

Your Ref: TP/IP/20345/2020  
Our Ref : CI/TPD20005982/N

11 September 2020

**Fatal Accident Investigation Team**

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

**INSPECTION REPORT OF MOTORCYCLE FBN 364C**

1. We refer to your request dated 28 April 2020 to conduct a physical inspection of a motorcycle bearing registration number FBN 364C (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 21 April 2020.
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 11 September 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.

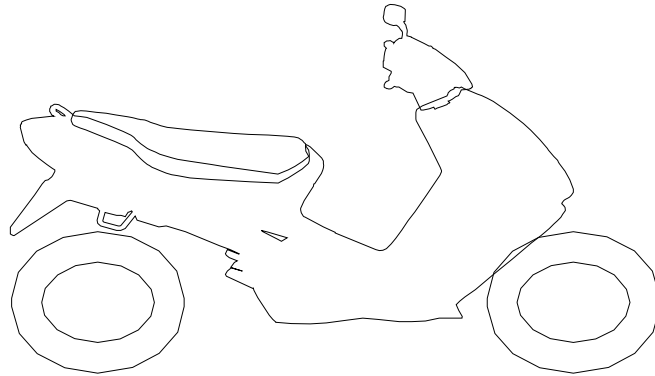
**General Condition**

4. The mileage of the Motorcycle could not be recorded at the time of our inspection due to a bent key as a result of the accident.
5. The Motorcycle was observed to have sustained damages along its frontal portion and left body. The body parts that were found to have been damaged include its headlight assembly, front mudguard, front brake lever, left crash bars, gear shift pedal, left front footrest and top rack, 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:-



Pirelli 140/70 - 17 (4mm)

Pirelli 110/70 - 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 front and rear wheel rim of the Motorcycle. See photos 1 – 15 below.



**Photo 1** shows the mileage of the Motorcycle which could not be recorded at the time of our inspection due to a bent key as a result of the accident.



**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 along its frontal portion and left body.



**Photo 3** shows a general view of the right frontal portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages along its frontal portion and left body.





**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 along its frontal portion and left body. Amongst the body parts that were found to have been damaged include its headlight assembly, front mudguard, front brake lever, left crash bars, gear shift pedal, left front footrest and top rack, amongst others.



**Photo 5** shows a close up view of the cracked headlight assembly of the Motorcycle as a result of the accident.

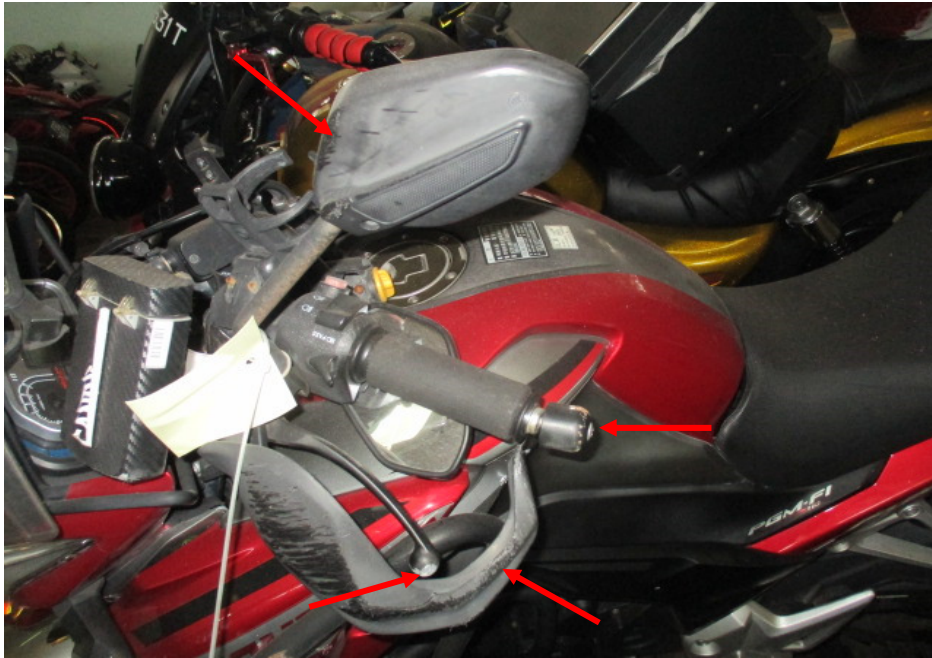


**Photo 6** shows a closer view of the front mudguard (arrowed) which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.



**Photo 7** shows a closer view of the windshield (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.





**Photo 8** shows the clutch lever, left handlebar end and clutch lever guard (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 gear shift pedal and left front footrest (circled) 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 left rear side cover which was amongst the body parts of the Motorcycle that had sustained damages of grazing nature as a result of the accident (circled).



**Photo 11** shows the left crash bars (arrowed) of the Motorcycle which sustained damages of grazing nature as a result of the accident.





**Photo 12** shows the top rack which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).



**Photo 13** shows the left pillion foot peg which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).





**Photo 14** shows the front tyre of the Motorcycle at the time of our inspection. The front tyre was observed to be in serviceable condition with remaining tread depth of approximately 3mm. The pattern of the tread was also clearly visible. 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 15** 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 16 – 19 below.



**Photo 16** 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.



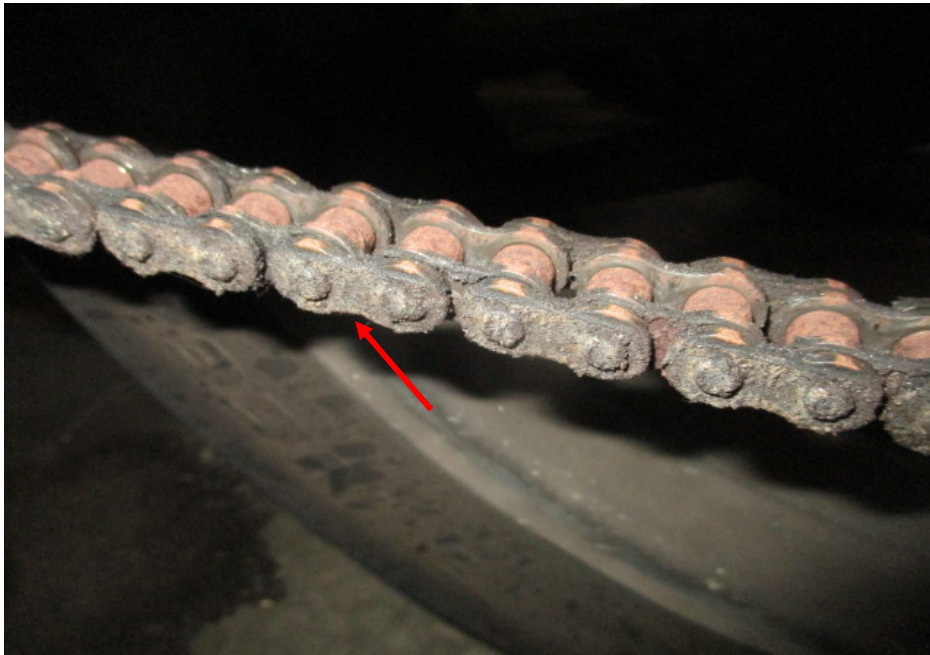


**Photo 17** shows the right side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the right engine area of the Motorcycle.



**Photo 18** 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 19** 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 to its handlebar. The impact of the accident had caused the handlebar to be bent. Hence we were unable to turn the handle bar towards the left or right.
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 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. However the front brake lever was observed to be broken as a result of the accident.

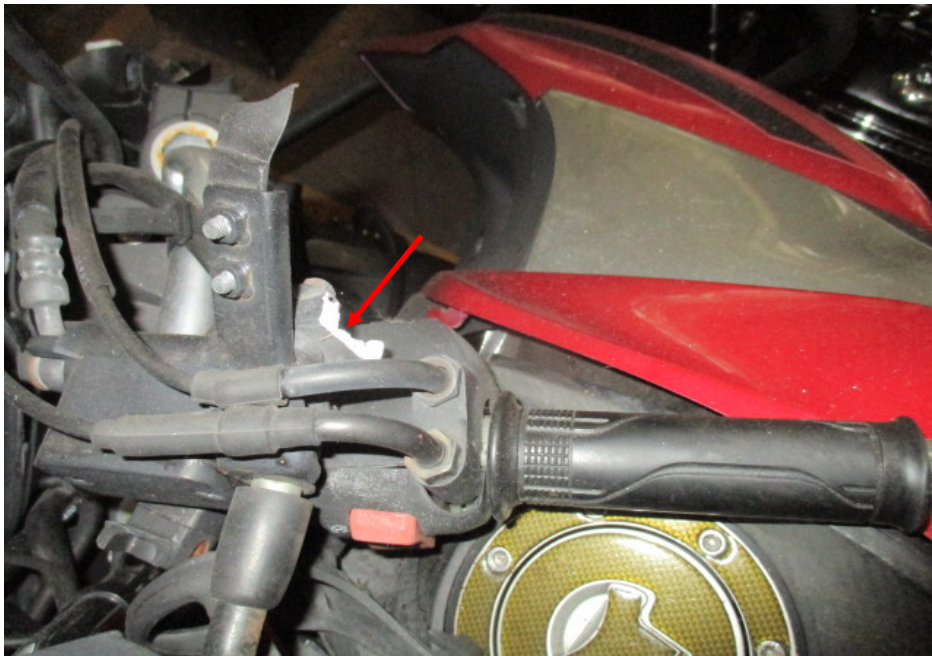
14. The brake fluid for the front brake of the Motorcycle was found to be without contamination and of sufficient level for operating purposes.
15. Static brake tests conducted on the Motorcycle had appear to indicate that the rear braking system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon stepping on the brake pedal. This would indicate that there was no leakage of pressure/vacuum in the rear braking system.
16. We were unable to conduct static brake tests on the front braking system of the Motorcycle due to the broken front brake lever. Hence we were unable to indicate if there was any leakage of pressure/vacuum in the front braking system.
17. For this case, we were not able to carry out any operational tests to the steering system of the Motorcycle due to the damage to its handlebar, which had rendered the Motorcycle immobile. We were not able to push the Motorcycle manually forward and backward, simulating movement of the Motorcycle, for the operational tests. See photos 20 – 26 below.



**Photo 20** shows the bent handlebar of the Motorcycle as a result of the accident (arrowed). We were hence not able to turn the handlebar of the Motorcycle towards the left or right.

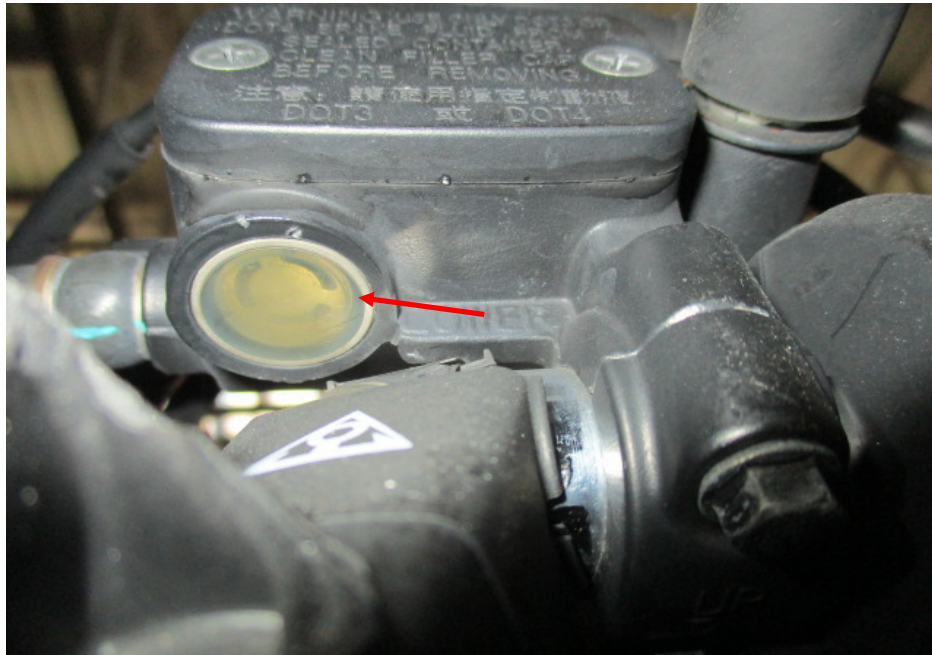


**Photo 21** shows a close up view of the bent handlebar of the Motorcycle as a result of the accident (arrowed). We were hence not able to turn the handlebar of the Motorcycle towards the left or right.

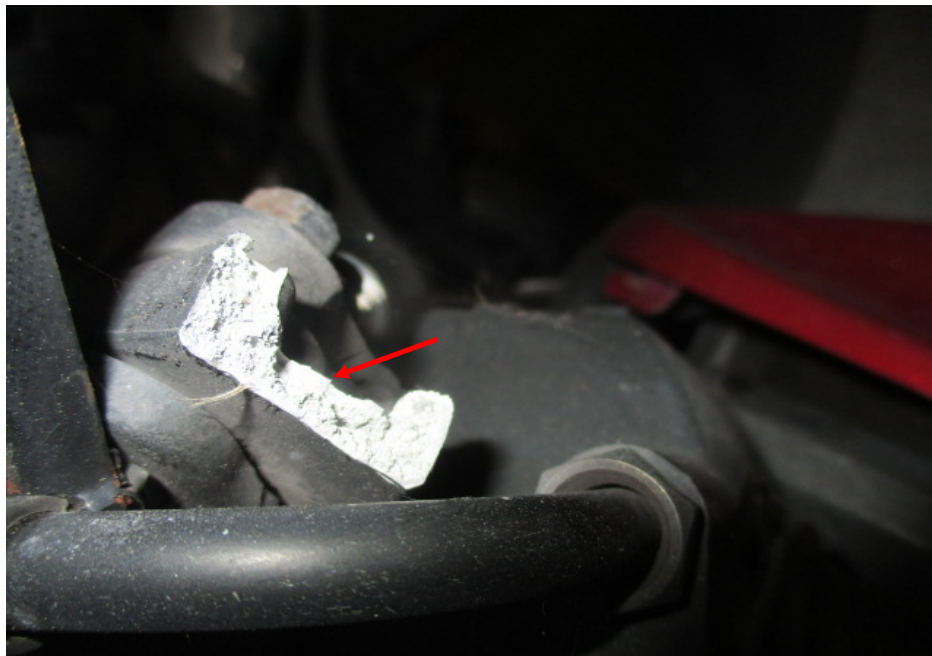


**Photo 22** shows the broken front brake lever of the Motorcycle as a result of the accident (arrowed). We were hence not able to conduct any static tests on the front braking system of the Motorcycle.





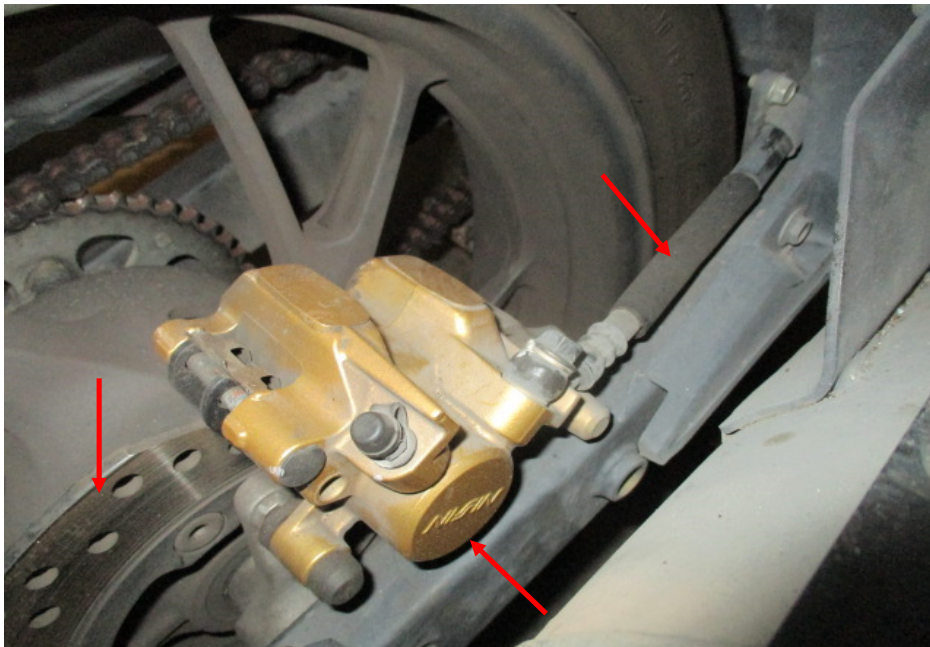
**Photo 23** shows the brake fluid for the front brake was found to be without contamination and of sufficient level for operating purposes (arrowed).



**Photo 24** shows a close up view of the broken front brake lever of the Motorcycle as a result of the accident (arrowed). We were hence not able to conduct any static tests on the front braking system of the Motorcycle. We were unable to indicate if there was any leakage of pressure/vacuum in the front brake system.



**Photo 25** 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.



**Photo 26** 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.

**Conclusion**

18. For this particular case, we were unable to determine whether there was any possible mechanical failure to the steering system and front braking system of the Motorcycle due to the extent of damage that it had sustained. However the rear braking system of the Motorcycle was found to be in serviceable condition.
19. 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 and 4mm each.
20. Our findings were based solely on a static and visual inspection of the Motorcycle. No operational test(s) could be carried out to the Motorcycle due to the damage of its handlebar (as a result of the accident), which had rendered the Motorcycle immobile.

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