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Your Ref: TP/IP/29690/2022 17 February 2023
Our Ref : CI/TPD23001713/N

General Investigation Team
Traffic Police Department
Singapore Police Force
10 Ubi Avenue 3
Singapore 408865

INSPECTION REPORT OF MOTORCYCLE FBM 221L

1. We refer to your request dated 13 December 2022 to conduct a physical inspection of a motorcycle bearing registration number FBM 221L herein referred to as **"Motorcycle"**), which was involved in a non- fatal road traffic accident on 2 November 2022.

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 16 February 2023 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

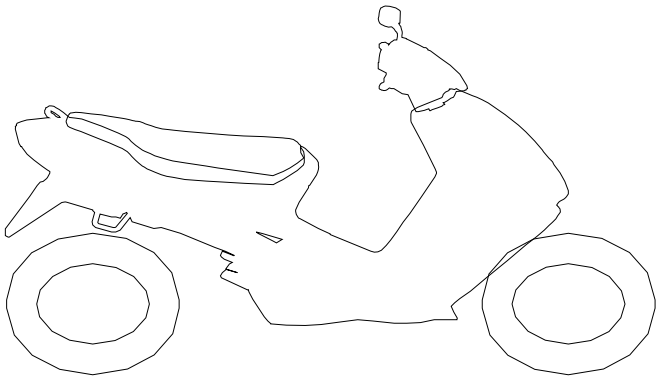
4. The mileage of the Motorcycle could not be recorded at the time of our inspection due to a missing speedometer gauge.

5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include it headlight, front mudguard, front brake lever, clutch lever, side mirrors, rear brake pedal, right front footrest, top box rack, and exhaust muffler heat shield, amongst others.

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.

7. The rear tyre was both observed to be sufficiently inflated for vehicular operation. However the front tyre was observed to be deflated. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Metzeler 130/70 - 17 (3mm)

Metzeler 100/80 - 17 (2mm)
(Deflated)

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 was broken. See photos 1 – 15 below.

Photo 1 shows the mileage of the Motorcycle could not be recorded at the time of our inspection due to a missing speedometer gauge (circled).

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 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 it headlight, front mudguard, front brake lever, clutch lever, side mirrors, rear brake pedal, right front footrest, top box rack and exhaust muffler heat shield, amongst others.

Photo 4 shows a closer view of the cracked headlight (arrowed) of the Motorcycle as a result of the accident.

Photo 5 shows a closer view of the cracked front mudguard of the Motorcycle as

Photo 6 shows the front brake lever and right handlebar end (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 7 shows a closer view of the dislodged right rear side cover (arrowed) of the Motorcycle as a result of the accident.

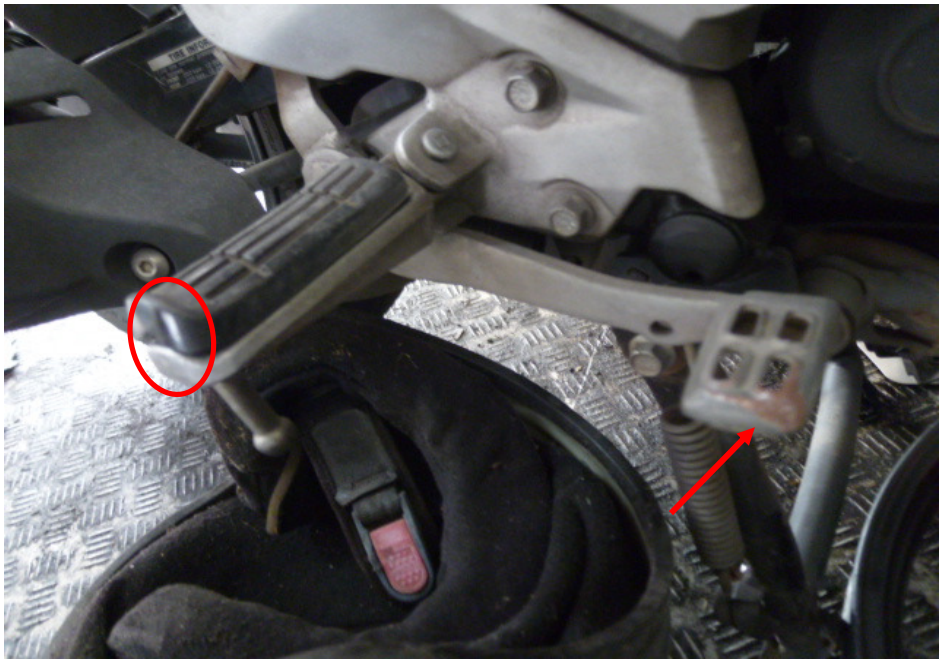


Photo 8 shows a closer view of the grazed rear brake pedal (arrowed) and right front footrest (circled) of the Motorcycle as a result of the accident.

Photo 9 shows a closer view of the torn pillion seat circled) and missing tail light cover (arrowed) of the Motorcycle as a result of the accident.

Photo 10 shows the deformed top box rack (arrowed) of the Motorcycle as a result of the accident.

Photo 11 shows the left side mirror, clutch lever and left handlebar end (arrowed) of the Motorcycle that had sustained damage as a result of the accident.

Photo 12 shows a closer view of the exhaust muffler heat shield which was amongst the body parts of the Motorcycle that had sustained damages of grazing nature as a result of the accident (arrowed).

Photo 13 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. However the front tyre was observed to be deflated..

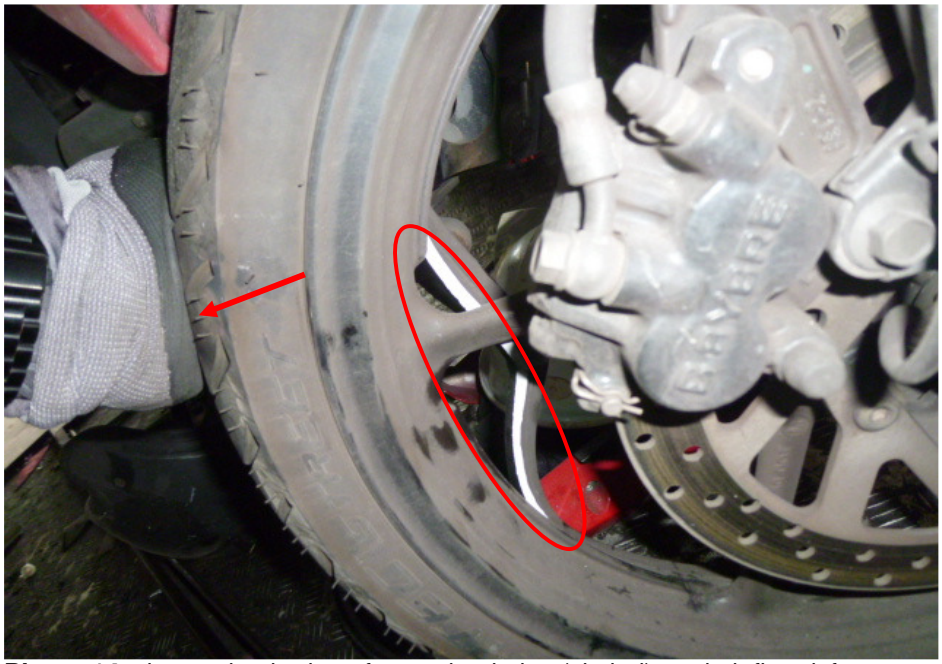


Photo 14 shows the broken front wheel rim (circled) and deflated front tyre (arrowed) of the Motorcycle at the time of our inspection.

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. 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 16 – 19 below.

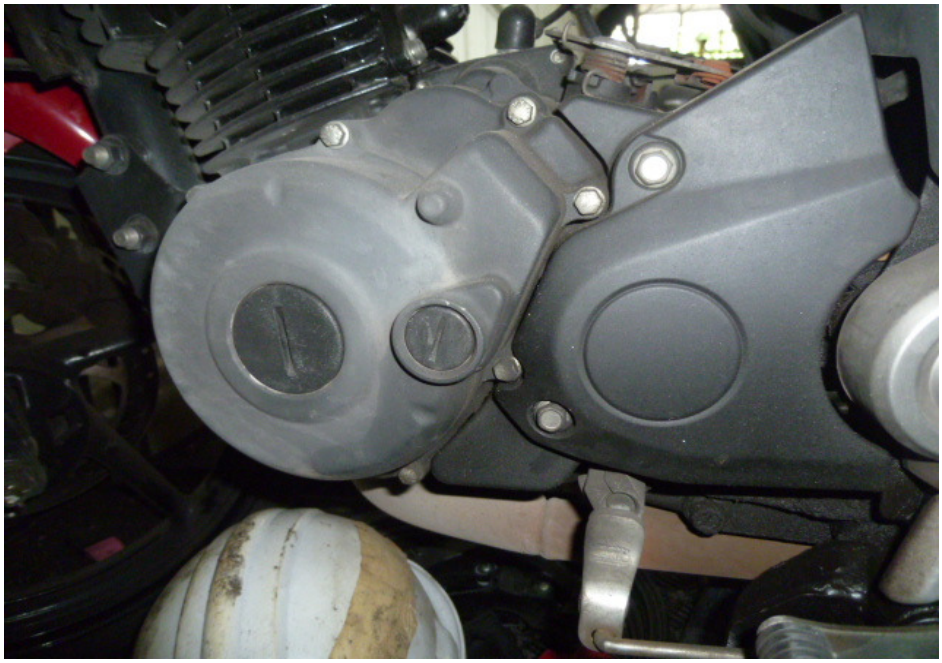


Photo 16 shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.

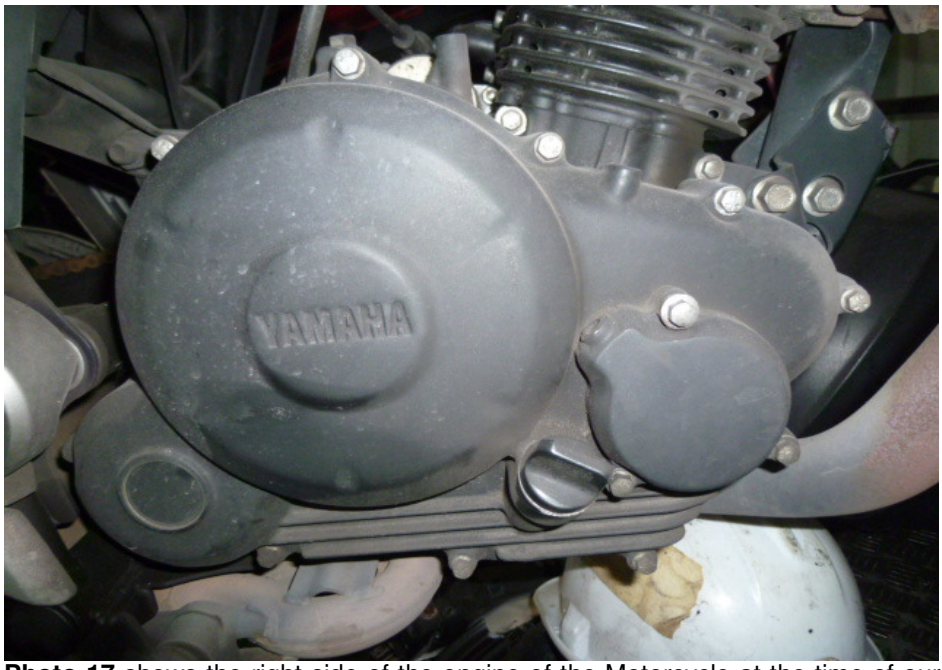


Photo 17 shows the right side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the right engine area of the Motorcycle.

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.

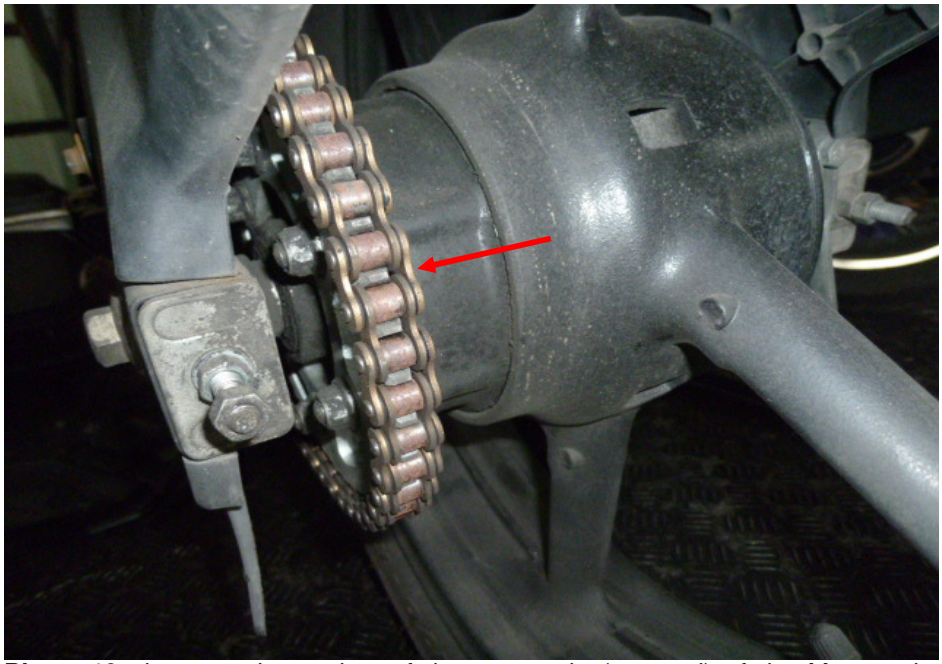


Photo 19 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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 of its fork assembly. The front forks were found to be bent as a result of the accident.

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 leakage of brake fluid observed along the front brake hose. This was from the respective front brake fluid reservoir to the front brake caliper of the Motorcycle.

13. We were unable remove the front brake reservoir cover to examine whether the front brake fluid was without contamination due to worn out screws. However the front brake fluid was observed to be of sufficient level for operational purposes. There was also no visible tear or cut observed on the connecting hoses and cables.

14. Static brake tests conducted on the Motorcycle had appeared to indicate that the front brake system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon pressing the front brake lever. This would indicate that there's no leakage of pressure/vacuum in the front brake system.

15. 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 – 25 below.

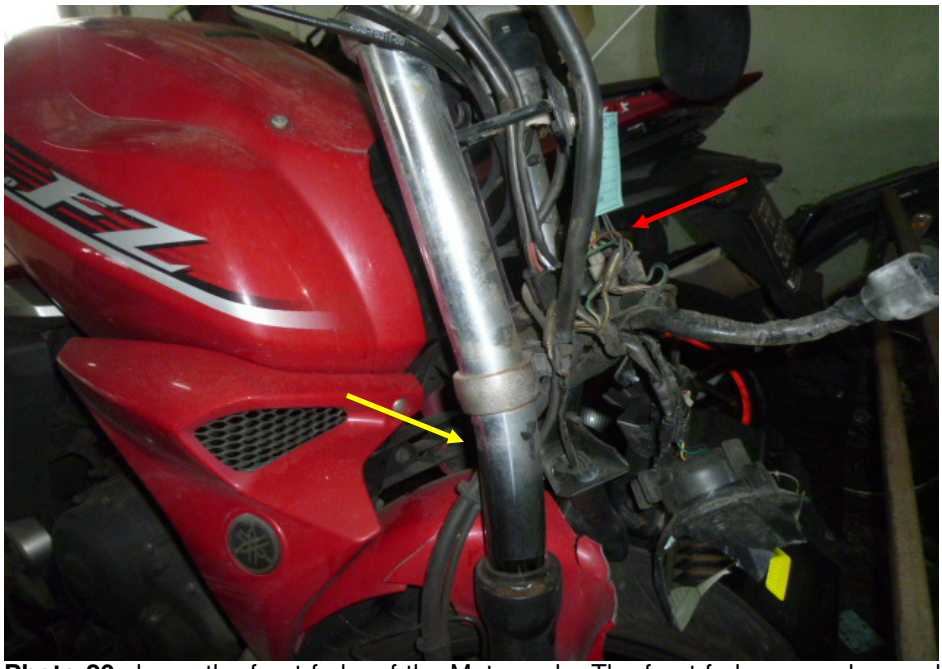


Photo 20 shows the front forks of the Motorcycle. The front forks were observed to be bent inwards as a result of the accident (arrowed). We were hence not able to conduct any tests on the steering system of the Motorcycle.

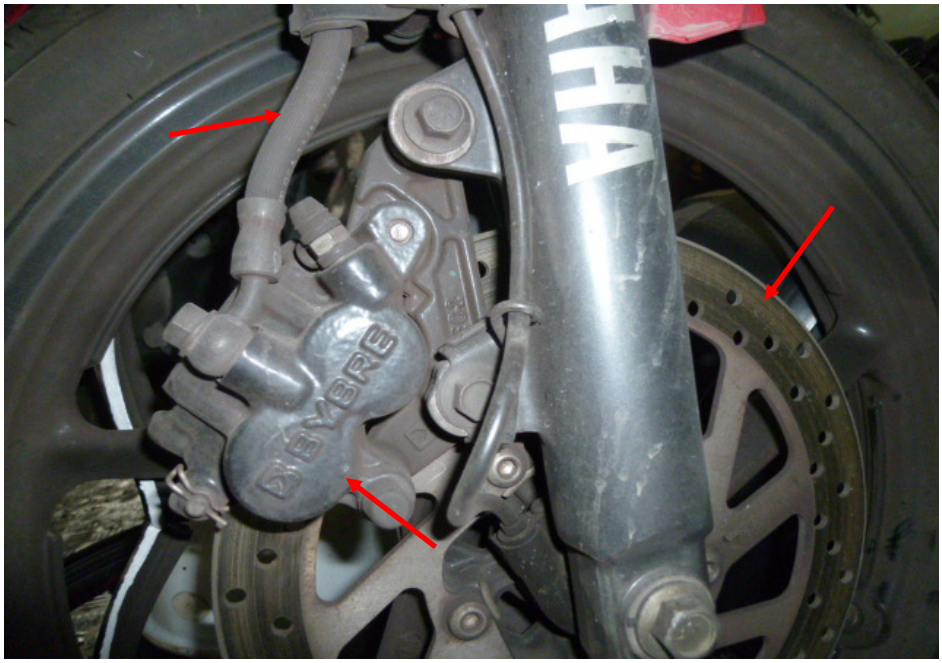


Photo 21 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no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

Photo 22 shows the brake fluid reservoir cover for the front brake of the Motorcycle. We were unable to examine whether the front brake fluid was without contamination due to worn out screws (circled).

Photo 23 shows a close up view of the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes (arrowed).

Photo 24 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.

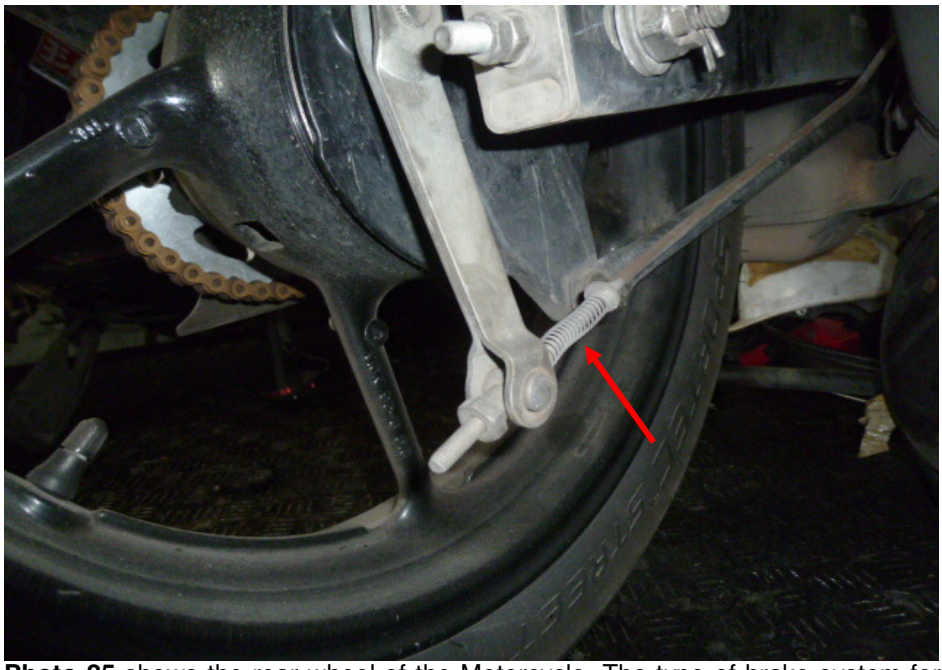
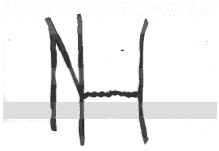


Photo 25 shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of a mechanical type, controlled by the brake foot pedal of the Motorcycle. Our checks of the cable (arrowed), spring and drum which are all part of the components in the rear brake system of the Motorcycle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

Conclusion

16. 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 was damaged as a result of the accident. The braking system of the Motorcycle was observed to be in serviceable condition.

17. The tyres of the Motorcycle were found to be in a serviceable condition (which had included the deflated front 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 tyres. The rear tyre was sufficiently inflated for vehicular operation. Both tyres had remaining tread depth of approximately 2mm and 3mm.



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