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Our Ref : CI/TPD21008008/N

4 August 2021

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBN 9371Y

1. We refer to your request dated 30 June 2021 to conduct a physical inspection of a motorcycle bearing registration number FBN 9371Y (herein referred to as **"Motorcycle"**), which was involved in a fatal road traffic accident on 15 May 2021.
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 4 August 2021 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.

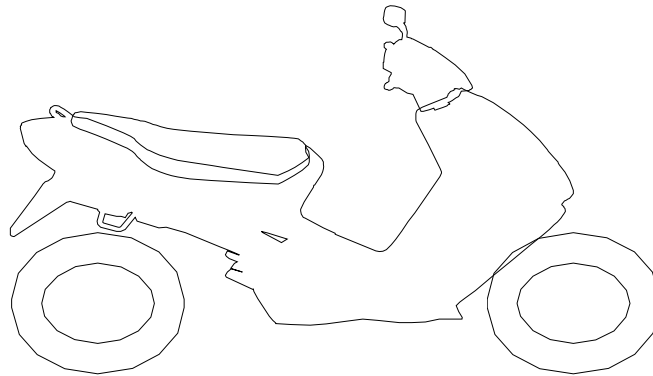
General Condition

4. The mileage of the Motorcycle could not be recorded at the time of our inspection due to a damaged speedometer gauge.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its head cowling, front mudguard, clutch lever, right cowling, right side mirror, rear brake pedal, right rear side cover and exhaust muffler heat shield, 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. The front tyre was observed to be sufficiently inflated for vehicular operation.

7. However the tyre was observed to be deflated at the time of our inspection. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



IRC 140/70 - 17 (3mm)
(Deflated)

IRC 100/80 - 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 damaged speedometer gauge of the Motorcycle as a result of the accident. Hence, we were unable to record the mileage of the Motorcycle 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 right 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 head cowl, front mudguard, clutch lever, right cowl, right side mirror, rear brake pedal, right rear side cover and exhaust muffler heat shield, amongst others.



Photo 5 shows a closer view of the grazed head cowl and headlight assembly of the Motorcycle as a result of the accident (arrowed).



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 right handlebar grip, right side mirror and front brake lever which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).



Photo 8 shows a closer view of the grazed left handlebar and bent clutch lever of the Motorcycle as a result of the accident (arrowed).



Photo 9 shows a closer view of the cracked right cowling of the Motorcycle as a result of the accident.



Photo 10 shows a closer view of the left pillion foot peg (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 11 shows the cracked right rear side cover of the Motorcycle as a result of the accident (arrowed).



Photo 12 shows a closer view of the cracked exhaust muffler heat shield of the Motorcycle as a result of the accident.



Photo 13 shows the broken right front footrest (circled) and grazed rear brake pedal (arrowed) of the Motorcycle as a result of the accident.



Photo 14 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 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 3mm. 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. However the tyre was also observed to be deflated (arrowed).

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.

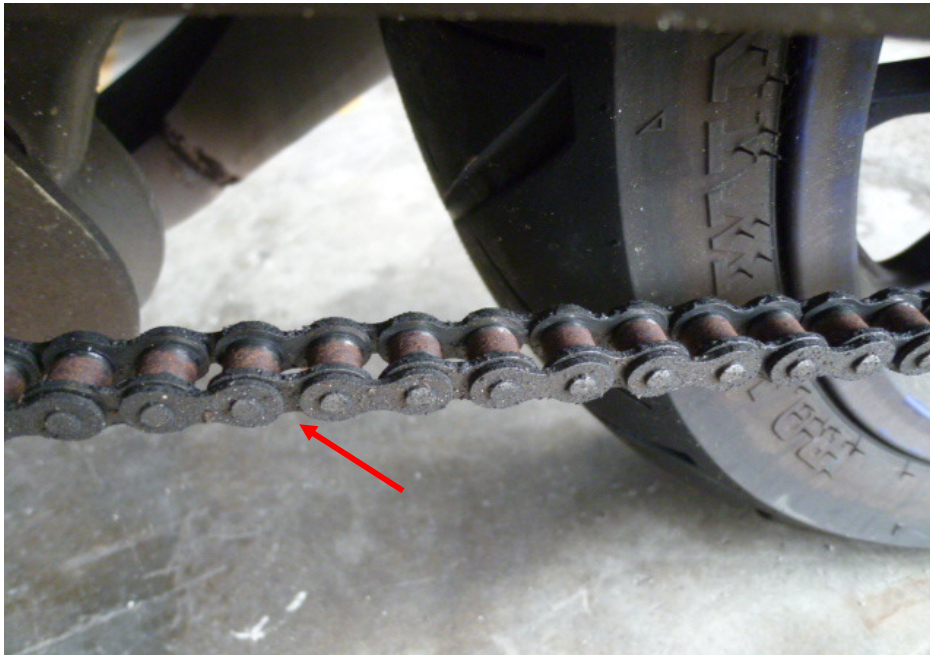


Photo 19 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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 fork assembly. The left front fork was observed to be bent as a result of the accident. 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. The brake fluid for the rear brake was found to be of sufficient level for operational purposes and without any contamination.

14. However the front brake reservoir cover was observed to be missing as a result of the accident. The front brake reservoir was also found to be empty.
15. Static brake tests could not be conducted on the front brake of the Motorcycle due to the empty front brake reservoir. Hence we were unable to indicate if there was any leakage of pressure/vacuum in the front brake system.
16. Static brake tests conducted on the rear brake of 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 is no leakage of pressure/vacuum in the rear brake system.
17. 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 its 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 20 – 26 below.



Photo 20 shows the front forks of the Motorcycle. The left front fork was observed to be bent (arrowed) as a result of the accident. Hence we were unable to turn the handle bar towards the left or right.



Photo 21 shows a closer view of the bent left front fork of the Motorcycle as a result of the accident (arrowed). Hence we were not able to conduct any test(s) on the steering system of the Motorcycle

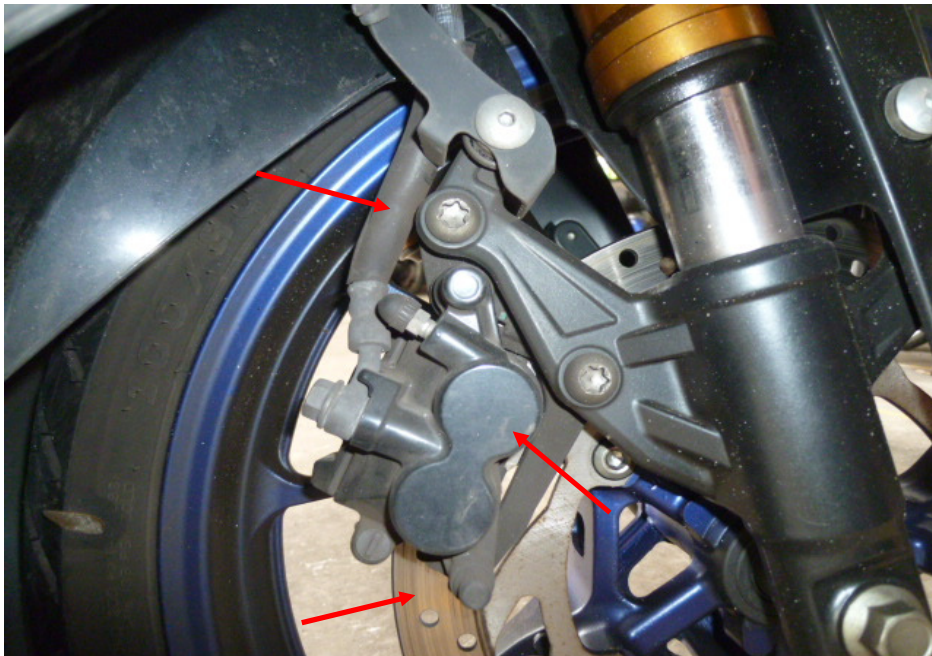


Photo 22 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 23 shows the front brake reservoir of the Motorcycle. The front brake reservoir cover was missing as a result of the accident. The front brake reservoir was also found to be empty (arrowed).



Photo 24 shows the front brake lever being depressed. The front brake reservoir cover was observed to be missing as a result of the accident. The front brake reservoir was also found to be empty (arrowed). Hence we were unable to indicate if there was any leakage of pressure/vacuum in the front brake system of the Motorcycle.



Photo 25 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 26 shows the brake fluid reservoir for the rear brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes and without contamination.

Conclusion

18. 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 was damaged as a result of the accident. The rear braking system was found to be in serviceable condition.
19. The 2 tyres of the Motorcycle were found to be in serviceable condition with remaining tread depth of approximately 3mm each (which had included the deflated rear 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 2 tyres. The front tyre was sufficiently inflated for vehicular operation

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