

Your Ref: TP/IP/34241/2021
Our Ref : CI/TPD21008634/N

6 August 2021

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBQ 340E

1. We refer to your request dated 19 July 2021 to conduct a physical inspection of a motorcycle bearing registration number FBQ 340E (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 16 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 6 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 could not be recorded at the time of our inspection due to a jammed key in the ignition.
5. The Motorcycle was observed to have sustained minor damages all around. The body parts that were found to have been damaged include its windshield, front cowling, front mudguard, front fork assembly, front wheel rim, right hand brake lever, right side mirror, side cowlings, right lower side cover, left pillion foot peg and top box rack, amongst others as a result of the accident. See photos 1 – 14 below.



Photo 1 shows the jammed key in the ignition of the Motorcycle as a result of the accident (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 portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.



Photo 5 shows a general view of the rear 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 windshield, front cowling, front mudguard, front fork assembly, front wheel rim, right hand brake lever, right side mirror, side cowlings, right lower side cover, left pillion foot peg and top box rack, amongst others as a result of the accident.



Photo 6 shows a closer view of the grazed windshield and front cowling of the Motorcycle at the time of our inspection (arrowed).



Photo 7 shows a closer view of the cracked front mudguard which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident (arrowed).



Photo 8 shows a closer view of the missing right side mirror and front brake lever of the Motorcycle which were observed to be damaged due to the accident (circled).



Photo 9 shows the missing right side cowling of the Motorcycle as a result of the accident.



Photo 10 shows the broken left side cowling of the Motorcycle as a result of the accident.



Photo 11 shows a closer view of the cracked right lower side cover of the Motorcycle as a result of the accident (arrowed).



Photo 12 shows a closer view of the grazed exhaust muffler heat shield of the Motorcycle at the time of our inspection (arrowed).



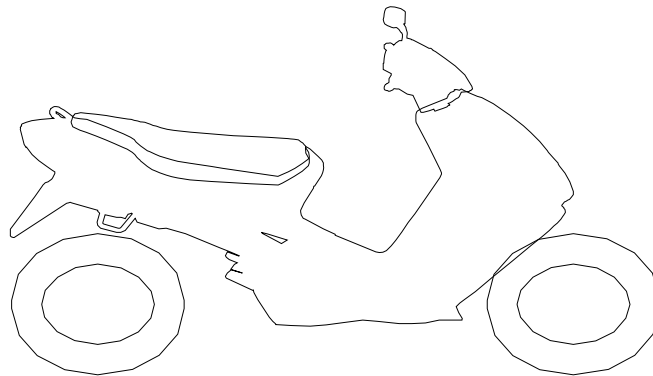
Photo 13 shows a closer view of the grazed left pillion foot peg of the Motorcycle at the time of our inspection (circled).



Photo 14 shows a closer view of the top box rack of the Motorcycle which had sustained damages of grazing nature due to the accident (circled).

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 140/70 - 14 (6mm)

Pirelli 110/80 - 14 (8mm)
(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. See photos 15 - 17 below.



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 8mm. 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 16 shows the bent front wheel rim (circled) and deflated front tyre (arrowed) of the Motorcycle at the time of our inspection.



Photo 17 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 drive train of the Motorcycle was found to be intact without any misalignment. There was also no visible tear or cut observed on the connecting hoses and cables. See photos 18 - 22 below.



Photo 18 shows the radiator of the Motorcycle at the time of our inspection. The radiator was found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the radiator of the Motorcycle.



Photo 19 shows the drive train cover of the Motorcycle which was found to be intact without any misalignment.

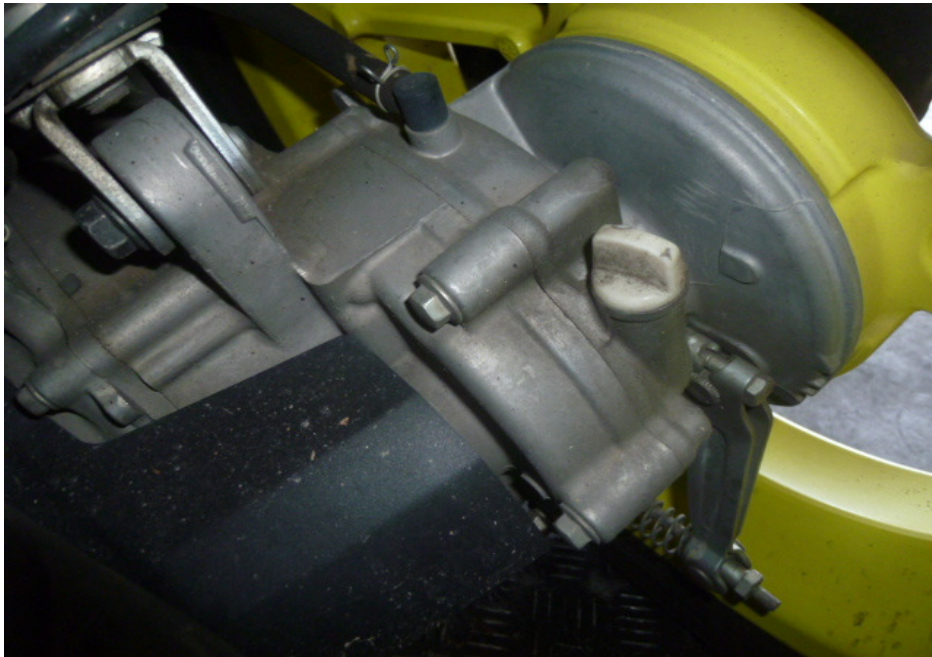


Photo 20 shows the drive train of the Motorcycle which was found to be intact without any misalignment.

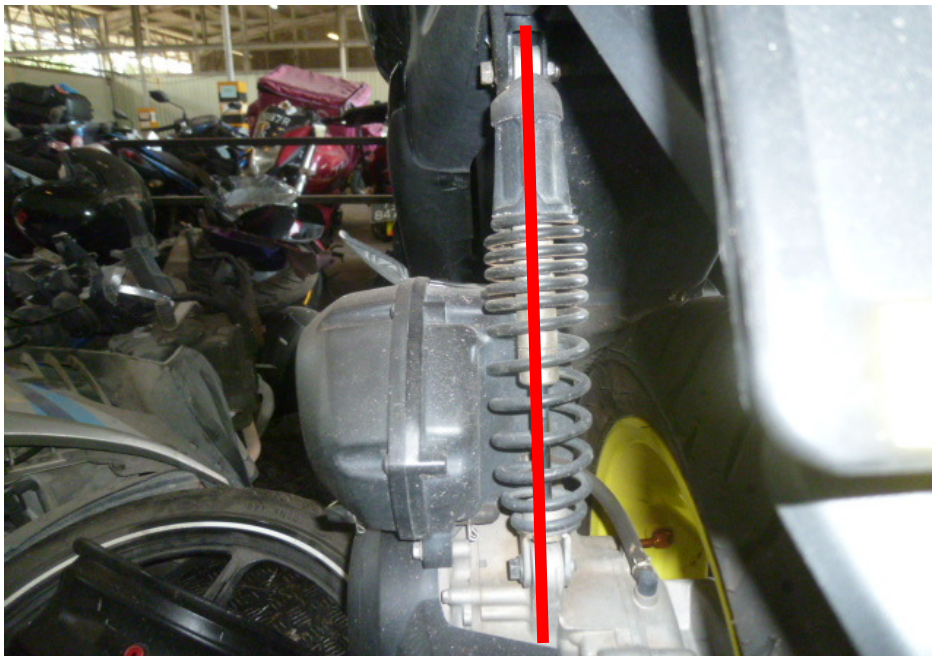


Photo 21 shows the left shock absorber of the Motorcycle which was found to be intact without any misalignment.



Photo 22 shows the right shock absorber of the Motorcycle which was found to be intact without any misalignment.

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 fork assembly. The front forks and steering stem were found to be bent as a result of the accident.
11. 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 drum and hand brake levers, 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. The brake fluid for the front brake was found to be without any contamination and of sufficient level for operating purposes. There was also no visible tear or cut observed on the connecting hoses and cables.

12. However due to the damage sustained to the steering system as a result of the accident, we were unable to turn the handlebar to conduct a visual examination of the front brake disc and front brake caliper of the Motorcycle.
13. Static brake tests conducted on the Motorcycle had appeared to indicate that the front brake system of the Motorcycle was not in serviceable condition. There was no resistance felt (spongy like feel) upon pressing the right hand brake lever. This would indicate that there may be a leakage of pressure/vacuum in the front brake system.
14. For this case, we were not able to carry out any operational tests to the steering system and front braking system of the Motorcycle due to the damage of its front fork assembly, 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 fork assembly of the Motorcycle. The front forks were observed to be bent (arrowed) 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 the steering stem of the Motorcycle. The steering stem observed to be bent (arrowed) as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.

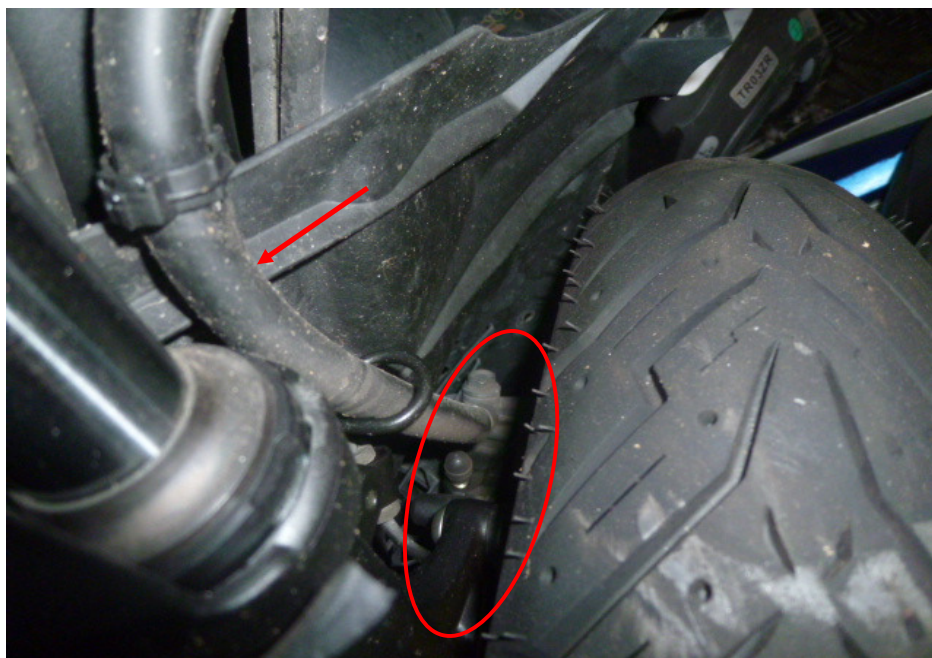


Photo 25 shows due to the damage sustained to the steering system as a result of the accident, we were unable to turn the handlebar to conduct a visual examination of the front brake disc and front brake caliper of the Motorcycle (circled). Our visual checks of the front brake hose had revealed it to be intact with no visible damage (arrowed). 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 and without contamination for operational purposes.



Photo 27 shows the front brake lever being depressed. There was no resistance felt (spongy like feel) upon pressing the front brake lever (arrowed). This would indicate that there may be a leakage of pressure/vacuum in the front brake system.

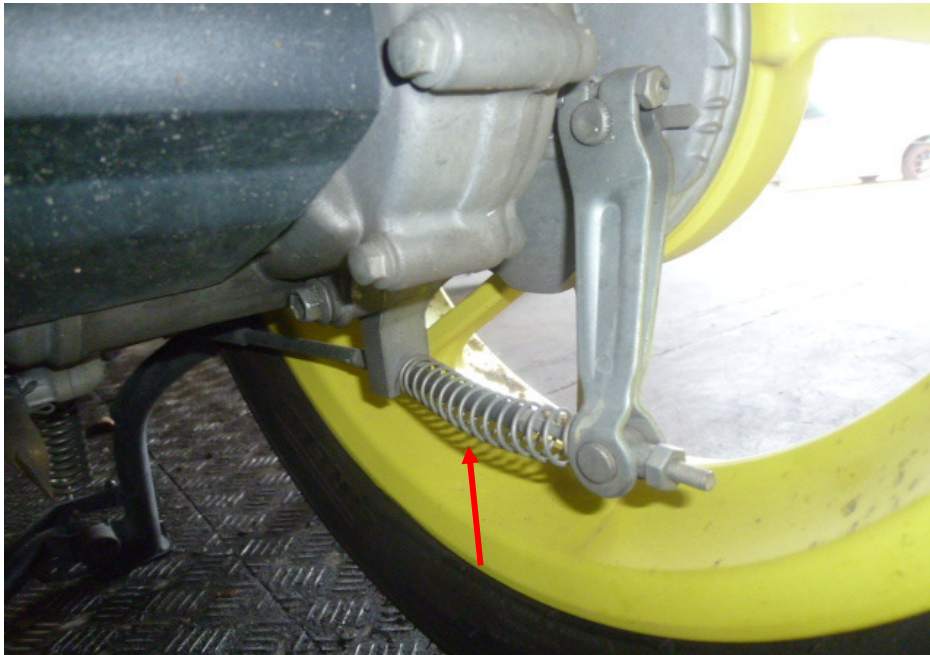
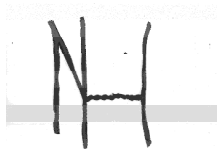


Photo 28 shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of a mechanical type, controlled by the brake foot pedal of the Motorcycle. Our checks of the cable (arrowed), spring and drum which are all part of the components in the rear brake system of the Motorcycle reveal all to be intact and without damage.

Conclusion

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 and front braking system was damaged as a result of the accident. However basing on our physical inspection of the Motorcycle, it appears that the rear braking system of the Motorcycle was in serviceable condition.

16. 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 8mm and 6mm.

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