

Your Ref: TP/IP/22973/2019
Our Ref : CI/TPD19008249/N

12 June 2019

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBD 690M

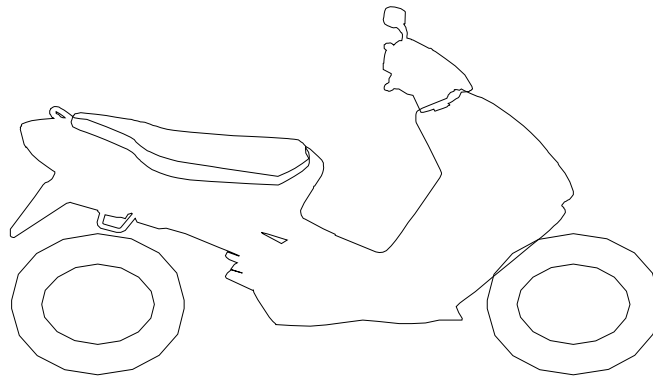
1. We refer to your request dated 29 April 2019 to conduct a physical inspection of a motorcycle bearing registration number FBD 690M (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 4 April 2019.
2. The purpose of this inspection is to primarily determine 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 31 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 could not be recorded at the time of our inspection due to a flat battery.
5. The Motorcycle was observed to have sustained damages along its front and right side. The body parts that were found to have been damaged include its headlight assembly, front mudguard, right side mirror, front brake lever, right cowling, right front footrest, right rear side cover, exhaust muffler and top box, 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:-



Deestone 80/90 - 17 (3mm)

Racingstone 70/90 - 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 – 12 below.



Photo 1 shows a general view of the front body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages along its front and right side. The mileage of the Motorcycle could not be recorded at the time of our inspection due to a flat battery.



Photo 2 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 damages along its front and right side. Amongst the body parts that were found to have been damaged include its headlight assembly, front mudguard, right side mirror, front brake lever, right cowling, right front footrest, right rear side cover, exhaust muffler and top box, amongst others.

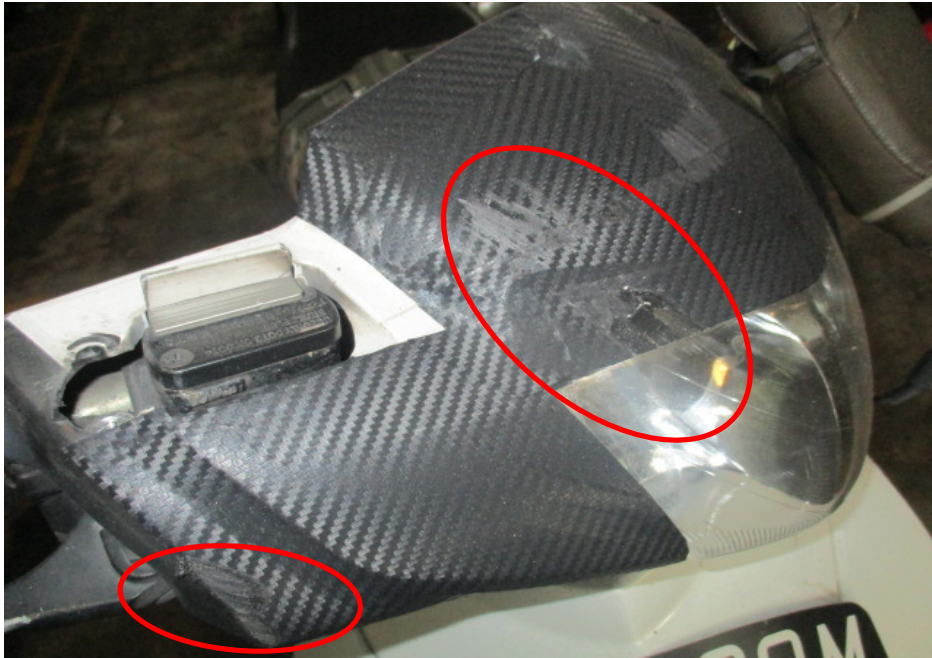


Photo 3 shows a closer view of the headlight assembly (circled) which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.



Photo 4 shows a closer view of the front mudguard 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 (circled) as well as the dislodged right side mirror (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 6 shows a closer view of the right cowl of the Motorcycle that had sustained damage as a result of the accident (arrowed).



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



Photo 8 shows a close up view of the exhaust muffler and exhaust muffler heat shield (circled) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 9 shows a close up view of the right rear side cover (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 10 shows the top box of the Motorcycle which was observed to have sustained damages of grazing nature as a result of the accident.



Photo 11 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 12 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 on the left side of the Motorcycle were intact with no visible damage. There was no fluid leak and/or fluid stain found around the left engine area of the Motorcycle. The outer engine cover on the right side of the Motorcycle had sustained a crack as a result of the accident however the engine components were still intact. There was also no fluid leak and/or fluid stain found around the right 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 13 – 16 below.



Photo 13 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 14 shows the right side of the engine of the Motorcycle at the time of our inspection. The outer engine cover had sustained a crack as a result of the accident (circled) however the engine components were still intact. There was also no fluid leak and/or fluid stain found around the right engine area of the Motorcycle.



Photo 15 shows a close up of the crack sustained to the outer engine cover on the right side of the engine of the Motorcycle (circled). However we observed that the engine components were still intact. There was also no fluid leak and/or fluid stain found 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.

Steering System & Braking System

11. Our checks on the various steering components of the Motorcycle revealed that its steering system was in serviceable condition. Its front fork was 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.
12. 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, brake lever and brake foot pedal, revealed all to be intact and without damage. There was also no visible tear or cut observed on the connecting hoses and cables.

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 the brake lever and stepping on the brake pedal.
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 17 – 21 below.



Photo 17 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 18 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.

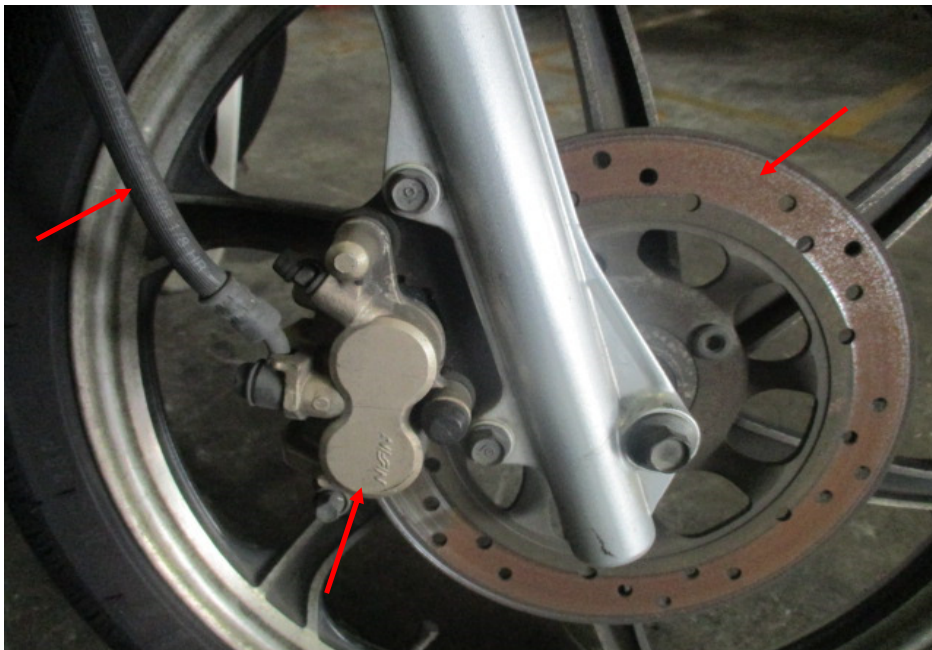


Photo 19 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 20 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level and without contamination for operational purposes.



Photo 21 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

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 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.

Muhd Nazril*Senior Technical Investigator***Ang Bryan Tani***AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA
Senior Technical Investigator
Technical Investigation & Reconstructionist (SAE-A)*

DISCLAIMER OF LIABILITY TO THIRD PARTIES:- This Report is made solely for the use and benefit of the Client named on the front page of this Report. No liability or responsibility whatsoever, in contract or tort, is accepted to any third party who may rely on the Report wholly or in part. Any third party acting or relying on this Report, in whole or in part, does so at his or her own risk.