

Your Ref: TP/IP/09011/2021
Our Ref : CI/TPD21005541/N

5 May 2021

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBL 9315X

1. We refer to your request dated 25 March 2021 to conduct a physical inspection of a motorcycle bearing registration number FBL 9315X (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 1 March 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 5 May 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.

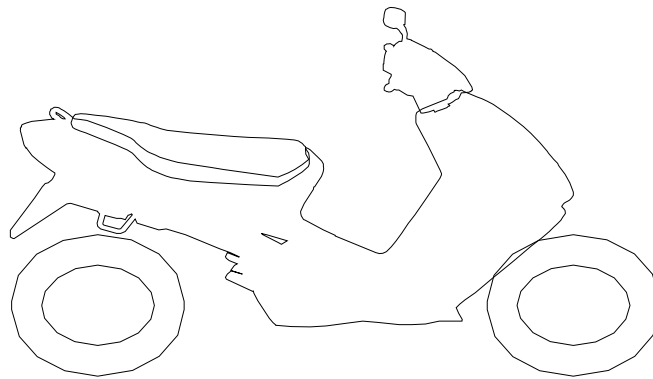
General Condition

4. The mileage of the Motorcycle could not be recorded at the time of our inspection due to 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 head cowling, left cowling, front mudguard, front brake lever, belly pan rear brake pedal, right front footrest, 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:-



Pirelli 160/60 - 17 (3mm)

Continental 120/70 - 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 rear wheel rim of the Motorcycle. However we did observe that the front wheel rim had sustained damages of grazing nature as a result of the accident. See photos 1 – 22 below.



Photo 1 shows the damaged speedometer gauge of the Motorcycle as a result of the accident.

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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. Amongst the body parts that were found to have been damaged include its head cowling, left cowling, front mudguard, front brake lever, belly pan rear brake pedal, right front footrest, rear side covers and exhaust muffler, amongst others.



Photo 5 shows a close up view of the head cowling which was amongst the body parts of the Motorcycle that had sustained damage 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 left lower front fork guard (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 8 shows a closer view of the torn seat (circled) 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 left cowl which was 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 belly pan (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 11 shows the missing clutch lever, left handlebar switch and clutch lever guard (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

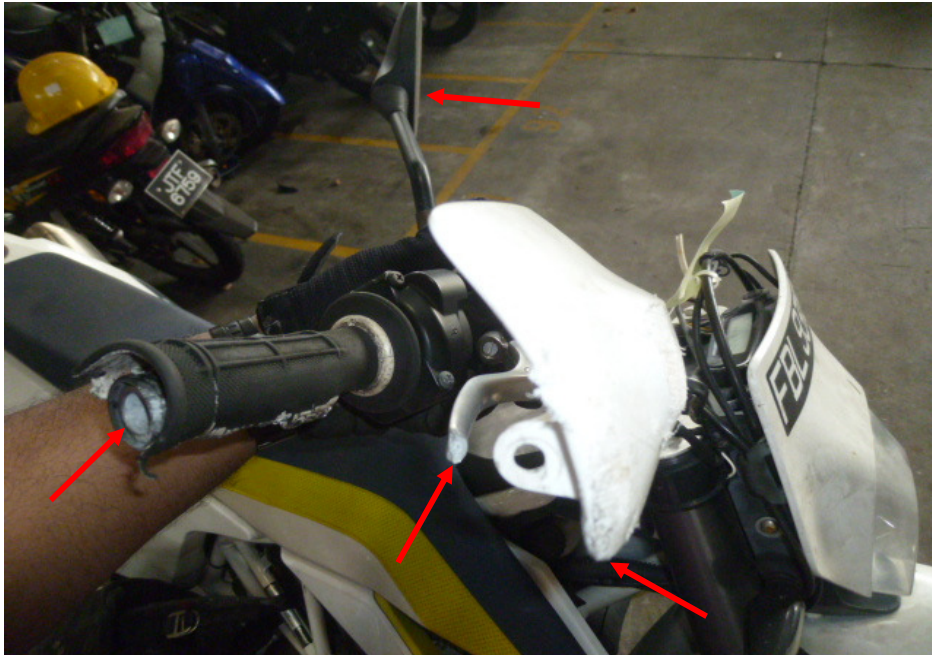


Photo 12 shows the front brake lever, right handlebar end, right side mirror and front brake lever guard (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

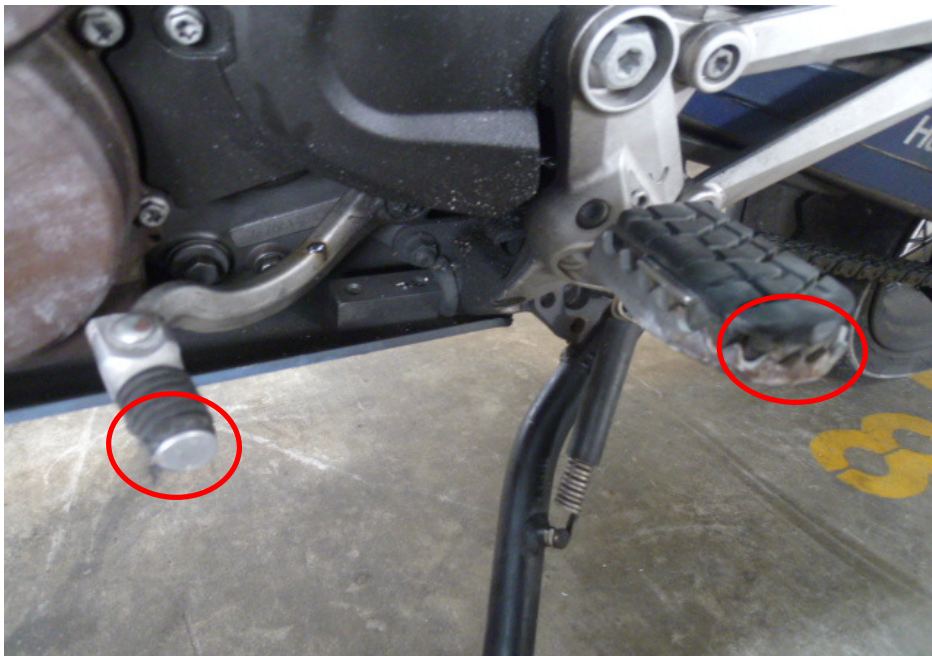


Photo 13 shows a closer view of the gear shift pedal and left front footrest (circled) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 14 shows a closer view of the rear brake pedal and right front footrest (circled) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 15 shows a closer view of the right pillion foot peg bracket (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 16 shows a closer view of the left pillion foot peg bracket (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 17 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 18 shows a closer view of right 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 19 shows the exhaust muffler which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 20 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 21 shows the front wheel rim of the Motorcycle which had sustained damages of grazing nature as a result of the accident (arrowed).



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 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 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.

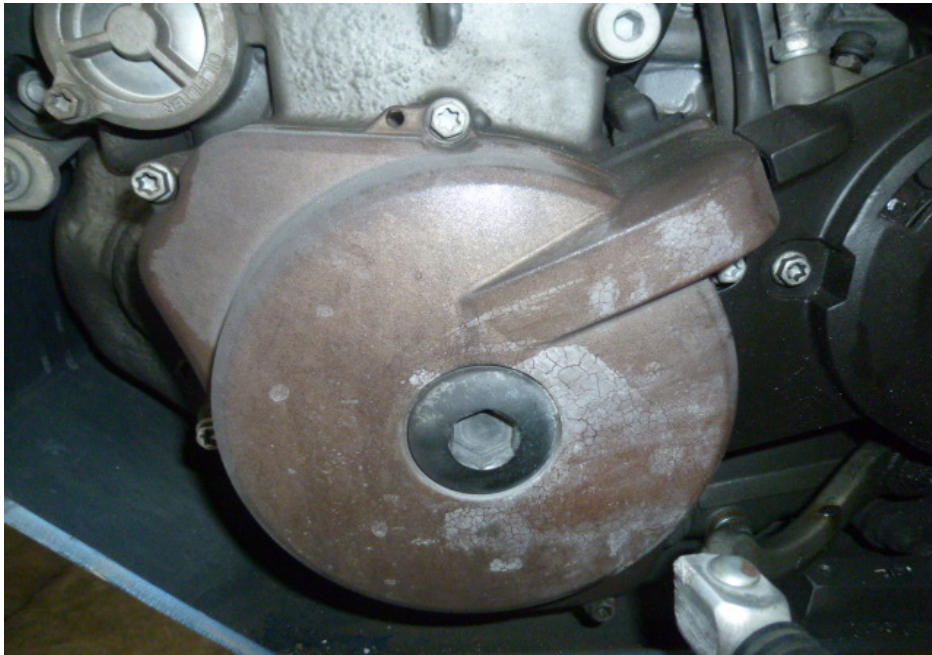


Photo 23 shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.

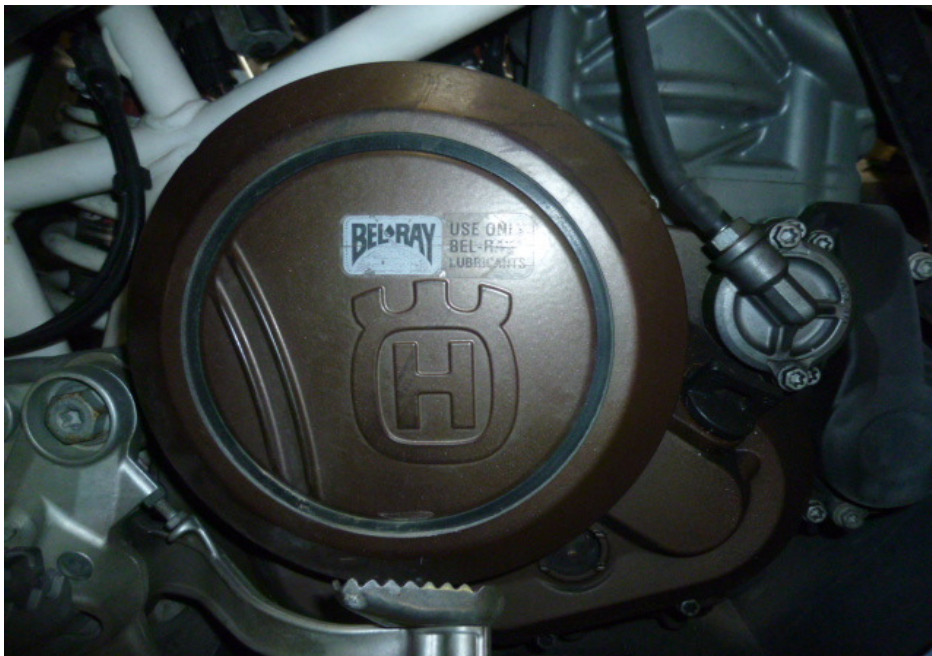


Photo 24 shows the right side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the right engine area of the Motorcycle.



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

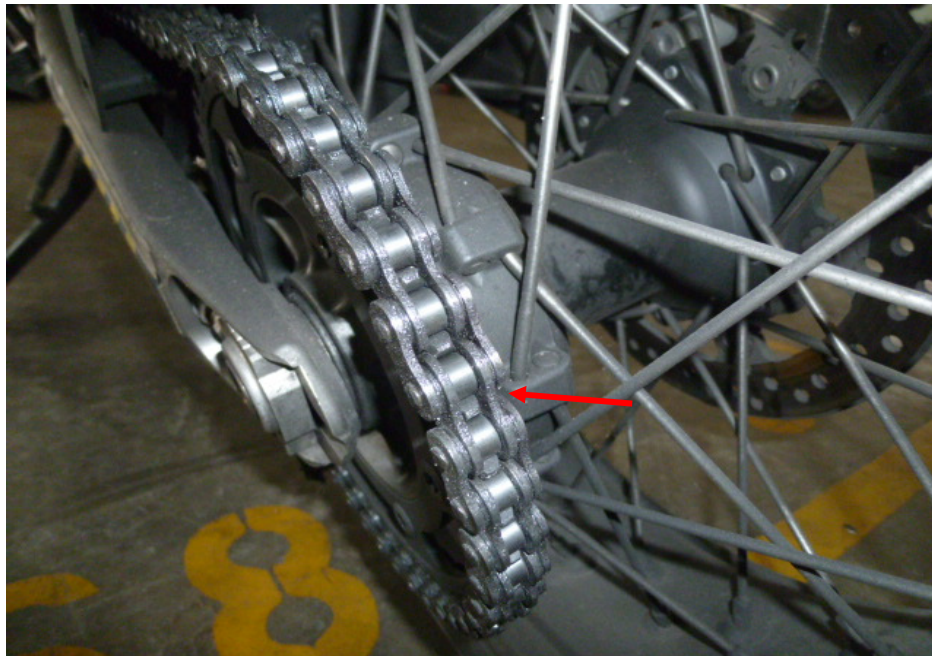


Photo 26 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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 clamp. The impact of the accident had caused the handlebar clamp to be broken. 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 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 calipers and rear brake caliper of the Motorcycle. The brake fluid for the rear brake was also found to be of sufficient level for operational purposes and without any contamination.
14. The brake fluid for the front brake was also found to be of sufficient level for operational purposes. However the front brake fluid was found to be slightly contaminated.
15. Static brake tests conducted on the Motorcycle had appear to indicate that the braking system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon pressing the brake lever and upon stepping on the brake pedal. This would indicate that there was no leakage of pressure/vacuum in the brake system.
16. 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 clamp, 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 27 – 32 below.



Photo 27 shows the handlebar clamp of the Motorcycle which was broken as a result of the accident (arrowed). We were hence not able to turn the handlebar of the Motorcycle towards the left or right.

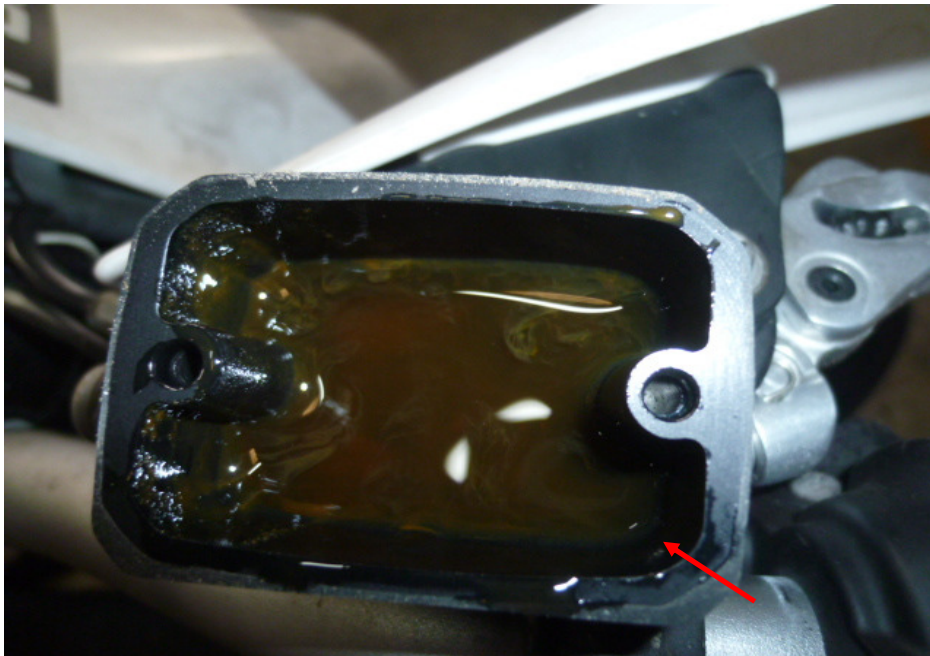


Photo 28 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes. However the front brake fluid was found to be slightly contaminated (arrowed).



Photo 29 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 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.



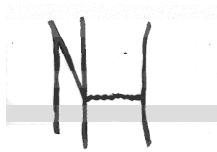
Photo 31 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 32 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

17. For this particular case, we were unable to determine whether there was any possible mechanical failure to the steering system of the Motorcycle due to the extent of damage that it had sustained. Its steering system was damaged as a result of the accident. The braking system of the Motorcycle was found to be in serviceable condition.
18. 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.
19. 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 clamp (as a result of the accident), which had rendered the Motorcycle immobile.

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