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Your Ref: TP/IP/17949/2021 2 August 2021
Our Ref : CI/TPD21008843/N

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

MECHANICAL INSPECTION REPORT OF MOTORCYCLE FBE 5320T

1. We refer to your request on 1 June 2021 to conduct a physical inspection of a motorcycle bearing registration number FBE 5320T (herein referred to as **"Motorcycle"**), which was involved in a non- fatal road traffic accident on 10 April 2021.

2. The objective of the inspection is to 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 August 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.

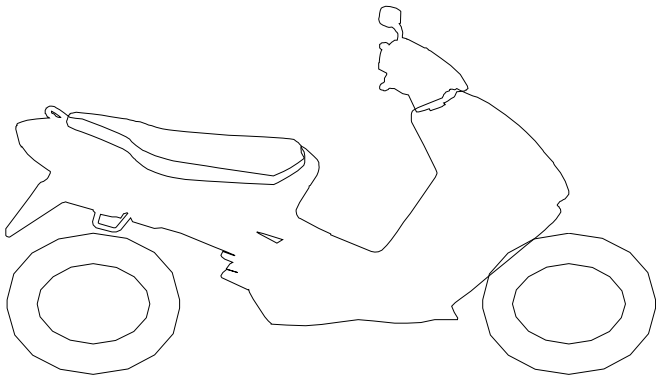
General Condition

4. The mileage of the Motorcycle at the time of our inspection was 1, 358km.

5. The Motorcycle had sustained damages all around. Body parts that were found to have been damaged include its front fork assembly, headlight assembly, head cowling, side cowlings, front mudguard, left side mirror, left handlebar end, clutch lever, front basket, radiator, top box bracket and rear number plate, 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. The rear tyre was 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 of the Motorcycle were recorded as follows:-



Maxxis 70/90 R17 (3mm)

Maxxis 70/90 R17 (3mm)
(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 rear wheel rim of the Motorcycle. However we did observe that the front wheel rim was bent as a result of the accident. See photos 1 – 16 below.

Photo 1 shows the speedometer gauge of the Motorcycle. The mileage of the Motorcycle at the time of our inspection was 1, 358km (circled).

Photo 2 shows a general view of the rear portion of the Motorcycle at the time of our inspection. The Motorcycle had sustained damages all around.

Photo 3 shows a general view of the frontal portion of the Motorcycle at the time of our inspection. The Motorcycle had sustained damages all around. Body parts that were found to have been damaged include its front fork assembly, headlight assembly, head cowling, side cowlings, front mudguard, left side mirror, left handlebar end, clutch lever, front basket, radiator, top box bracket and rear number plate, amongst others.

Photo 4 shows the general view of the head cowling (arrowed) of the Motorcycle which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 5 shows the general view of the front cowling and headlight assembly of which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).

Photo 6 shows the deformed front basket of the Motorcycle as a result of the accident (arrowed).

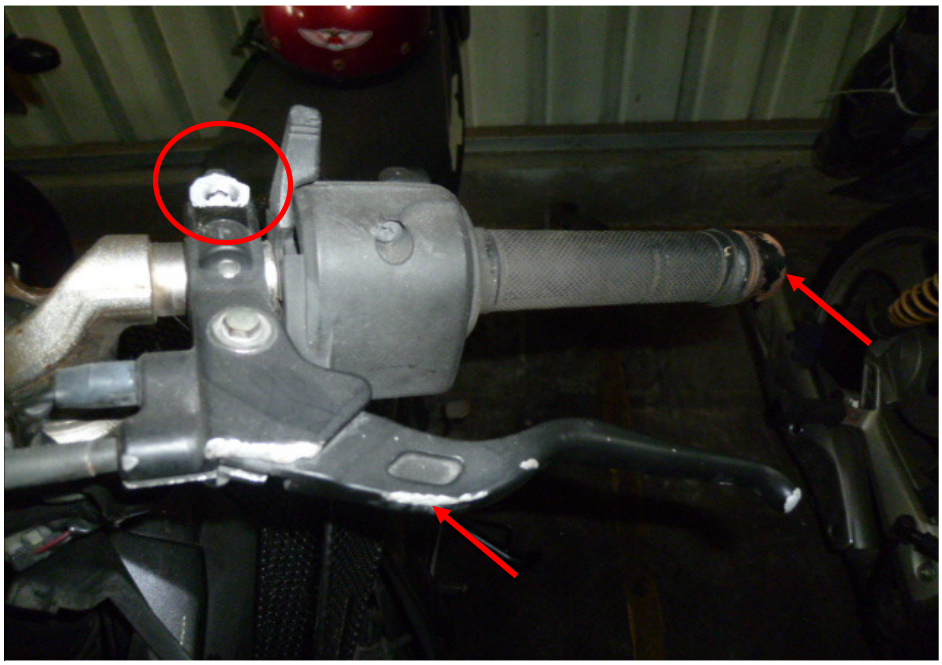


Photo 7 shows a close up view of the broken left side mirror (circled) as well as the clutch lever and left handlebar end (arrowed) of the Motorcycle. These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.

Photo 8 shows a close up view of the deformed left cowling (arrowed) of the Motorcycle as a result of the accident (arrowed).

Photo 9 shows a close up view of the cracked front mudguard of the Motorcycle as a result of the accident (arrowed).

Photo 10 shows a closer view of the cracked right cowling of the Motorcycle as a result of the accident (arrowed).

Photo 11 shows the grazed top box bracket (arrowed) of the Motorcycle as a result of the accident (arrowed).

Photo 12 shows the deformed radiator which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).

Photo 13 shows the dented rear number plate (arrowed) of the Motorcycle as a result of the accident.

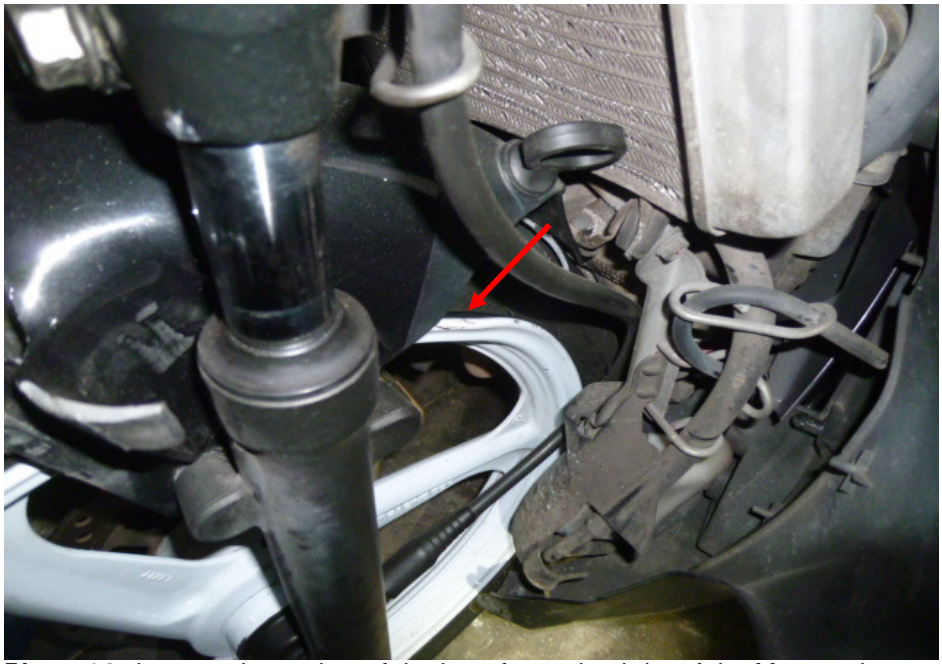


Photo 14 shows a closer view of the bent front wheel rim of the Motorcycle as a result of the accident (arrowed).

Photo 15 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. 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 front tyre. However the front tyre was observed to be deflated as a result of the accident.

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 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 gear chain 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 17 - 20 below.

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 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.

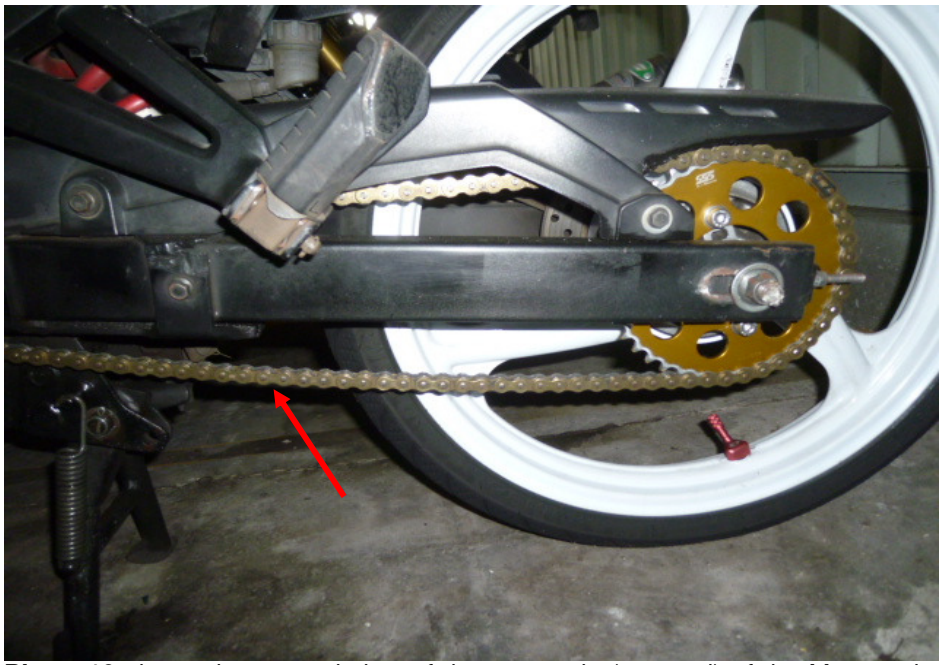


Photo 19 shows the general view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

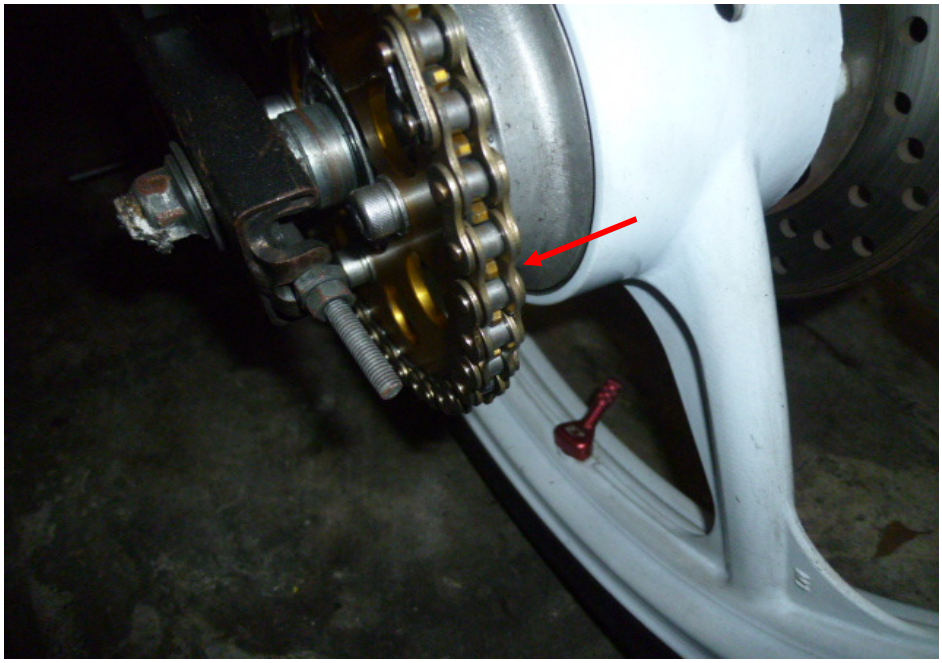


Photo 20 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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 bent inwards as a result of the accident which had rendered the Motorcycle immobile.

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 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 sufficiently level and without any contamination.

13. 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.

14. 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 – 25 below.

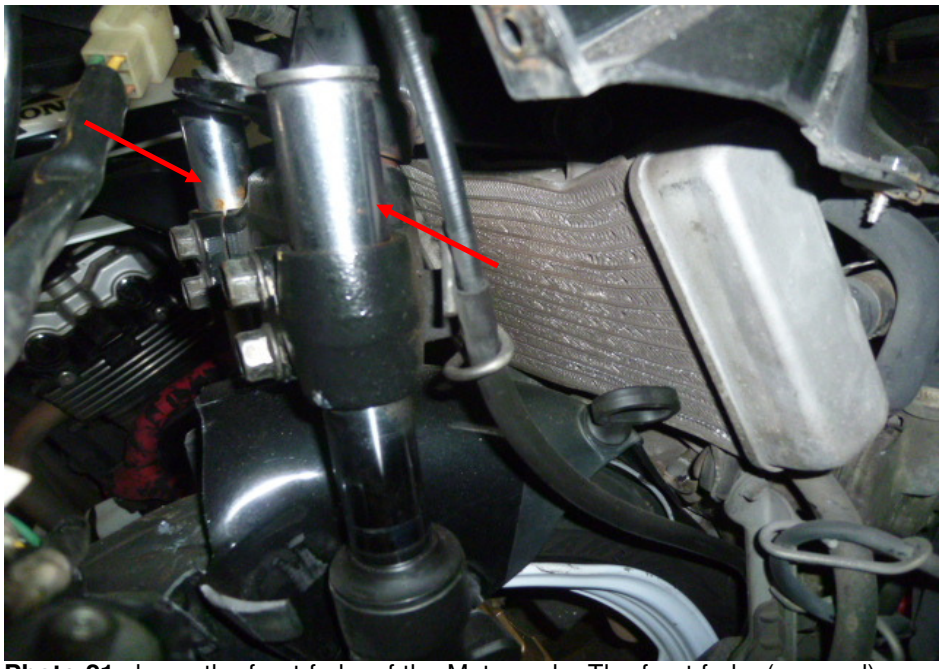


Photo 21 shows the front forks of the Motorcycle. The front forks (arrowed) were observed to be bent inwards as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.

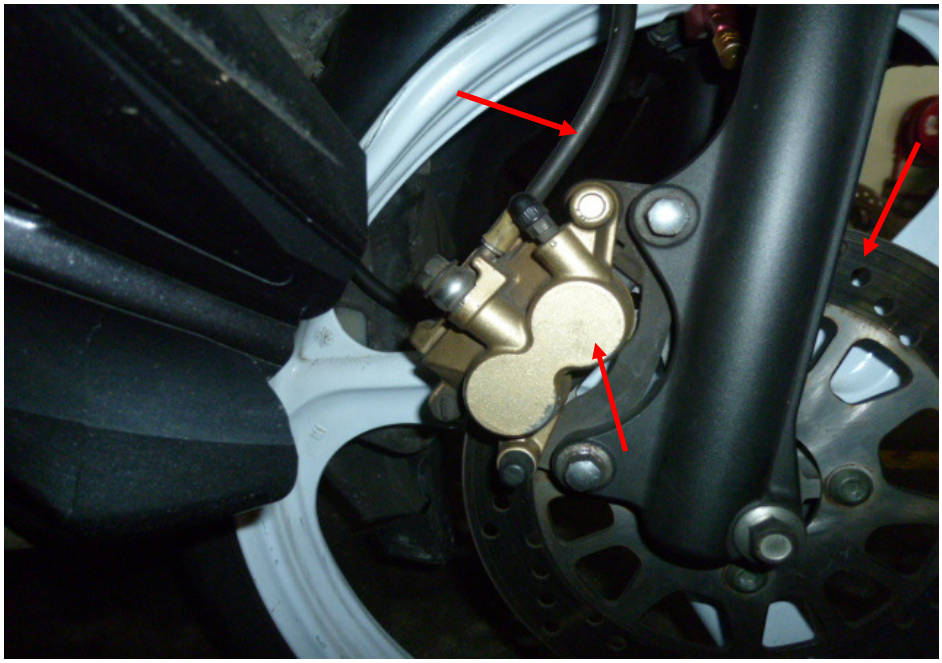


Photo 22 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

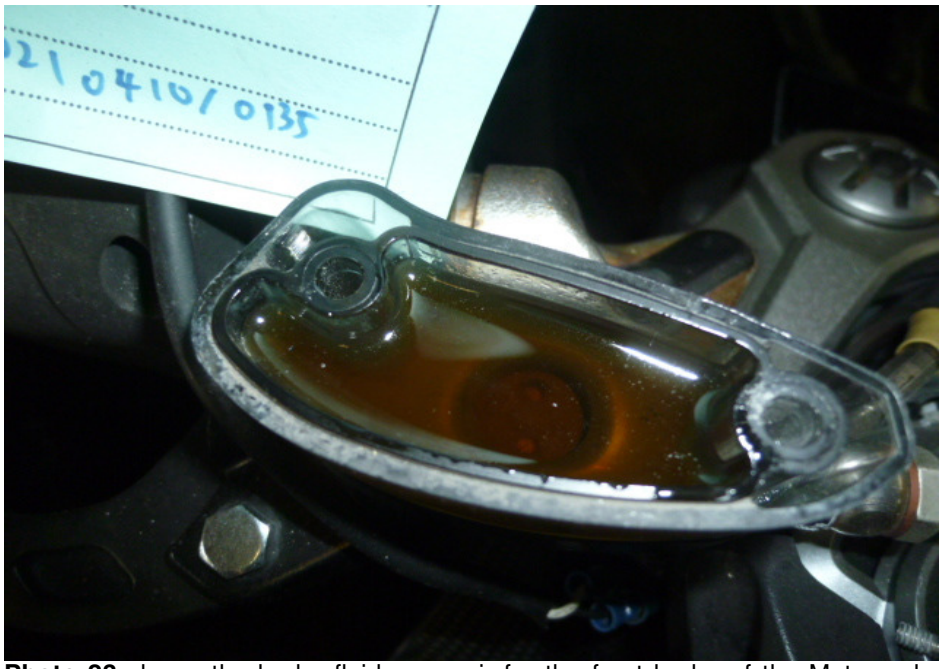


Photo 23 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes and without contamination.

Photo 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.

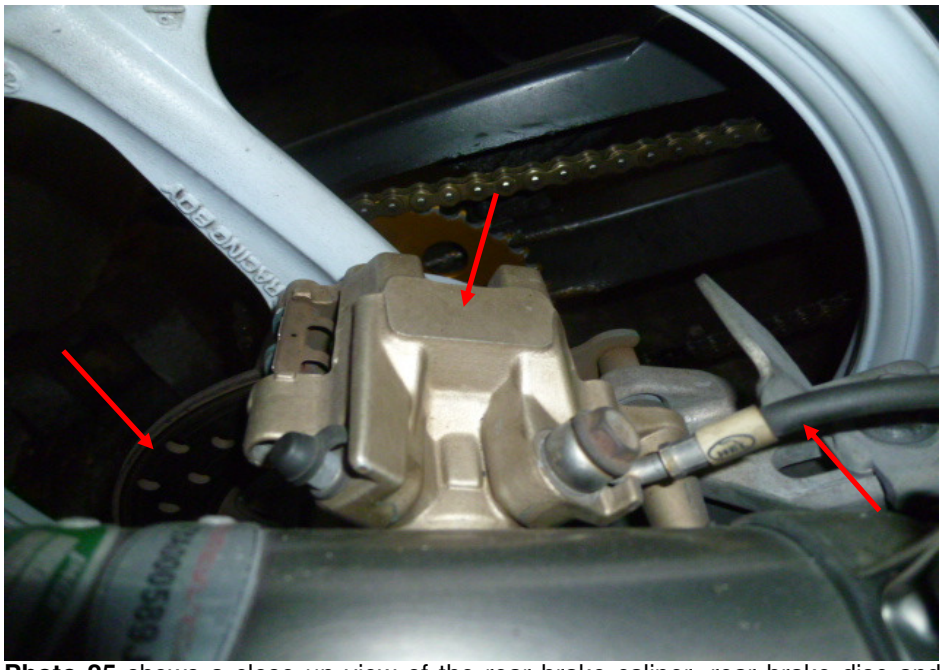
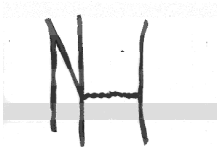


Photo 25 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible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

Conclusion

15. 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. Its braking system was observed to be in serviceable condition.

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



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