However the front forks had sustained damages of grazing nature as a result of the accident. Turning the handle bar towards the left and right also did not produce any abnormal free play and/or resistance.
12. The braking system of the Motorcycle was observed to be of a full hydraulic type, where hydraulic (brake fluid) pressure controls the brake for the front wheel and rear wheel. The brake for the front wheel is engaged by pressing the brake lever at the right side of the Motorcycle's handle bar while the brake for the rear wheel is engaged by stepping on the brake pedal at the right side foot rest of the Motorcycle.
13. Our visual examination of the various components in the Motorcycle's braking system like the brake discs, brake calipers, brake lever, brake foot pedal and brake hoses revealed all to be intact and without damage. There was also no leakage of brake fluid observed along the brake hoses. This was from the respective brake fluid reservoirs to the front brake caliper and rear brake caliper of the Motorcycle.



14. We were unable remove the front brake reservoir cover to examine whether the front brake fluid was without contamination due to a worn out screw. However the front brake fluid was observed to be of sufficient level for operational purposes.
15. We were unable remove the rear brake reservoir cover to examine whether the front brake fluid was of sufficient level for operational purposes and without contamination due to a worn out screw.
16. Static brake tests conducted on the Motorcycle had appear to indicate that the front braking system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon pressing the brake lever. This would indicate that there was no leakage of pressure/vacuum in the front brake system.
17. Static brake tests conducted on the Motorcycle had appear to indicate that the rear braking system of the Motorcycle was not in serviceable condition. There was no resistance felt (spongy like feel) upon stepping on the brake pedal. This would indicate that there may be a leakage of pressure/vacuum in the rear brake system.
18. 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 front braking system. The front wheel of the Motorcycle was able to stop rotating immediately upon depressing the brake lever. However the rear wheel of the Motorcycle was unable to stop rotating upon stepping on the brake pedal. See photos 27 – 35 below.



**Photo 27** shows the front forks (arrowed) of the Motorcycle. The front forks and fork bracket of the Motorcycle were both found to be intact. However the front forks had sustained damages of grazing nature as a result of the accident (circled). Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play. The steering system of the Motorcycle was in serviceable condition at the time of our inspection.

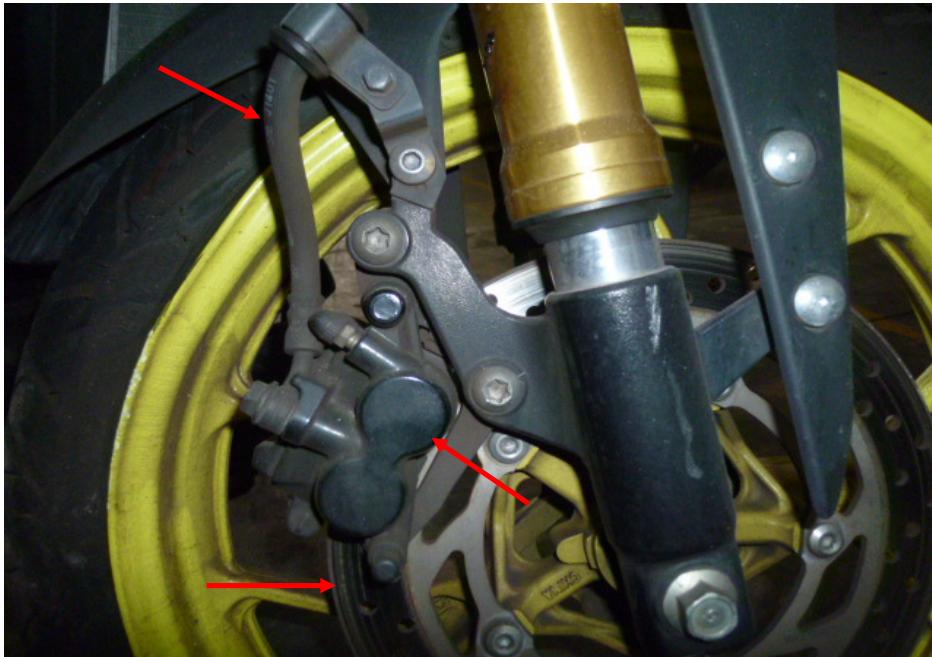




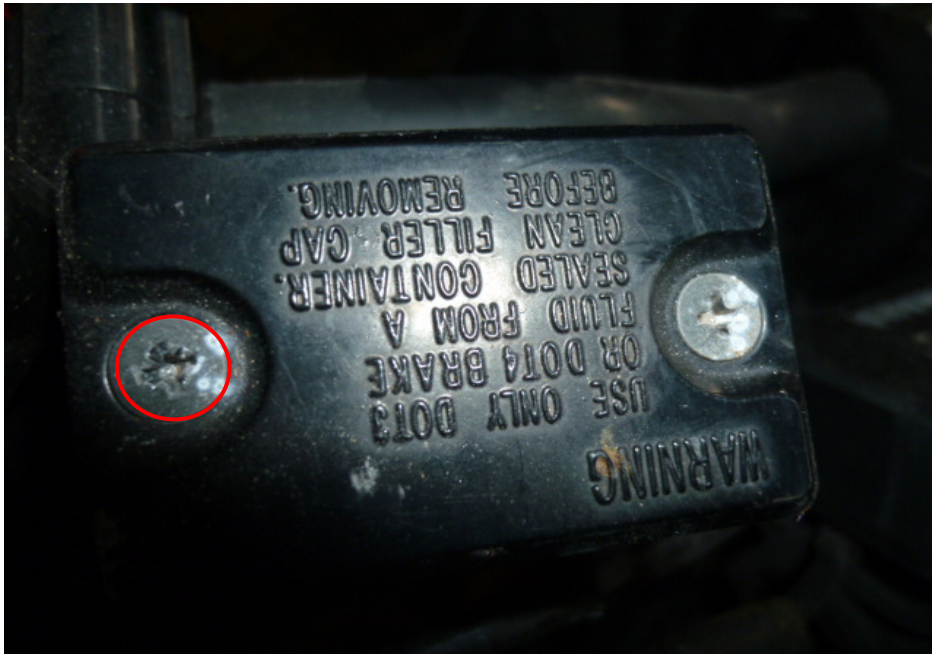
**Photo 28** shows the front wheel of the Motorcycle turned towards its full left. Turning the Motorcycle's handle bar towards the left did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.



**Photo 29** shows the front wheel of the Motorcycle turned towards its full right. Turning the Motorcycle's handle bar towards the 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 30** 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 31** shows the brake fluid reservoir cover for the front brake of the Motorcycle. We were unable to examine whether the front brake fluid was without contamination due to the worn out screw (circled).

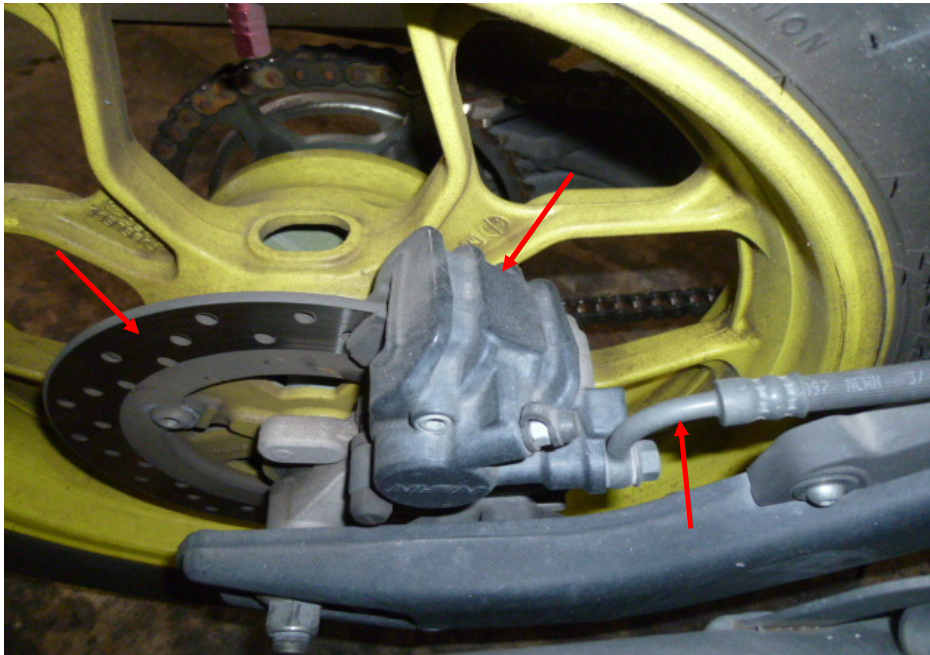




**Photo 32** shows a close up view of the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes (arrowed).



**Photo 33** shows the front brake lever being depressed. There was some resistance felt (spongy like feel) upon pressing the front brake lever (arrowed). This would indicate that there is no leakage of pressure/vacuum in the front brake system.



**Photo 34** shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear 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 35** shows the brake fluid reservoir cover for the rear brake of the Motorcycle. We were unable to examine whether the front brake fluid was of sufficient level for operational purposes and without contamination due to the worn out screw (circled).



**Conclusion**

19. Basing on our physical inspection of the Motorcycle, it appears that the steering system and front braking system of the Motorcycle were all in serviceable condition. The rear braking system of the Motorcycle was observed not to be in serviceable condition.
20. The tyres of the Motorcycle were found to be in a serviceable condition (which had included the deflated front tyre). 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. The rear tyre was sufficiently inflated for vehicular operation. Both tyres had remaining tread depth of approximately 3mm and 4mm.

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