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Your Ref: TP/IP/32687/2021 25 October 2021
Our Ref : CI/TPD21010814/N

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

INSPECTION REPORT OF MOTORCYCLE FBK 2349A

1. We refer to your request dated 22 September 2021 to conduct a physical inspection of a motorcycle bearing registration number FBK 2349A (herein referred to as **"Motorcycle"**), which was involved in a fatal road traffic accident on 8 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 8 January 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 the damages sustained to the speedometer gauge.

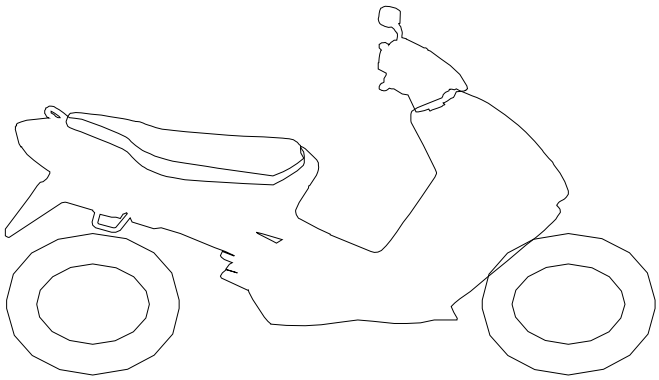
5. The Motorcycle was observed to have sustained damages at its frontal portion and right body. The body parts that were found to have been damaged include its windshield, headlight assembly, front cowling, front mudguard, right cowling, petrol tank, front brake lever guard, right side mirror, rear brake pedal, right front footrest and exhaust muffler protector, amongst others.

Tyres and Wheel Rims

6. The condition of the rear tyre 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 rear tyre. The rear tyre was observed to be sufficiently inflated for vehicular operation.

7. However we observed a tear on the front tyre. The front tyre was also observed to be deflated as a result of the accident.

8. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Bridgestone 190/55 - 17 (6mm)

Bridgestone 120/70 - 17 (4mm)
Cut / Deflated

9. 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 had sustained damages of grazing nature. See photos 1 – 16 below.

Photo 1 shows mileage of the Motorcycle which could not be recorded at the time of our inspection due to the damages sustained to the 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 at its frontal portion and right body.

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 at its frontal portion and right body.

Photo 4 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 at its frontal portion and right body. The body parts that were found to have been damaged include its windshield, headlight assembly, front cowling, front mudguard, right cowling, petrol tank, front brake lever guard, right side mirror, rear brake pedal, right front footrest and exhaust muffler protector, amongst others.

Photo 5 shows a close up view of the broken windshield was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).

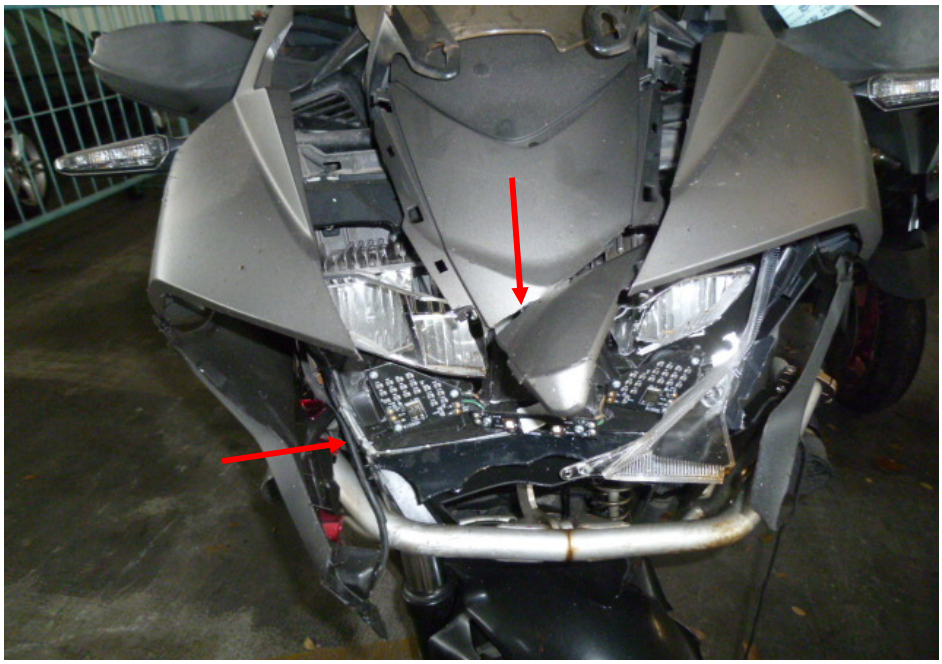


Photo 6 shows a closer view of the cracked headlight assembly and front cowling which were amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident (arrowed).

Photo 7 shows a closer view of the cracked front mudguard of the Motorcycle as a result of the accident (arrowed).

Photo 8 shows a closer view of the front brake lever guard and right side mirror (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

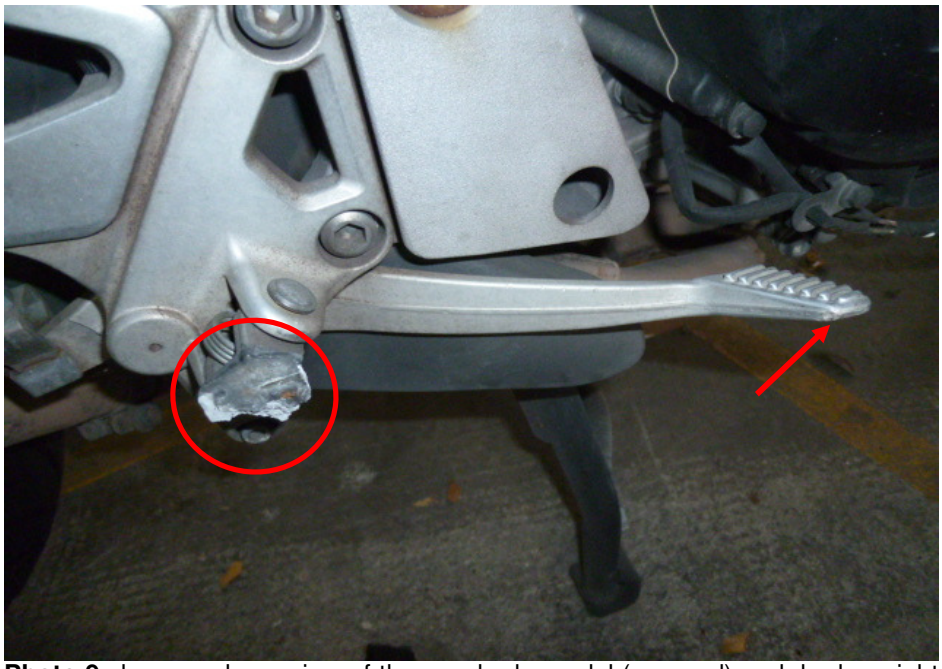


Photo 9 shows a closer view of the rear brake pedal (arrowed) and broken right front footrest (circled) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 10 shows a closer view of the dented petrol tank of the Motorcycle as a result of the accident (arrowed).

Photo 11 shows a closer view of the exhaust muffler protector which was amongst the body parts of the Motorcycle that had sustained damages of grazing nature as a result of the accident (arrowed).

Photo 12 shows a closer view of the cracked right cowling of the Motorcycle 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 4mm. The tyre was observed to be deflated. We also observed a tear on the front tyre as a result of the accident (circled).

Photo 14 shows a closer view of the tear on the front tyre as a result of the accident (arrowed).

Photo 15 shows the deflated front tyre and grazed front wheel rim (arrowed) of the Motorcycle as a result of the accident at the time of our inspection.

Photo 16 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

10. Upon examination of the engine area of the Motorcycle, 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 also no fluid leak and/or fluid stain found around the left engine area of the Motorcycle. The various right engine components had sustained damage of grazing nature 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.

11. The gear chain of the Motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 17 – 20 below.

Photo 17 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.

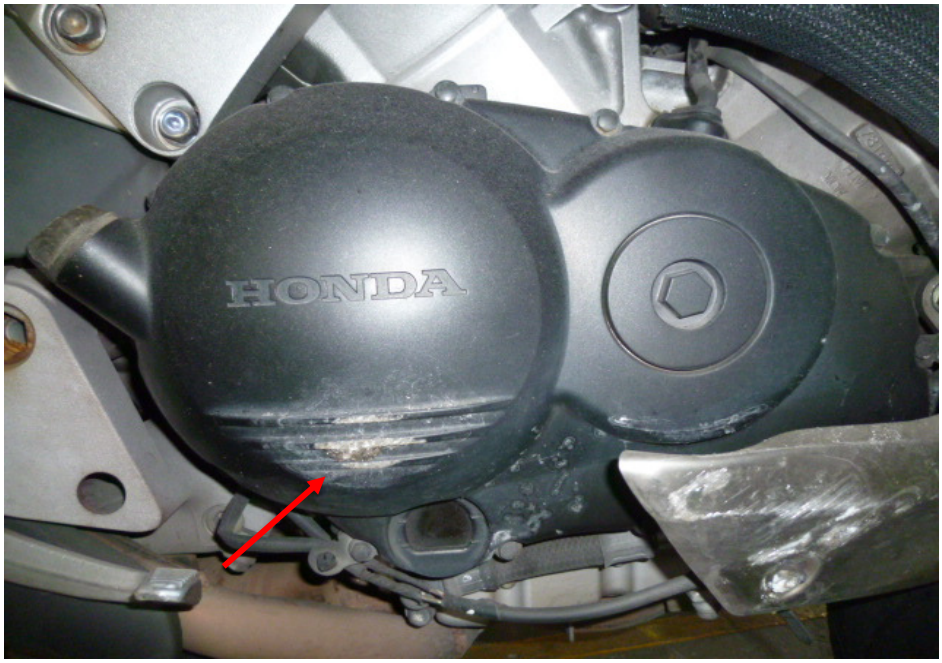


Photo 18 shows the right side of the engine of the Motorcycle at the time of our inspection. The various left engine components had sustained damage of grazing nature as a result of the accident (arrowed) however the engine components were still intact. There was also no fluid leak and/or fluid stain found around the right engine area of the Motorcycle.

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

Photo 20 shows a closer view of the gear chain (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

12. 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 left fork was found to be broken as a result of the accident which had rendered the Motorcycle immobile.

13. 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.

14. Our visual examination of the various components in the Motorcycle's hydraulic clutch system like the clutch lever and clutch hoses 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 observed to be of sufficient level for operating purposes. However it was also found to be slightly contaminated.

15. Static tests conducted on the clutch of the Motorcycle had appear to indicate that the hydraulic clutch system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon pressing the clutch lever. This would indicate that there was no leakage of pressure/vacuum in the hydraulic clutch system.

16. 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.

17. Our visual examination of the various components in the Motorcycle's braking system like the brake discs, brake calipers, brake lever, 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. The brake fluid for the front brake and rear brake was also found to be of sufficient level for operational purposes and without any contamination.

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

19. 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 21 – 28 below.

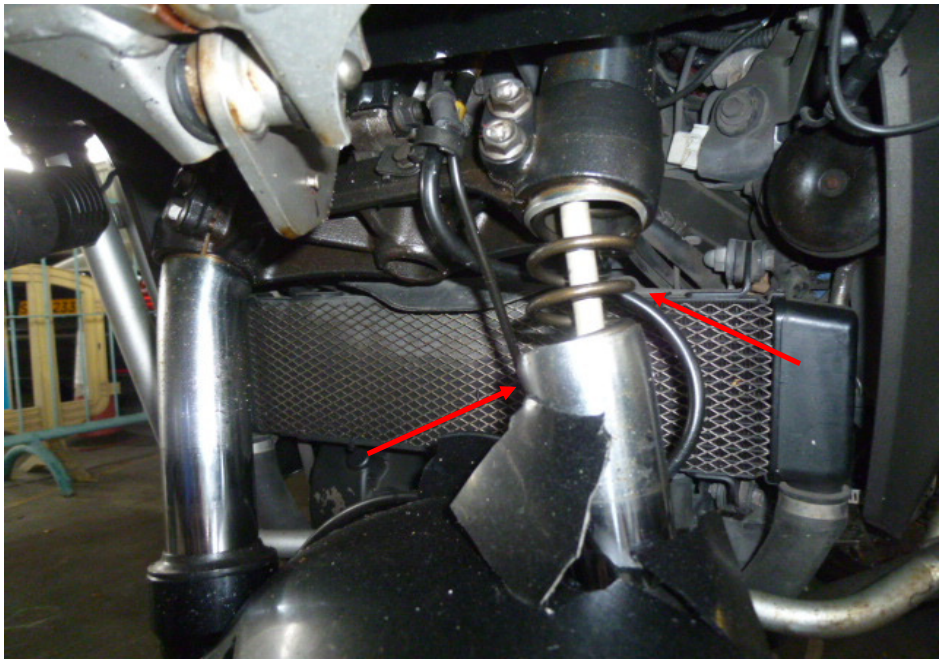


Photo 21 shows the front fork assembly of the Motorcycle. The left front fork was found to be broken as a result of the accident (arrowed) which had rendered the Motorcycle immobile. Hence we were not able to conduct any test(s) on the steering system of the Motorcycle.

Photo 22 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. However it was also found to be slightly contaminated (arrowed).

Photo 23 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.

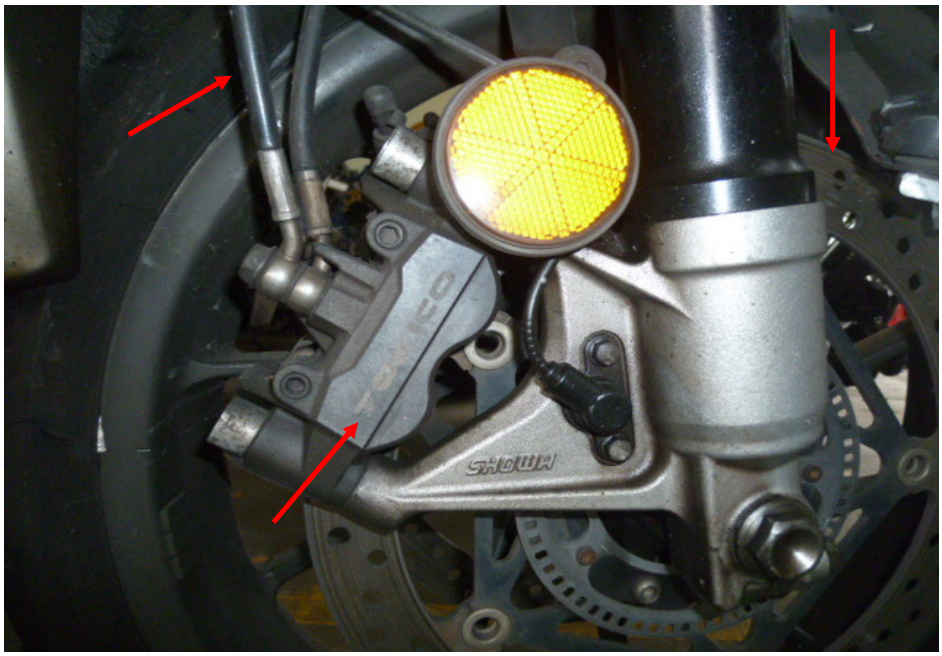


Photo 24 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) at the right side of the Motorcycle's front wheel, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed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

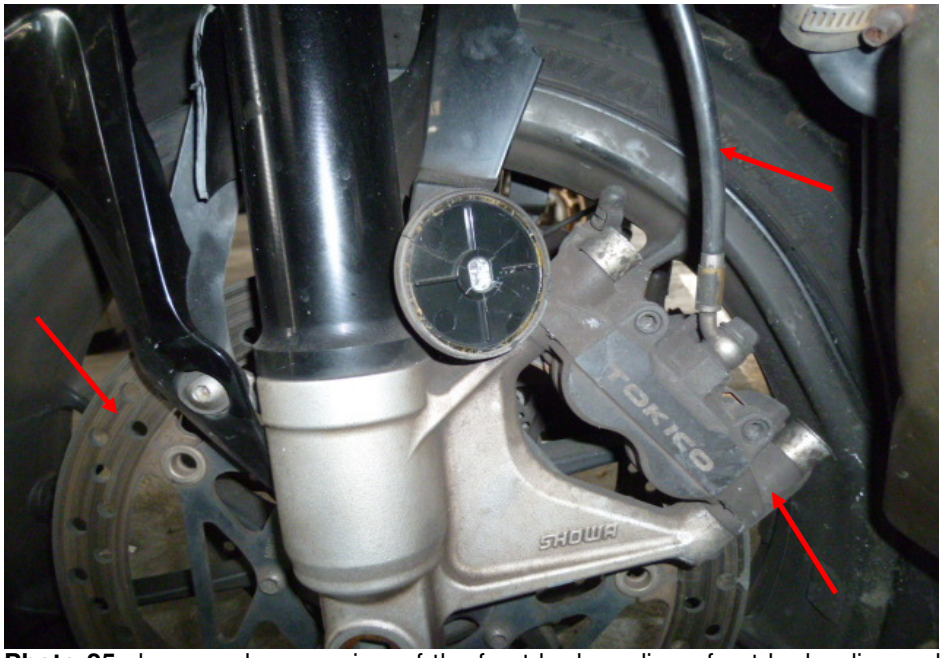


Photo 25 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) at the left side of the Motorcycle's front wheel, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

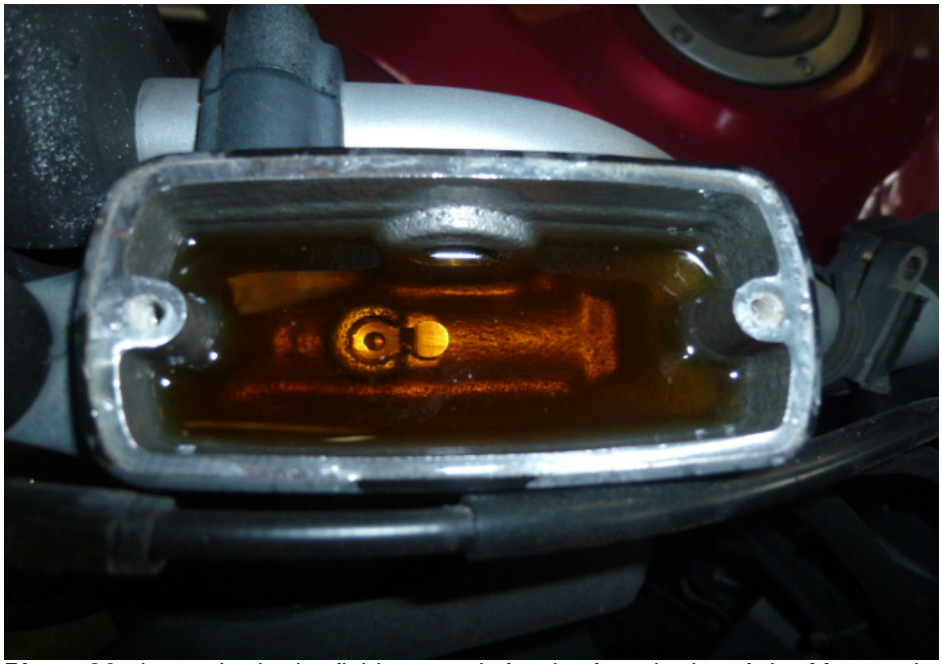


Photo 26 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes and without contamination.

Photo 27 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.

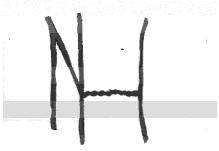
Photo 28 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

Conclusion

20. 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.

21. The 2 tyres of the Motorcycle were found to be in serviceable condition (which had included the torn 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 rear tyre. The rear tyre was sufficiently inflated for vehicular operation. Both tyres had remaining tread depth of approximately 4mm and 6mm.

22. 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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