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Our Ref :CI/TPD19008251/N

22 June 2019

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBG 8909R

1. We refer to your request dated 29 April 2019 to conduct a physical inspection of a motorcycle bearing registration number FBG 8909R (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 21 February 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 27 May 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 recorded at the time of our inspection was 62,867km.
5. The Motorcycle was observed to have sustained minor damages at the frontal and right portion. The body parts that were found to have been damaged include its front mudguard, front brake lever, right side mirror, right cowling, right rear side cover, right pillion foot rest, exhaust muffler, top box rack and top box, amongst others as a result of the accident. See photos 1 – 11 below.



Photo 1 shows the speedometer gauge of the Motorcycle where the mileage recorded at the time of our inspection was 62, 867km (circled).



Photo 2 shows a general view of the front body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained minor damages at the frontal and right portion.



Photo 3 shows a general view of the right front body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained minor damages at the frontal and right portion. The body parts that were found to have been damaged include its front mudguard, front brake lever, right side mirror, right cowling, right rear side cover, right pillion foot rest, exhaust muffler, top box rack and top box, amongst others as a result of the accident.



Photo 4 shows a closer view of the front mudguard (circled) 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 closer view of the front brake lever and right handlebar end (arrowed) as well as the right side mirror (circled) of the Motorcycle which were observed to be damaged due to the accident



Photo 6 shows a closer view of the right cowling 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 bottom cowling of the Motorcycle which was observed to be damaged due to the accident.



Photo 8 shows a closer view of the damaged right pillion footrest (circled) of the Motorcycle at the time of our inspection.



Photo 9 shows a closer view of the exhaust muffler of the Motorcycle which had sustained damage due to the accident (circled).



Photo 10 shows a closer view of the damaged right rear side cover of the Motorcycle which was observed to have sustained scratches due to the accident (circled).



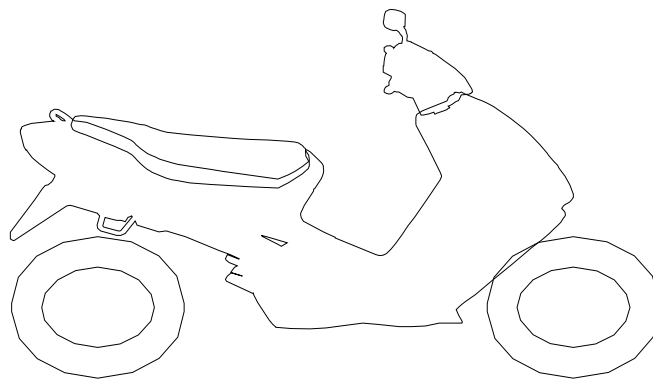
Photo 11 shows the broken top box rack of the Motorcycle (circled).



Photo 11 shows a closer view of the top box of the Motorcycle which was observed to have sustained scratches due to the accident.

Tyres and Wheel Rims

6. The condition of the Motorcycle's 2 tyres was observed to be in serviceable condition. The tread pattern of the 2 tyres was clearly visible. 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 2 tyres were both observed to be sufficiently inflated for vehicular operation. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Michelin 130/70 - 12 (3mm)

Pirelli 110/90 - 13 (3mm)

7. 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 12 & 13 below.



Photo 12 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 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 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

8. 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.
9. The drive train of the motorcycle was found to be intact without any misalignment. There was also no visible tear or cut observed on the connecting hoses and cables. See photos 14 - 17 below.

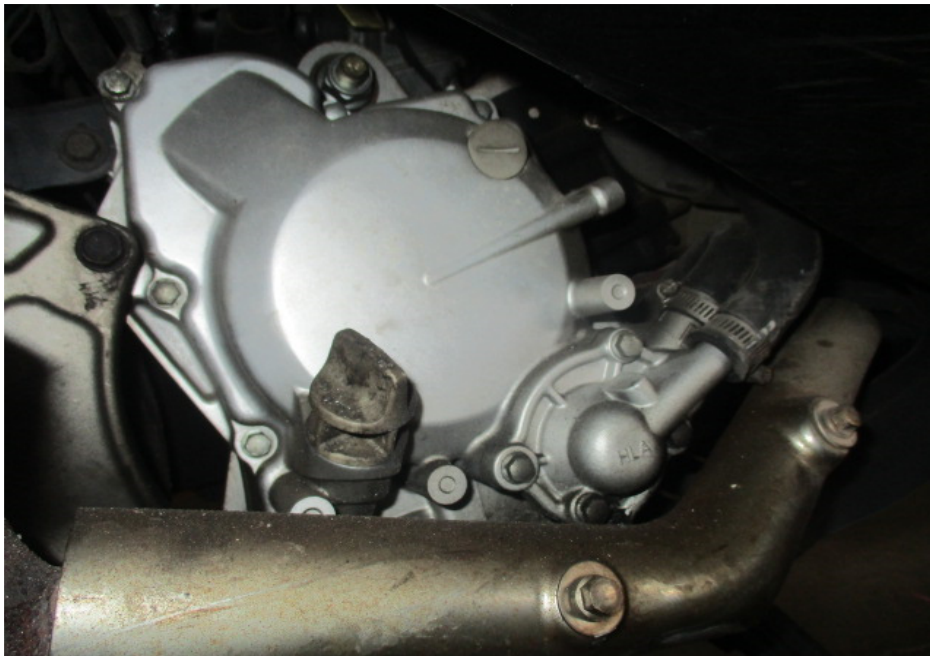


Photo 14 shows the right side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the right engine area of the Motorcycle.



Photo 15 shows the drive train of the Motorcycle which was found to be intact without any misalignment.

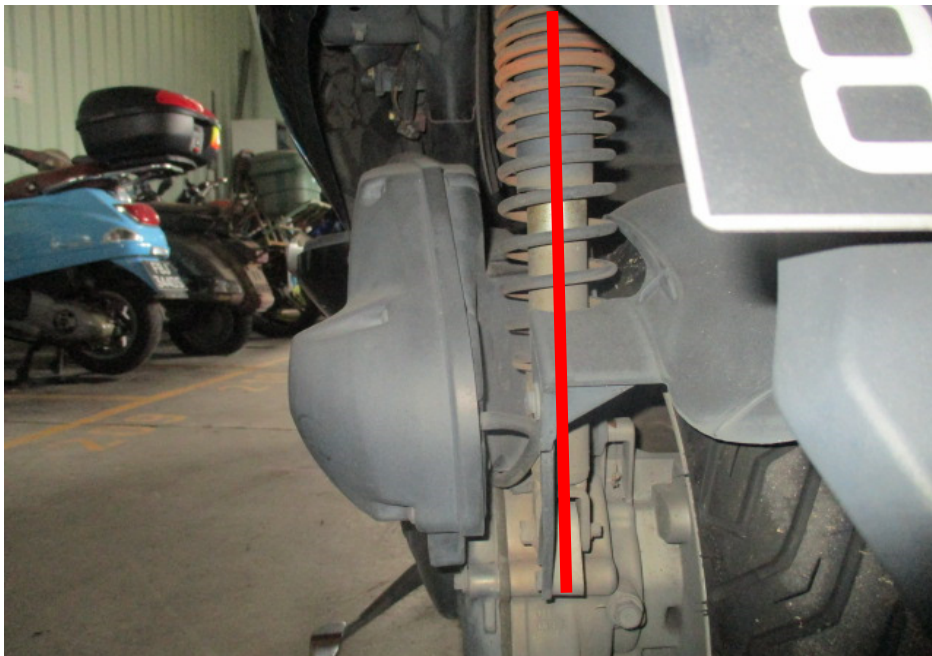


Photo 16 shows the left shock absorber of the motorcycle which was found to be intact without any misalignment.

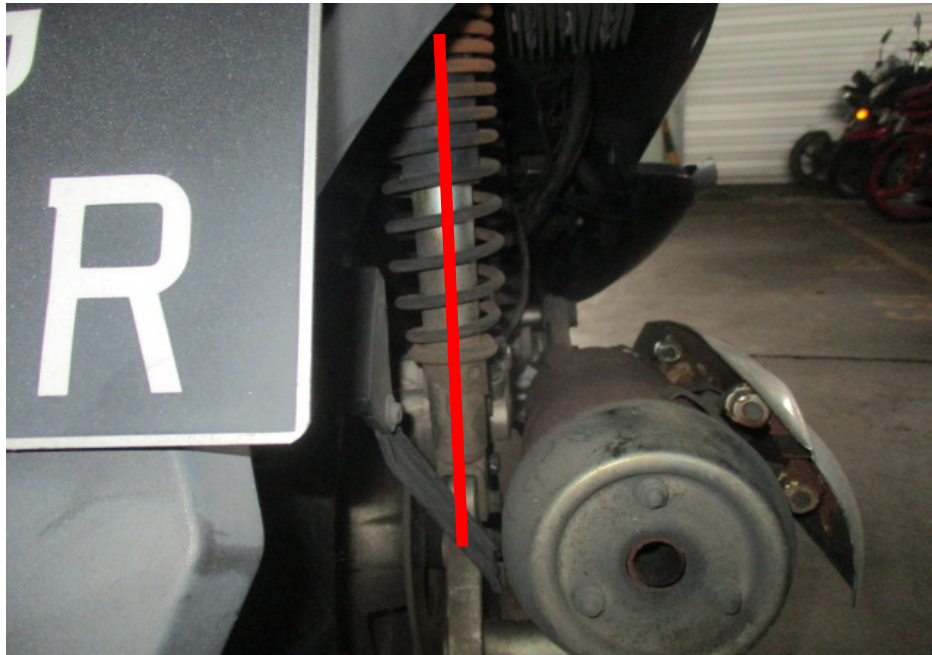


Photo 17 shows the right shock absorber of the motorcycle which was found to be intact without any misalignment.

Steering System & Braking System

10. Our checks on the various steering components of the Motorcycle had revealed that its steering system was in serviceable condition. Its front forks and fork brackets were both found to be intact and undamaged. Turning the handle bar towards the left and right also did not produce any abnormal free play and/or resistance.
11. 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 pulling the brake lever at the right side of the Motorcycle's handle bar while the brake for the rear wheel is engaged by pulling the brake lever at the left side of the Motorcycle's handle bar.
12. Static brake tests conducted on the Motorcycle had appeared to indicate that the brake system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon pressing both brake levers. This would indicate that there's no leakage of pressure/vacuum in the brake system. Our checks on the brake fluid had also indicated that the brake fluid was of sufficient level for operational purposes, and without contamination.

13. 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 both brake levers.
14. In general, the observations gathered during the brake test had indicated that the braking system of the Motorcycle was in serviceable condition. See photos 18 – 24 below.



Photo 18 shows the front forks (arrowed) of the Motorcycle. The front forks and fork brackets of the Motorcycle were both found to be intact and undamaged. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. The steering system of the Motorcycle was in serviceable condition at the time of our inspection.



Photo 19 shows the front wheel of the Motorcycle turned towards its full right. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.



Photo 20 shows the front wheel of the Motorcycle turned towards its full left. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.

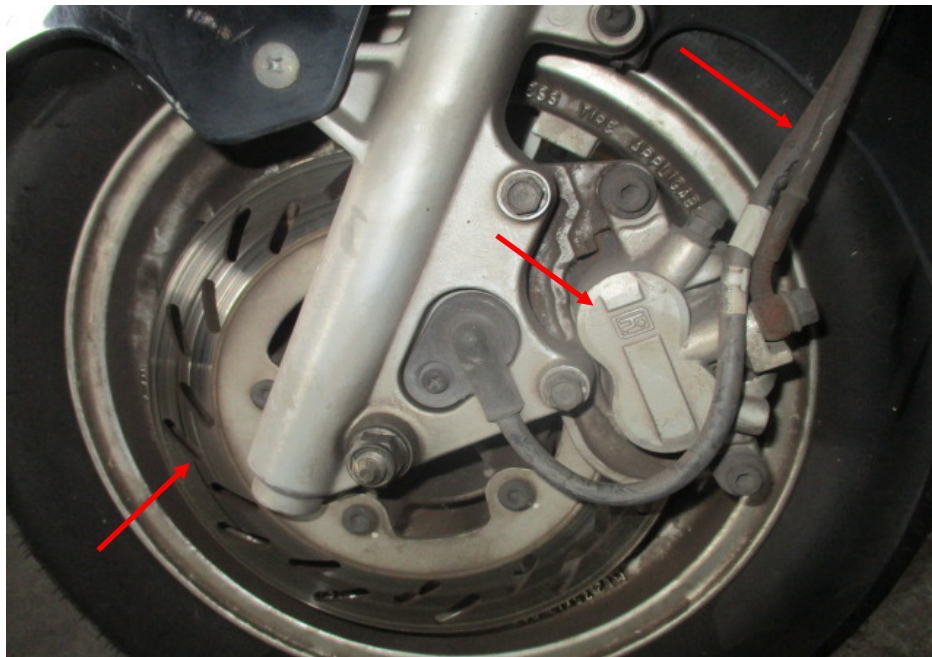


Photo 21 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 22 shows the rear brake lever being depressed. There was some resistance felt (spongy like feel) upon pressing the rear brake lever (arrowed). This would indicate that there is no leakage of pressure/vacuum in the brake system.



Photo 23 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.

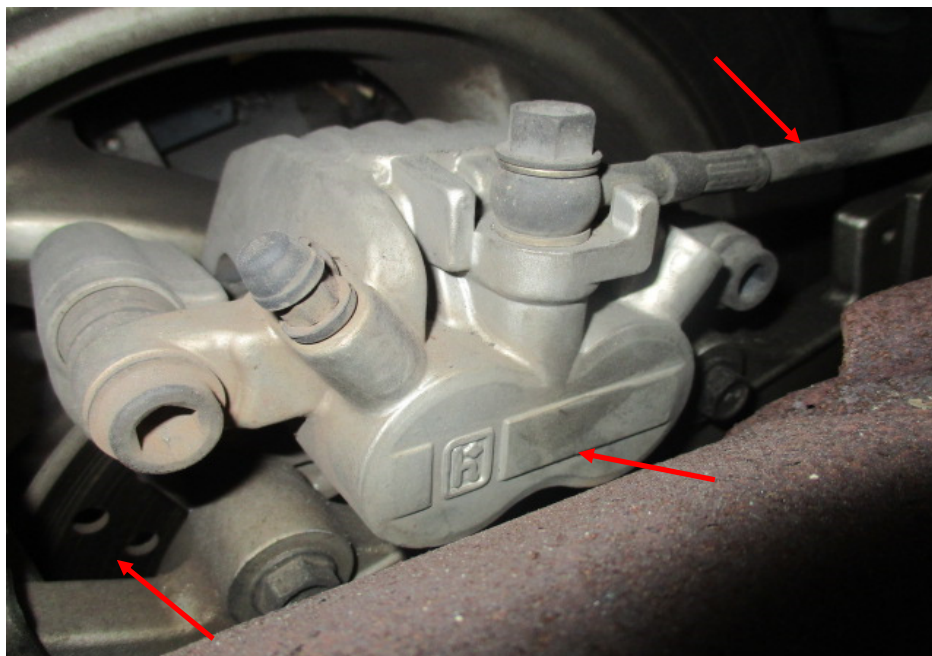


Photo 24 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

Conclusion

15. Basing on our physical inspection of the Motorcycle, it appears that the steering system and braking system of the Motorcycle were all in serviceable condition. We did not find any evidence(s) to suggest that there was possible mechanical failure to the Motorcycle that may have caused and/or contributed to the accident.
16. The tyres of the Motorcycle were found to be in a 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 tyres. It was sufficiently inflated for vehicular operation with remaining tread depth of approximately 3mm each.

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