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Your Ref: TP/IP/10841/2022 5 September 2022
Our Ref : CI/TPD22005265/N

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

INSPECTION REPORT OF MOTORCYCLE FBT 1240M

1. We refer to your request dated 30 May 2022 to conduct a physical inspection of a motorcycle bearing registration number FBT 1240M (herein referred to as **"Motorcycle"**), which was involved in a fatal road traffic accident on 5 May 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 2 September 2022 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.

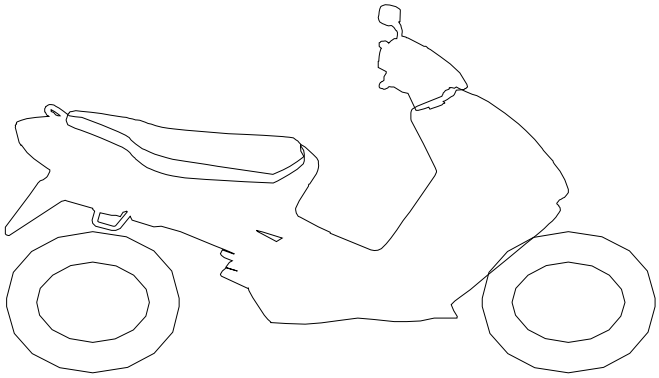
General Condition

4. The mileage of the Motorcycle at the time of our inspection was not recorded due to the damages sustained to the speedometer gauge as a result of the accident.

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, side cowlings, handlebar, side mirrors, clutch lever, front brake lever, handlebar ends, radiator, front basket, gear shift pedal, left front footrest, rear side covers and exhaust muffler, 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. 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:-



Pirelli 130/70 - 17 (6mm)

Pirelli 90/80 - 17 (4mm)
Deflated

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 1 – 18 below.

Photo 1 shows a general view of the rear body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.

Photo 2 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.

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 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, side cowlings, handlebar, side mirrors, clutch lever, front brake lever, handlebar ends, radiator, front basket, gear shift pedal, left front footrest, rear side covers and exhaust muffler, amongst others.

Photo 5 shows a closer view of the damaged speedometer gauge of the Motorcycle. The mileage of the Motorcycle at the time of our inspection was not recorded due to the damage sustained to the speedometer display screen as a result of the accident.

Photo 6 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.

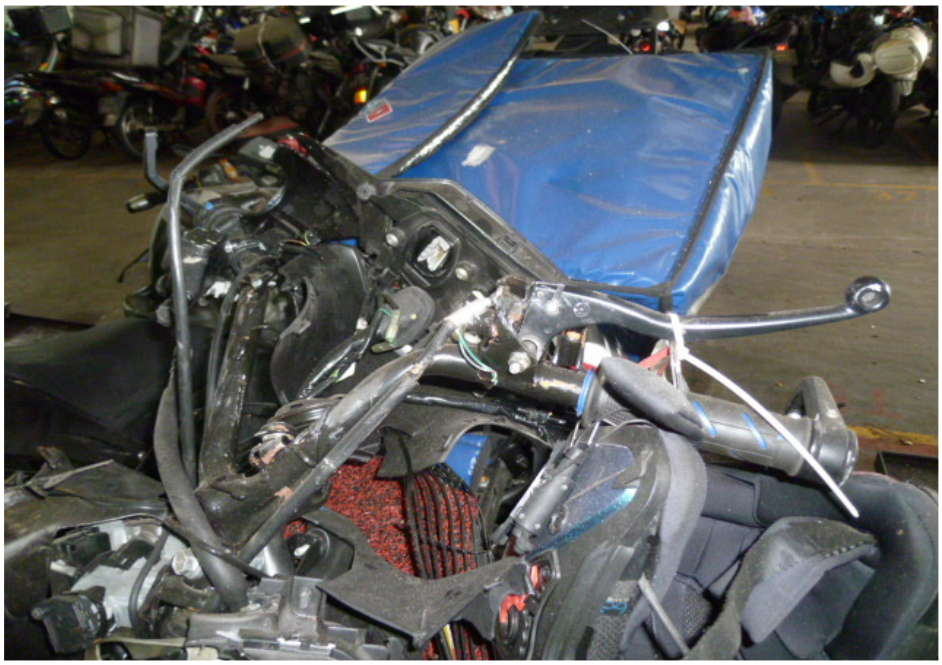


Photo 7 shows a close up view of the side mirrors, clutch lever, front brake lever, handlebar and handlebar ends of the Motorcycle. These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.

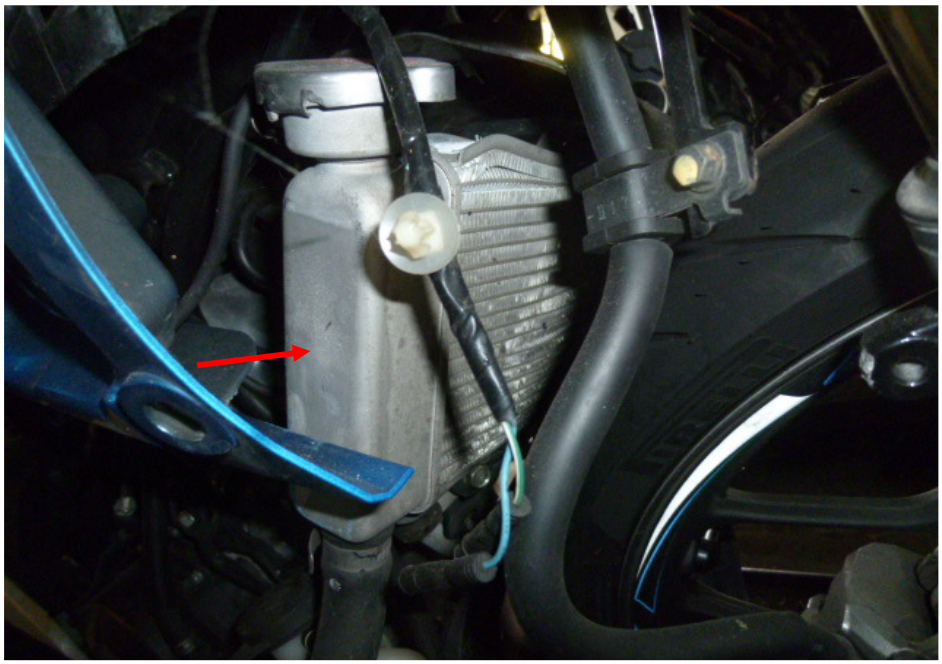


Photo 8 shows the deformed radiator of the Motorcycle as a result of the accident (arrowed).

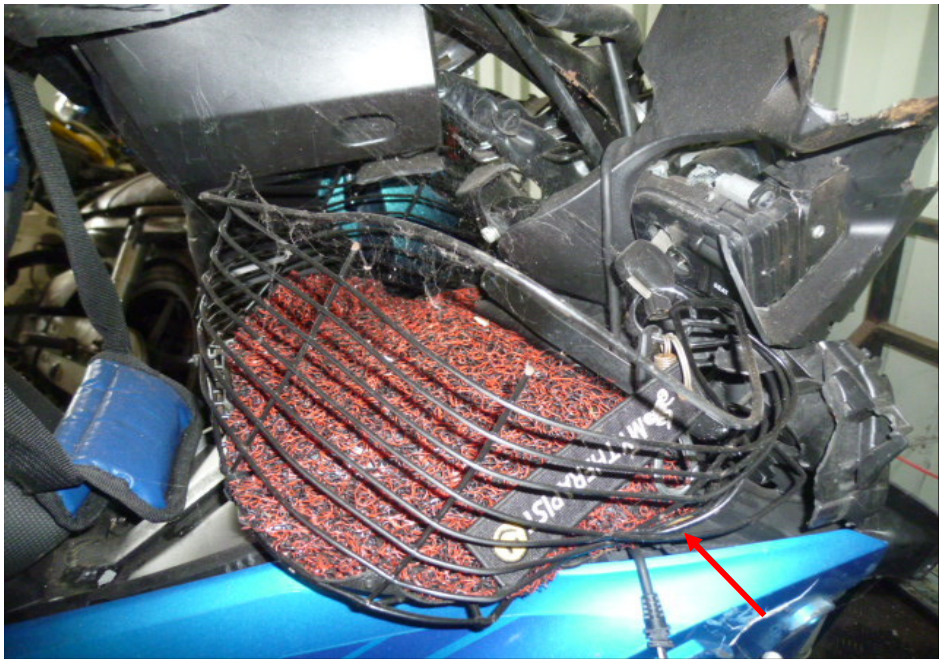


Photo 9 shows the front basket (arrowed) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 10 shows the missing left cowling which was amongst the body of the Motorcycle that had sustained damage as a result of the accident.

Photo 11 shows the cracked right cowling which was amongst the body of the Motorcycle that had sustained damage as a result of the accident.

Photo 12 shows a closer view of the gear shift pedal (arrowed) and left front footrest (circled) which was 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 grazed left rear side cover (arrowed) which was 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 grazed right rear side cover (arrowed) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

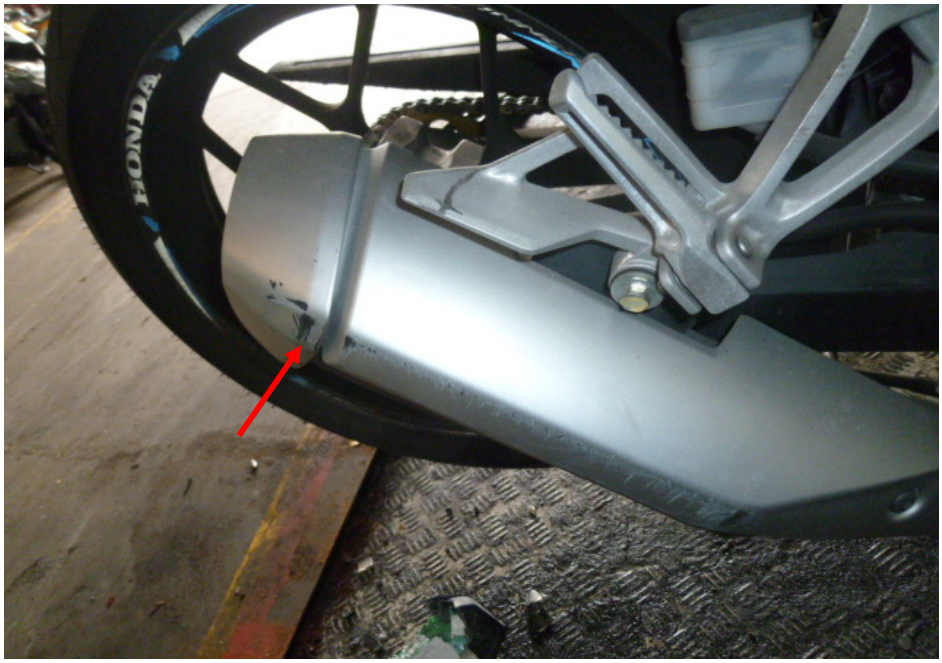


Photo 15 shows the grazed exhaust muffler of the Motorcycle as a result of the accident (arrowed).

Photo 16 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 4mm. 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 17 shows the deflated front tyre (arrowed) of the Motorcycle at the time of our inspection.

Photo 18 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 6mm. 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 gear train of the Motorcycle, which rotates the rear wheel of the Motorcycle, was found to be in serviceable condition and without any misalignment. It was also adequately lubricated for operating purposes. See photos 19 – 22 below.

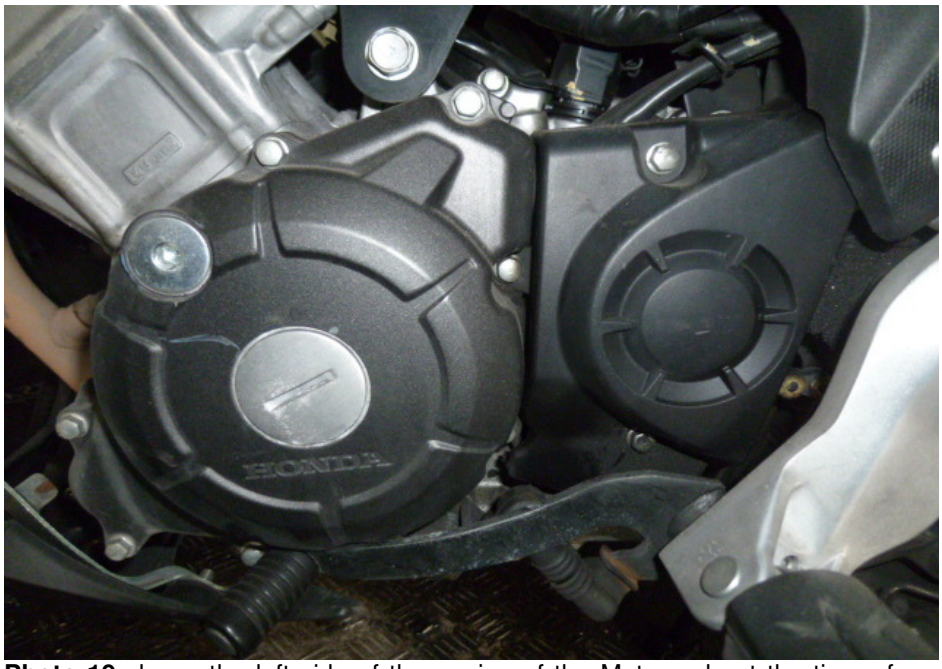


Photo 19 shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.

Photo 20 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 21 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.

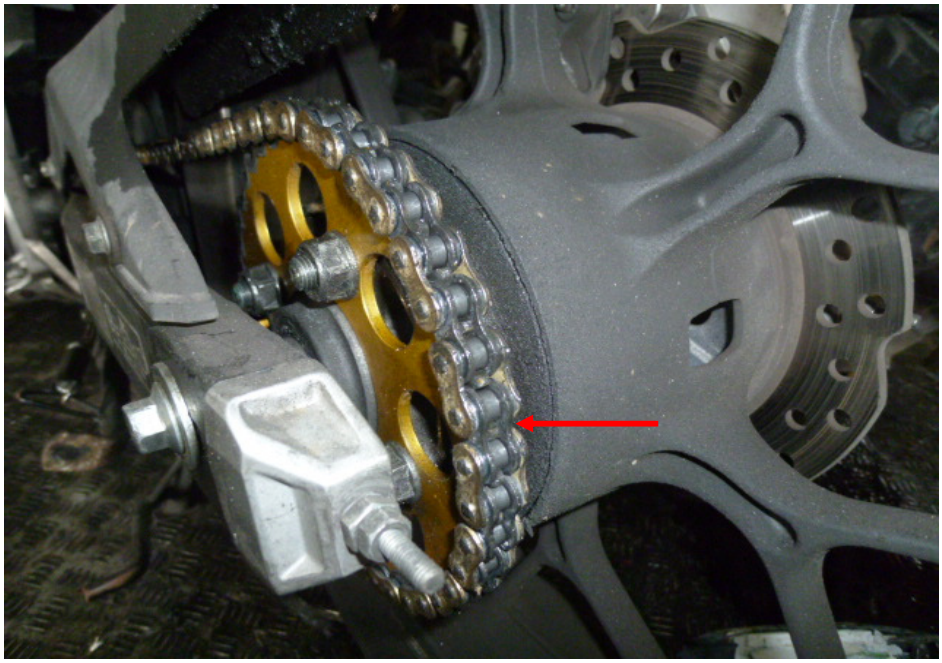


Photo 22 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

Steering System & Braking System

10. 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 forks. The front forks were found to be broken as a result of the accident.

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 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.

12. Our visual examination of the various components in the Motorcycle's braking system like the brake discs, brake calipers, 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 caliper and rear brake caliper of the Motorcycle.

13. The brake fluid for the front brake was found to be of sufficient level for operating purposes and without any contamination. The brake fluid for the rear brake was observed to be of sufficient level for operational purposes. However the brake fluid for the rear brake was found to be slightly contaminated.

14. However we observed that part of the front brake master pump had broken off as a result of the accident. Hence static as well as operational brake tests could not be conducted on the Motorcycle front braking system. We were unable to determine if there was any leakage of pressure/vacuum in the front brake system.

15. Static brake tests conducted on the rear braking system of the Motorcycle had appear to indicate that the rear braking system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon stepping on the rear brake pedal. This would indicate that there was no leakage of pressure/vacuum in the rear braking 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 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 23 – 28 below.

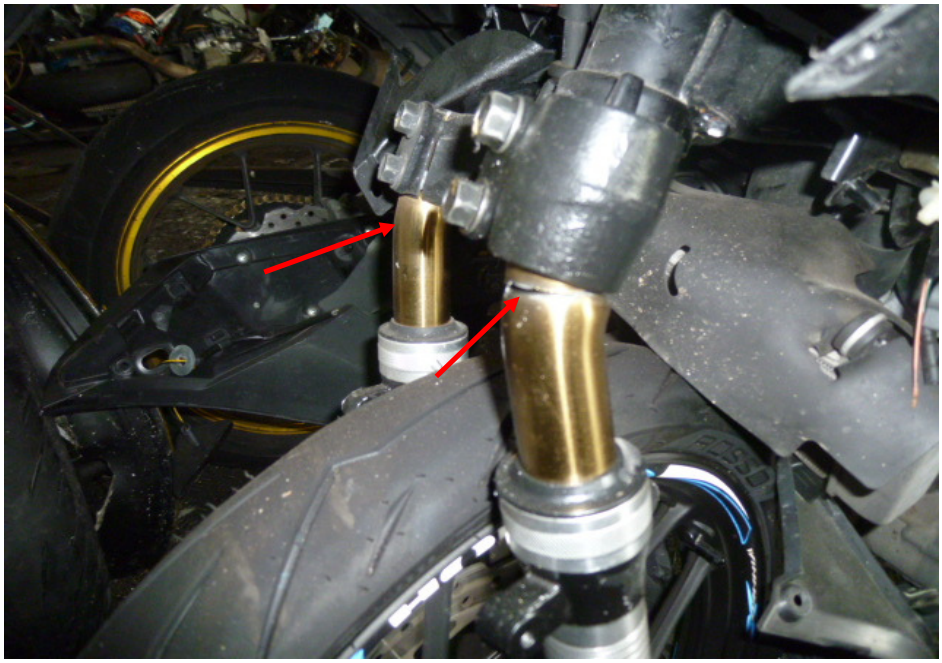


Photo 23 shows the front forks of the Motorcycle. The front forks (arrowed) were observed to be broken as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.

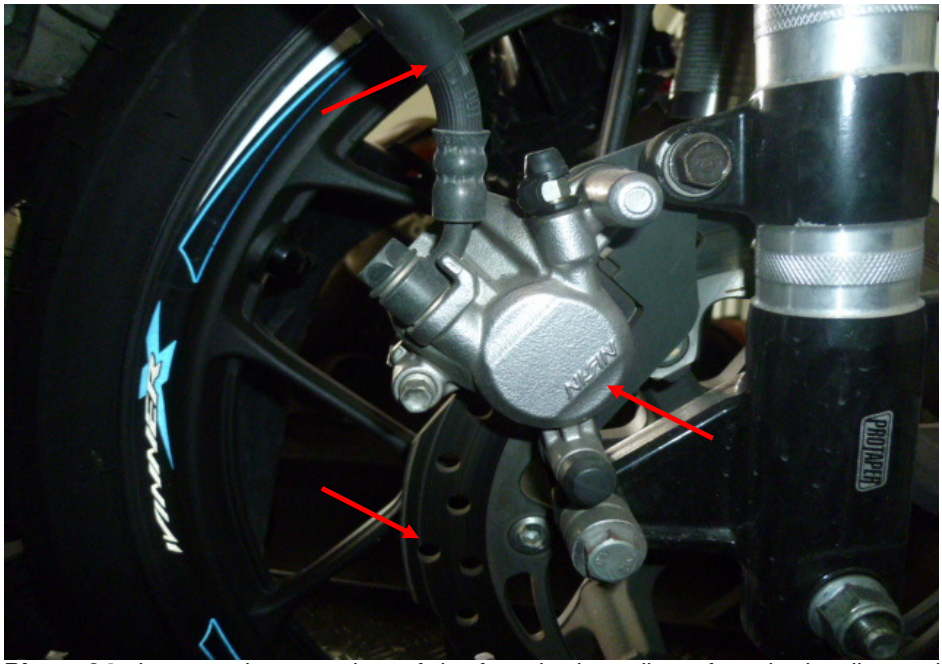


Photo 24 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no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

Photo 25 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 and without contamination.

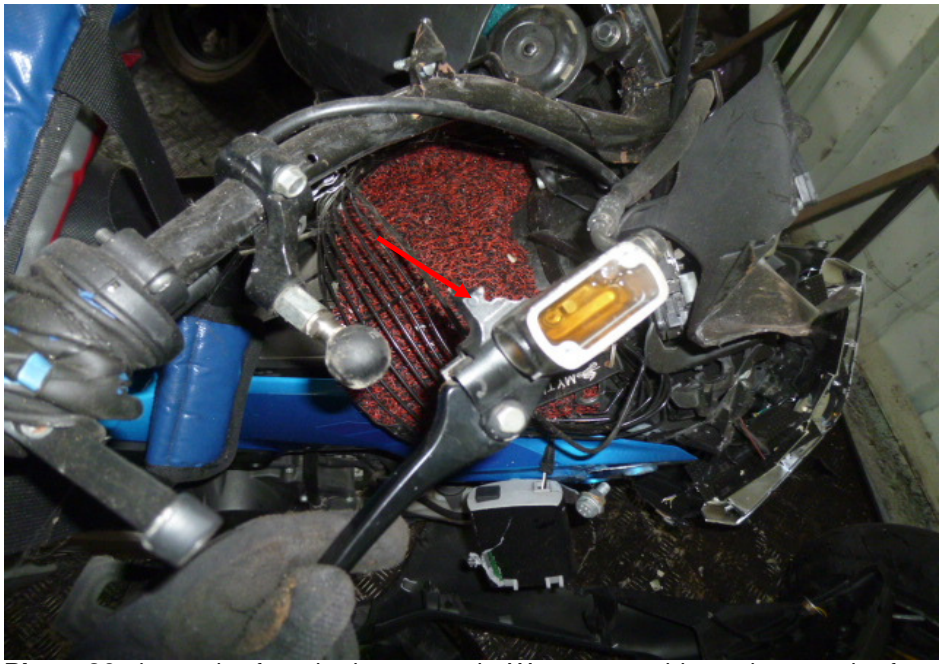


Photo 26 shows the front brake reservoir. We were unable to depress the front brake lever as part of front brake master pump had broken off as a result of the accident (arrowed). Hence we were unable to determine if there was any leakage of pressure/vacuum in the front brake system.

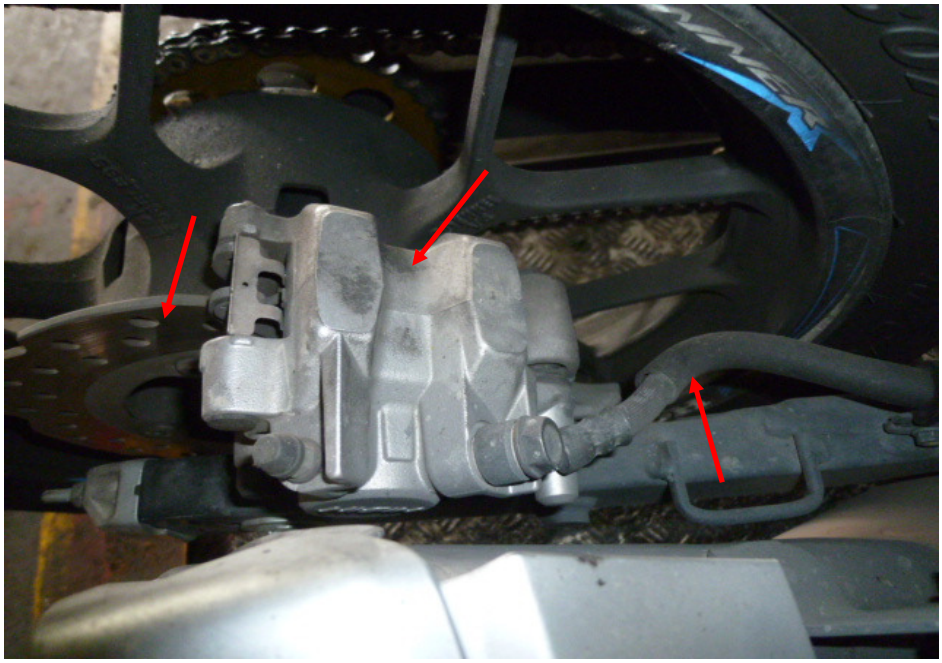


Photo 27 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

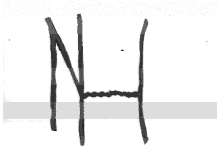
Photo 28 shows a close up view of the brake fluid reservoir for the rear brake of the Motorcycle. The rear brake fluid was observed to be of sufficient level for operational purposes. However it was found to be slightly contaminated (arrowed).

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

18. 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. It was sufficiently inflated for vehicular operation with remaining tread depth of approximately 4mm and 6mm.

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 front forks (as a result of the accident), which had rendered the Motorcycle immobile.



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