

Your Ref: TP/IP/32313/2021
Our Ref : CI/TPD21008633/N

9 August 2021

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBB 4895Z

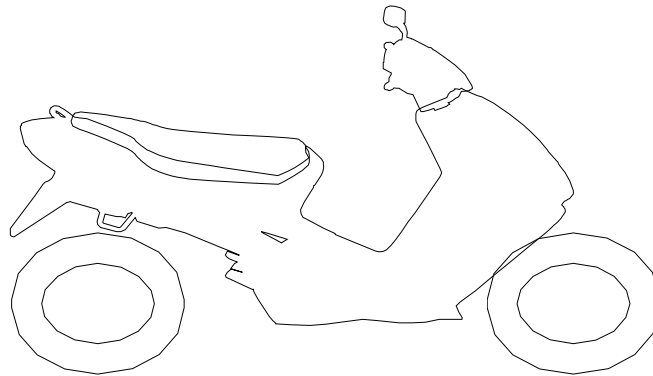
1. We refer to your request dated 19 July 2021 to conduct a physical inspection of a motorcycle bearing registration number FBB 4895Z (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 7 July 2021.
2. The purpose of this inspection is to primarily determine 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 9 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 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 speedometer gauge, headlight assembly, front mudguard, side mirrors, front brake lever, clutch lever, handlebars, handlebar ends, petrol tank, left front footrest bracket, seat, left rear side cover and tail light assembly, 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. The tyre brand, tyre size and remaining tread depth of the 2 tyres of the Motorcycle were recorded as follows:-
7. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Dunlop 80/90 - 18 (5mm)

Dunlop 80/80 - 18 (7mm)

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 – 13 below.

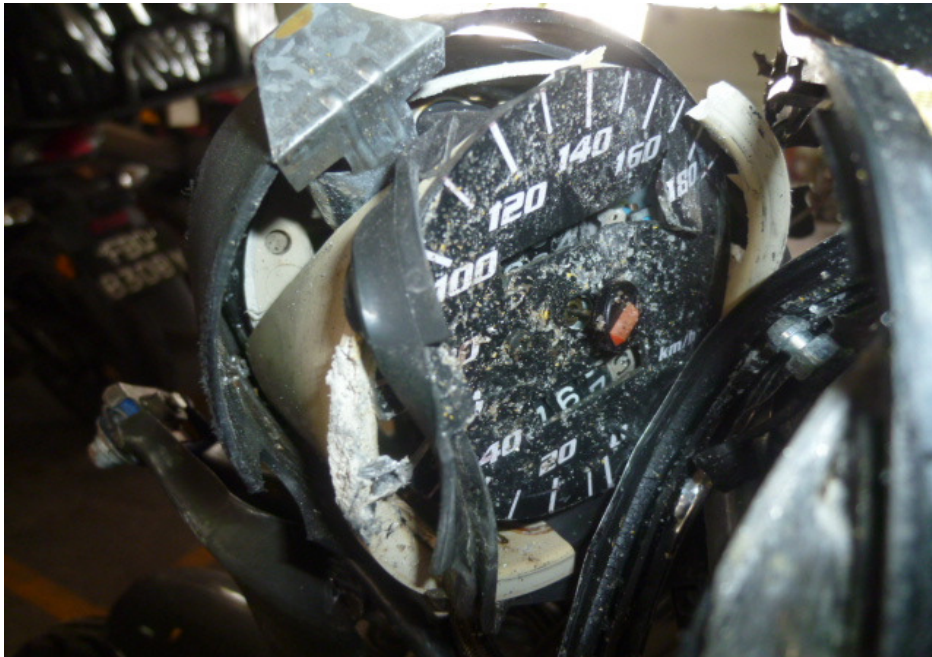


Photo 1 shows the speedometer gauge of the Motorcycle. The mileage of the Motorcycle could not be recorded at the time of our inspection due to damages sustained to the speedometer gauge as a result of the accident.



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. The body parts that were found to have been damaged include its speedometer gauge, headlight assembly, front mudguard, side mirrors, front brake lever, clutch lever, handlebars, handlebar ends, petrol tank, left front footrest bracket, seat, left rear side cover and tail light assembly, amongst others.



Photo 4 shows a closer view of the headlight 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 handlebars, side mirrors, front brake lever, clutch lever and handlebar ends of the Motorcycle. These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.



Photo 6 shows a closer view of the petrol tank, which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).



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



Photo 8 shows the broken left front footrest bracket (arrowed) of the Motorcycle as a result of the accident.



Photo 9 shows the grazed left rear side cover (arrowed) of the Motorcycle as a result of the accident.



Photo 10 shows the deformed seat of the Motorcycle as a result of the accident (arrowed).



Photo 11 shows the broken tail light assembly of the Motorcycle as a result of the accident (arrowed).



Photo 12 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 7mm. 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 front tyre.



Photo 13 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 5mm. 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 train of the Motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 14 – 17 below.



Photo 14 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 15 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 16 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 17 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 front fork assembly. The front forks were found to be bent inwards as a result of the accident.
12. The clutch system of the Motorcycle was observed to be of a hydraulic type, where hydraulic (clutch fluid) pressure is needed to effectively engage and disengage the clutch. The clutch is disengaged by pressing the clutch lever at the Motorcycle's left handlebar.
13. Our visual examination of the various components in the Motorcycle's hydraulic clutch system like the clutch lever and clutch hose revealed all to be intact and without damage. There was also no leakage of clutch fluid observed along the clutch hose. This was from the respective clutch fluid reservoir at the left handlebar of the Motorcycle. The clutch fluid was found to be of sufficient level for operating purposes and without any contamination.
14. 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 and brake foot pedal, revealed all to be intact and without damage. The brake fluid for the front brake was found to be of sufficient level for operating purposes and without any contamination. There was also no visible tear or cut observed on the connecting hoses and cables. However we found that part of the front brake lever had broken off as a result of the accident. We also observed a leakage of brake fluid along the front brake hose. This was from the respective front brake fluid reservoir to the front brake caliper of the Motorcycle. Upon closer examination, we found that the front brake hose was cut as a result of the accident.
15. For this case, static as well as operational brake tests could not be conducted on the Motorcycle's front braking system due to the broken front brake lever and cut front brake hose. We were unable to determine if there was any leakage of pressure/vacuum in the front brake system.

16. 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 fork assembly, 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 18 – 25 below.



Photo 18 shows the front fork assembly of the Motorcycle. The front forks were observed to be bent inwards as a result of the accident (arrowed). We were hence not able to conduct any tests on the steering system of the Motorcycle.



Photo 19 shows the hydraulic clutch fluid reservoir for the hydraulic clutch system of the Motorcycle. The hydraulic clutch fluid was observed to be of sufficient level for operational purposes and without any contamination.



Photo 20 shows the clutch lever being depressed. There was some resistance felt (spongy like feel) upon pressing the clutch lever (arrowed). This would indicate that there is no leakage of pressure/vacuum in the hydraulic clutch system.



Photo 21 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 the front brake caliper and front brake disc had revealed all to be intact with no visible damage. However we observed a leakage of brake fluid along the front brake hose.



Photo 22 shows the front brake reservoir of the Motorcycle. We observed a leakage of brake fluid along the front brake hose. This was from the respective front brake fluid reservoir to the front brake caliper of the Motorcycle. Upon closer examination, we found that the front brake hose was cut as a result of the accident (arrowed).



Photo 23 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was found to be of sufficient level for operating purposes and without any contamination.

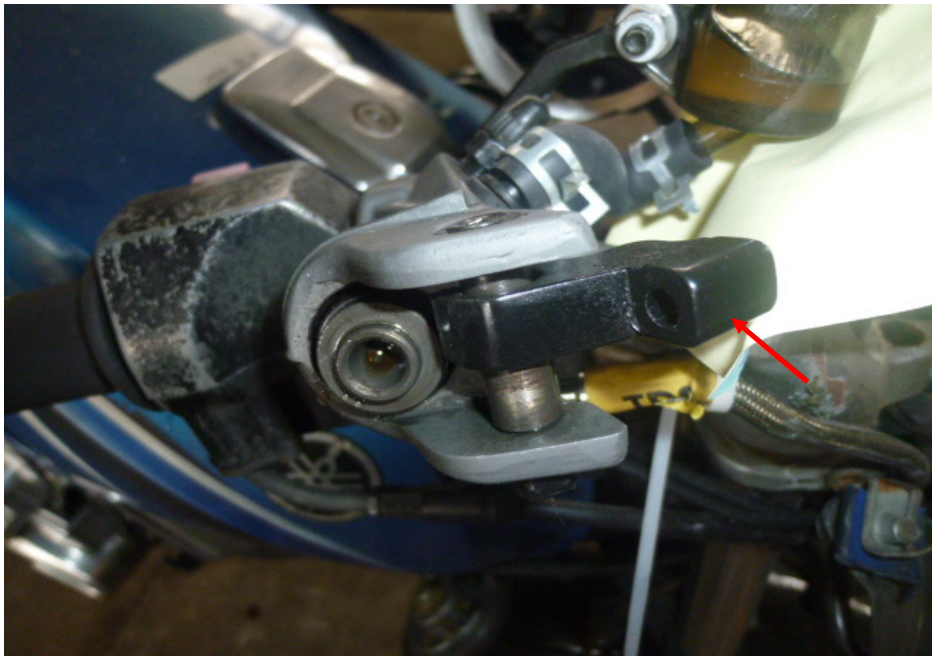


Photo 24 shows the front brake reservoir. We were unable to depress the front brake lever as part of it had broken off as a result of the accident (arrowed). Hence we were unable to determine if there was any leakage of pressure/vacuum in the front brake system.

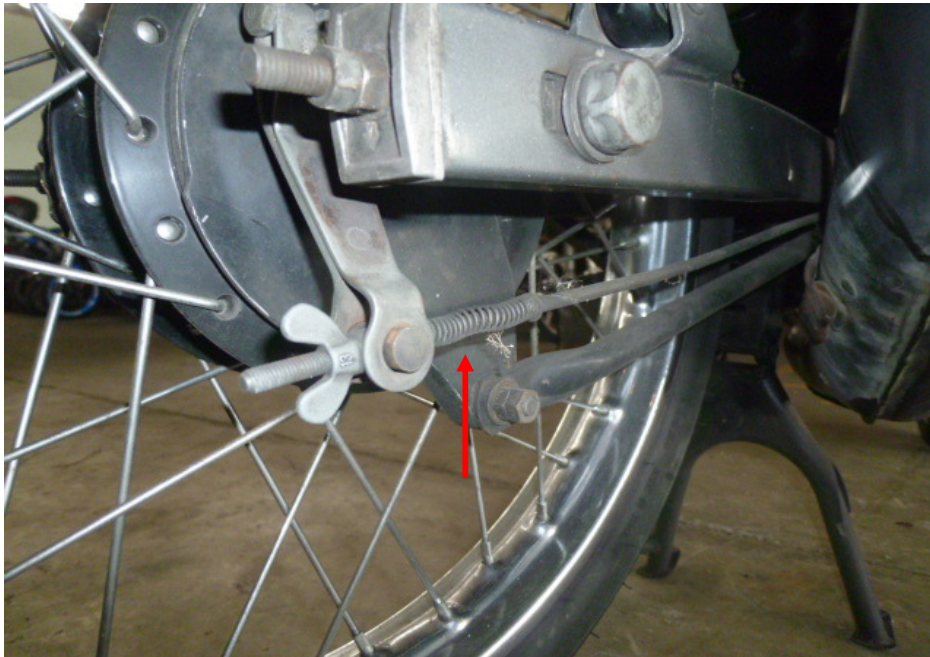
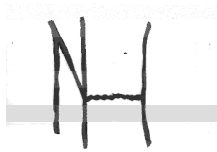


Photo 25 shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of a mechanical type, controlled by the brake foot pedal of the Motorcycle. Our checks of the cable (arrowed), spring and drum which are all part of the components in the rear brake system of the Motorcycle reveal all to be intact and without damage.

Conclusion

17. 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 of the Motorcycle was observed 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 depths of approximately 7mm and 5mm.

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