

Your Ref: TP/IP/42055/2019  
Our Ref : CI/TPD19013995/N

15 August 2019

**Fatal Accident Investigation Team**

Traffic Police Department  
Singapore Police Force 3035e  
10 Ubi Avenue 3  
Singapore 408865

**INSPECTION REPORT OF MOTORCYCLE FBC 4128A**

1. We refer to your request dated 5 August 2019 to conduct a physical inspection of a motorcycle bearing registration number FBC 4128A (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 15 August 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 15 August 2019 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.

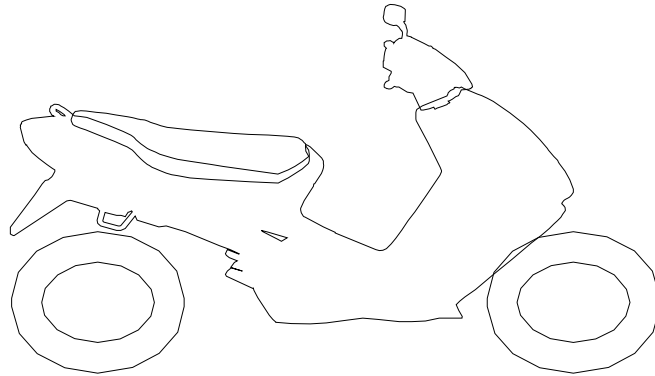
**General Condition**

4. The mileage of the Motorcycle at the time of our inspection was 10, 2280km.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its headlamp assembly, front cowling, side cowlings, left handlebar grip, left side mirror, left front footrest, gear shift pedal, rear side covers and exhaust muffler, 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:-



Maxxis 80/90 - 17 (3mm)

Dunlop 70/90 - 17 (3mm)

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 broken as a result of the accident. See photos 1 – 17 below.



**Photo 1** shows the speedometer gauge of the Motorcycle where the mileage recorded at the time of our inspection was 10,280km (circled).



**Photo 2** shows a general view of the front 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 left 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 headlamp assembly, front cowling, side cowlings, left handlebar grip, left side mirror, left front footrest, gear shift pedal, rear side covers and exhaust muffler, amongst others.





**Photo 4** shows a closer view of the cracked headlamp assembly which was 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 close up view of the cracked front cowling which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 6** shows a closer view of the front brake lever, left side mirror and right handlebar grip (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 7** shows a closer view of the left cowling of the Motorcycle that had sustained damages as a result of the accident.





**Photo 8** shows a closer view of the left handlebar grip 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 9** shows a closer view of the right front footrest (circled) and the kickstart pedal (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 10** shows a closer view of the left front footrest (arrowed) and gear shift pedal (circled) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 11** shows the left rear side cover of the Motorcycle which was observed to be cracked as a result of the accident (circled).





**Photo 12** shows the exhaust muffler which was amongst the body parts of the Motorcycle that had sustained damages of grazing nature as a result of the accident.



**Photo 13** shows a closer view of the right rear side cover of the Motorcycle that had cracked as a result of the accident.





**Photo 14** shows a closer view of the right pillion foot peg which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 15** 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 16** shows a closer view of the broken front wheel rim of the Motorcycle as a result of the accident (arrowed).



**Photo 17** 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 engine area of the Motorcycle, we had observed that the various engine related parts and components on the left side of the Motorcycle were intact with no visible damage. There was also no fluid leak and/or fluid stain found around the left engine area of the Motorcycle. The outer engine cover at the right side of the Motorcycle had cracked as a result of the accident however the engine components were still intact. There was also no fluid leak and/or fluid stain found around the right 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 18 – 21 below.



**Photo 18** 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.

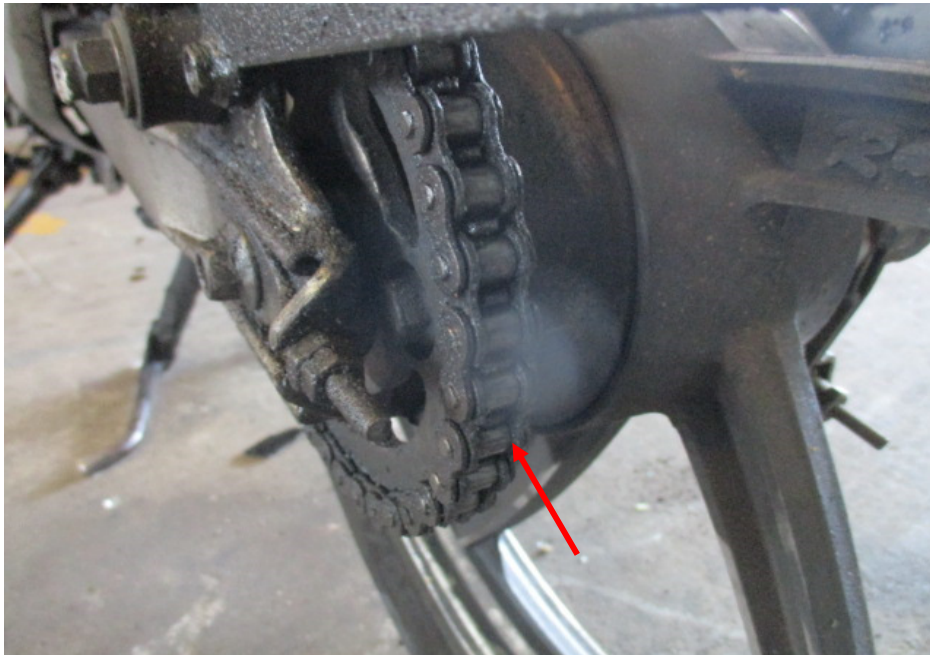


**Photo 19** shows the right side of the engine of the Motorcycle at the time of our inspection. The outer engine cover at the right side of the Motorcycle had cracked as a result of the accident (circled) however the engine components were still intact. There was also no fluid leak and/or fluid stain found around the right engine area of the Motorcycle.



**Photo 20** 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 21** 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. 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 right front fork. The right front fork was found to be bent as a result of the accident.
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 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 found to be without any contamination however it was of insufficient level for operating purposes. There was also no visible tear or cut observed on the connecting hoses and cables.

13. 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.
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 braking system. The front wheel and rear wheel of the Motorcycle were able to stop rotating immediately upon depressing the brake lever and stepping on the brake pedal.
15. In general, the observations gathered during the brake test had indicated that the braking system of the Motorcycle was in serviceable condition. See photos 22 – 26 below.



**Photo 22** shows the front right fork of the Motorcycle. The front right fork was 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 without contamination and of sufficient level for operational purposes.



**Photo 25** 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 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**

16. 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 was damaged as a result of the accident.
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 3mm each.

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