

Your Ref: TP/IP/01949/2020
Our Ref : CI/TPD20001846/N

7 July 2020

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBK 9640L

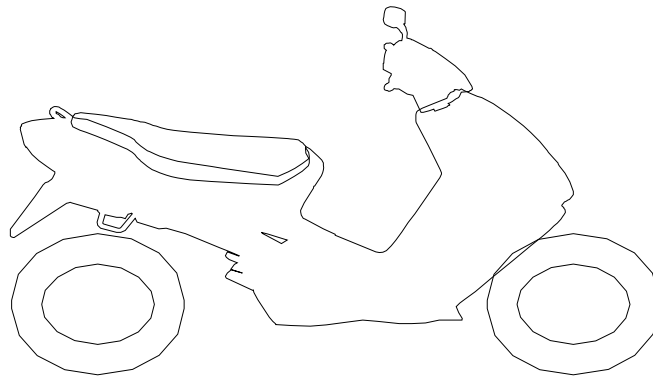
1. We refer to your request dated 3 February 2020 to conduct a physical inspection of a motorcycle bearing registration number FBK 9640L (herein referred to as “**Motorcycle**”), which was involved in a fatal road traffic accident on 12 January 2020.
2. The purpose of this inspection is to primarily 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 7 July 2020 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 56, 730km.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its headlight assembly, side covers, handlebar ends, front cowling, front mudguard, engine crash bars, handlebar ends, front brake lever, clutch lever, clutch lever guard, side stand enlarger, fuel tank cover, rear brake pedal, right front footrest, exhaust muffler and exhaust muffler slider, 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:-



Pirelli 160/60 - 17 (4mm)

Pirelli 120/70 - 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 rear wheel rim of the Motorcycle. We had however found some relatively minor marks of grazing nature on the edges of the front wheel rim, at the right side of the Motorcycle. See photos 1 – 19 below.



Photo 1 shows the speedometer gauge of the Motorcycle. The mileage of the Motorcycle at the time of our inspection was 56, 730km (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 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 left body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around. Amongst the body parts that were found to have been damaged include its headlight assembly, side covers, handlebar ends, front cowling, front mudguard, engine crash bars, handlebar ends, front brake lever, clutch lever, clutch lever guard, side stand enlarger, fuel tank cover, rear brake pedal, right front footrest, exhaust muffler and exhaust muffler slider, amongst others.



Photo 5 shows a closer view of the damaged headlight assembly (arrowed) and front cowling (circled) of the Motorcycle as a result of the accident.



Photo 6 shows a close up view of the cracked front mudguard of the Motorcycle as a result of the accident.

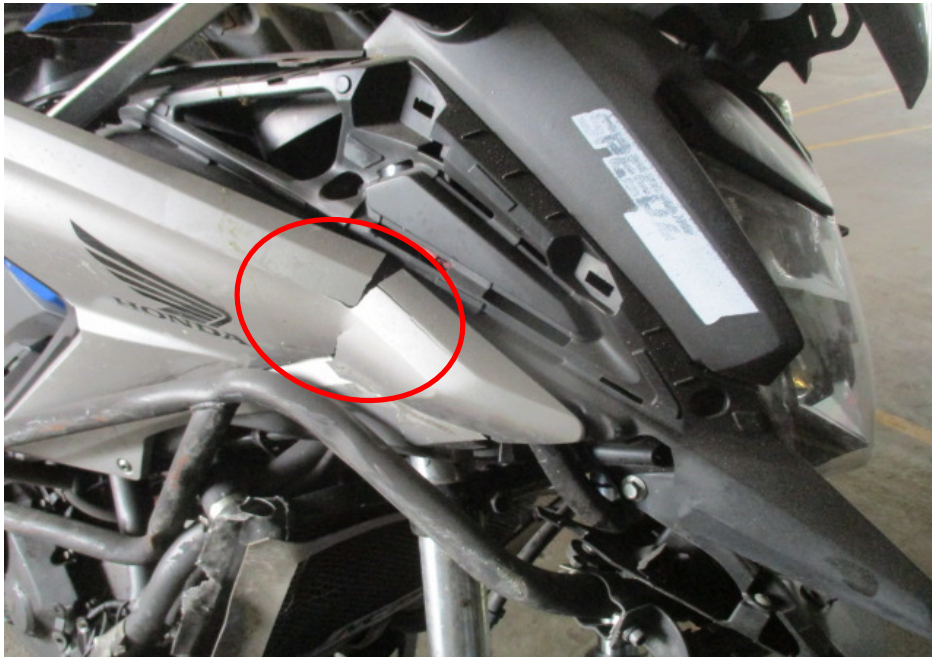


Photo 7 shows a closer view of the cracked right side cover of the Motorcycle as a result of the accident (circled).

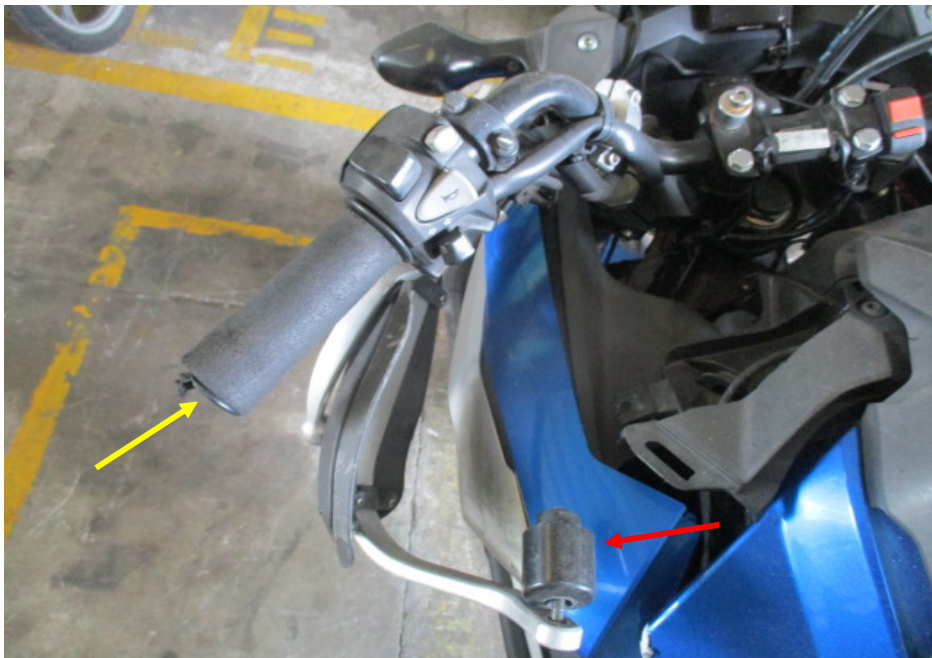


Photo 8 shows a closer view of the left handlebar end (yellow arrow) and clutch lever guard (red arrow) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 9 shows a closer view of the side stand enlarger of the Motorcycle which sustained damages of grazing nature as a result of the accident (circled).



Photo 10 shows a closer view of the bent 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 11 shows a closer view of the left pillion foot peg (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 12 shows the damaged fuel tank cover Motorcycle as a result of the accident (circled).

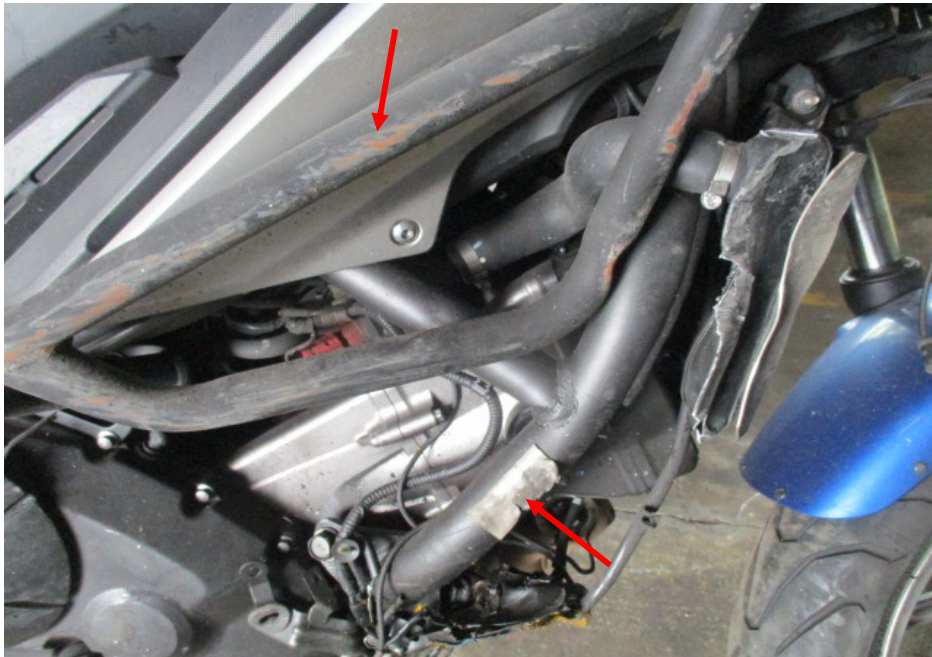


Photo 13 shows a closer view of the right crash bar of the Motorcycle that had sustained damages of grazing nature as a result of the accident (arrowed).



Photo 14 shows a closer view of the left crash bar of the Motorcycle that had sustained damages of grazing nature as a result of the accident (arrowed).

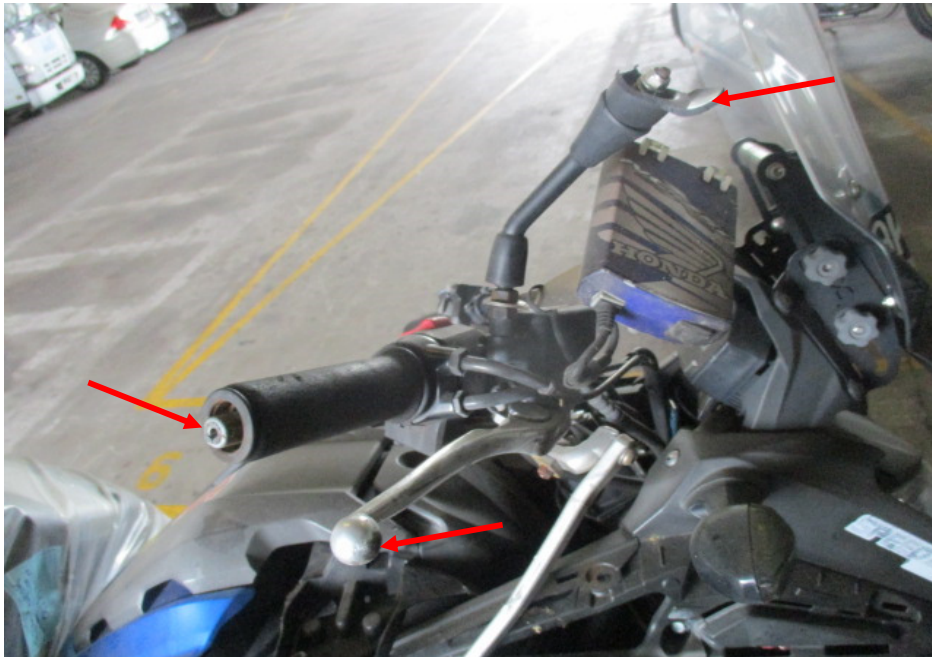


Photo 15 shows a closer view of the right handlebar end, right side mirror and front brake lever (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 16 shows a closer view of the bent exhaust muffler slider (circled) and the damaged exhaust muffler (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



Photo 17 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 18 shows the front wheel rim of the Motorcycle at the time of our inspection. Some relatively minor marks of grazing nature were observed on the edges of the front wheel rim (circled), at the right side of the Motorcycle.



Photo 19 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 4mm. 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. Wet fluid stains were observed on the underside of the engine cover of the Motorcycle as well as on the ground, indicating that a fluid leak had occurred as a result of the accident.
10. 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 20 – 24 below.

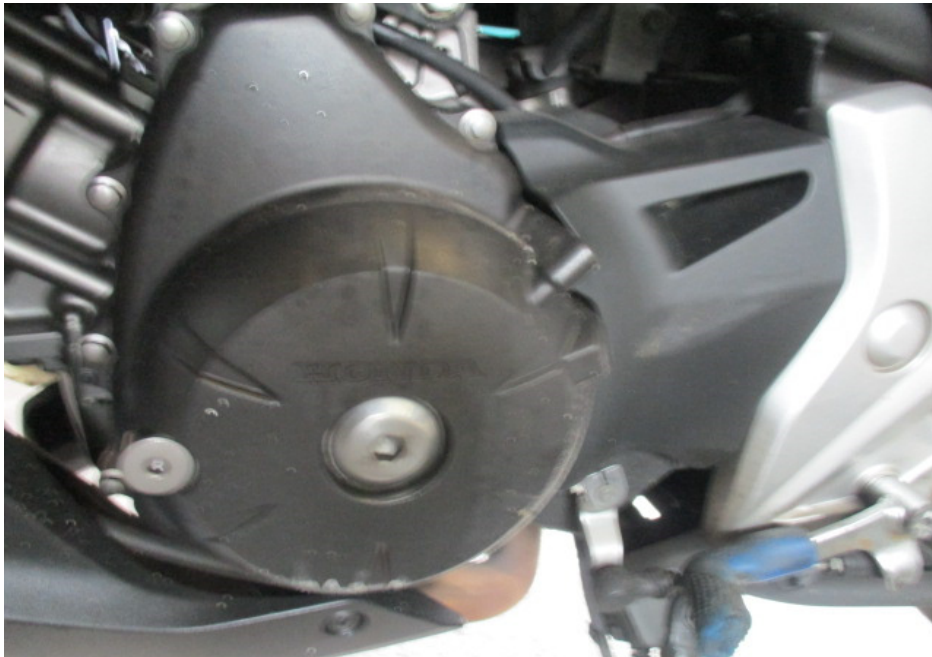


Photo 20 shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.



Photo 21 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 22 shows wet fluid stains observed on the ground directly below the engine cover of the Motorcycle (arrowed), indicating that a fluid leak had occurred as a result of the accident.



Photo 23 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.

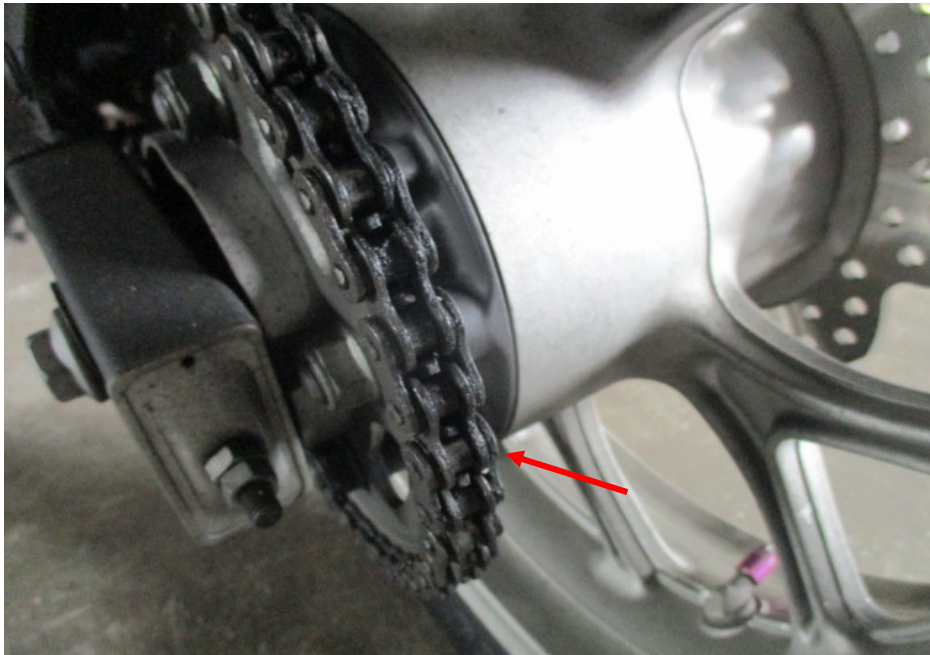


Photo 24 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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 to its front forks. The front forks were observed to be bent inwards as a result of the accident.
12. 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.
13. 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.

14. 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.
15. 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. See photos 25 – 29 below.

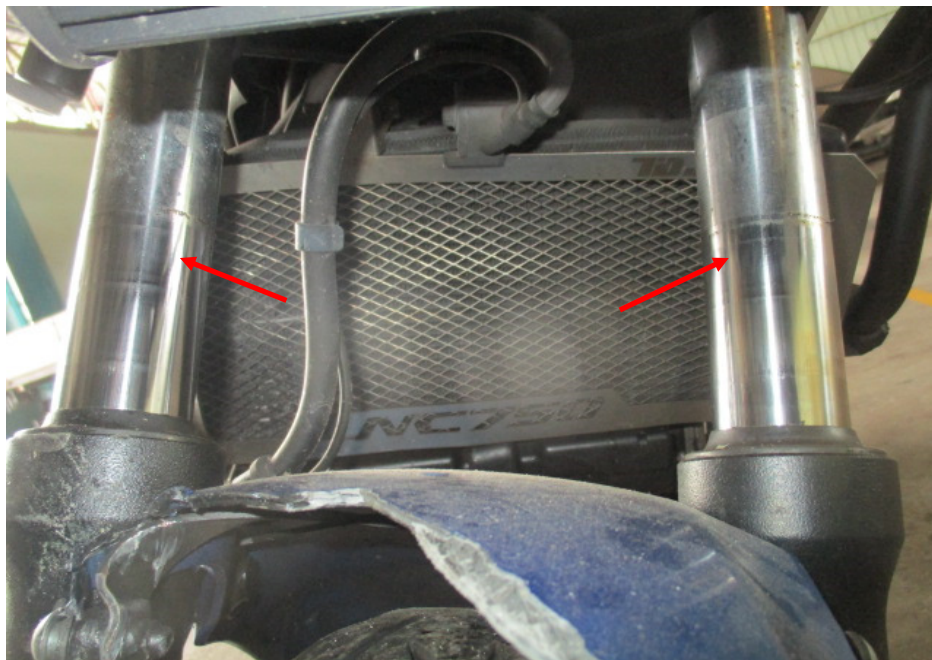


Photo 25 shows the front forks (arrowed) of the Motorcycle. The front forks were observed to be bent inwards as a result of the accident.

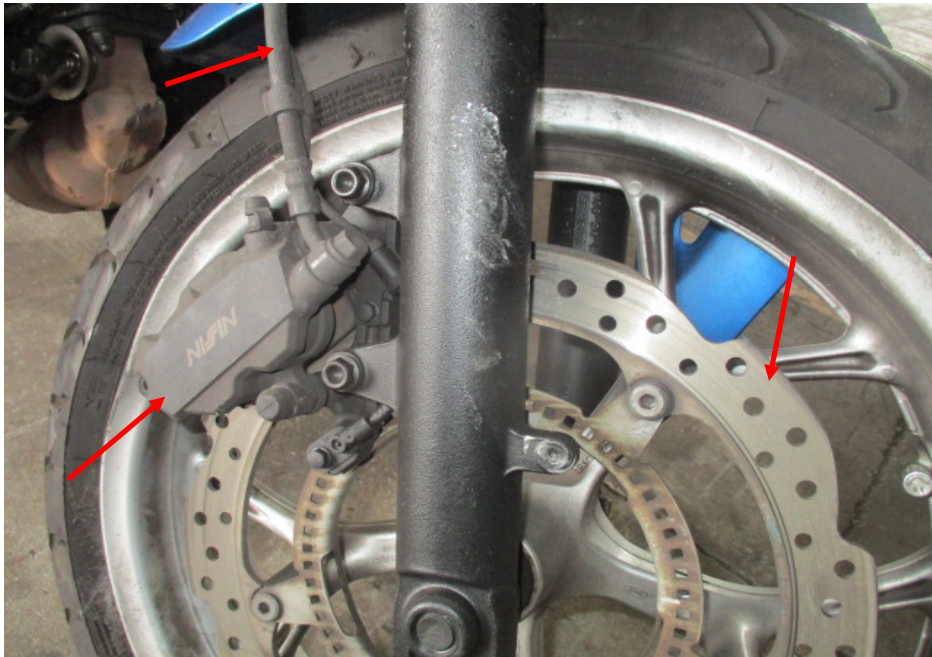


Photo 26 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 27 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 28 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.

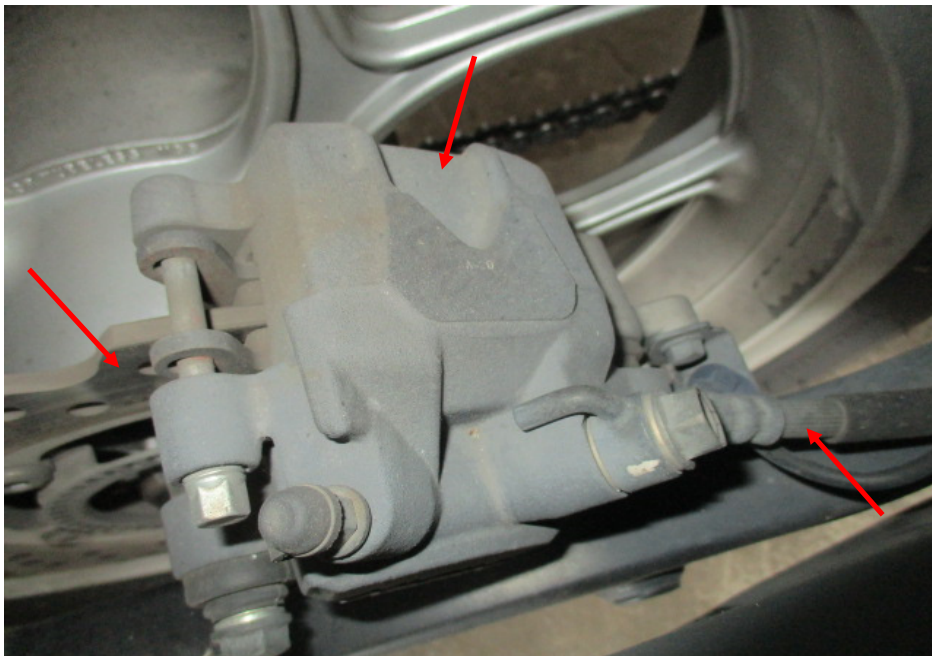


Photo 29 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

Conclusion

16. Basing on our physical inspection of the Motorcycle, it appears that the braking system of the Motorcycle were all in serviceable condition. Its steering system was damaged as a result of the accident.
17. 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 and 4mm each.

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