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Our Ref : CI/TPD22004869/N

6 July 2022

**Fatal Accident Investigation Team**

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

**INSPECTION REPORT OF MOTORCYCLE JTQ 2476**

1. We refer to your request dated 15 March 2022 to conduct a physical inspection of a motorcycle bearing registration number JTQ 2476 (herein referred to as “**Motorcycle**”), which was involved in a fatal road traffic accident on 24 February 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 1 July 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.

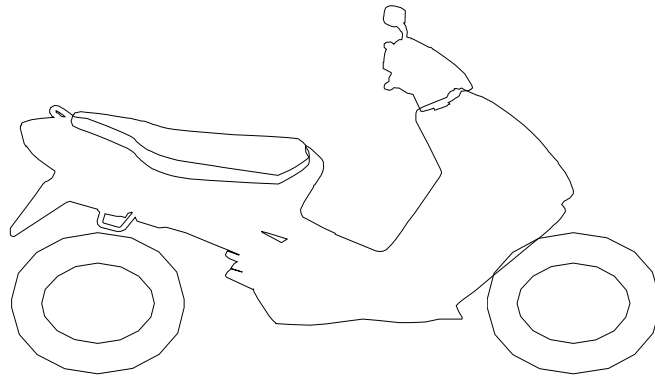
**General Condition**

4. The mileage of the Motorcycle 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 all around. The body parts that were found to have been damaged include its steering stem, headlight assembly, front cowling, front mudguard, side cowlings, side mirrors, front brake lever and right rear side cover, 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.

7. The front tyre was both observed to be sufficiently inflated for vehicular operation. However the rear tyre was observed to be deflated. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Timsum 80/80 - 17 (4mm)  
(Deflated)

Timsum 80/80 - 17 (5mm)

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 front wheel rim of the Motorcycle. However we did observe that the rear wheel rim was bent. See photos 1 – 20 below.



**Photo 1** shows the damaged speedometer gauge of the Motorcycle as a result of the accident (circled). Hence the mileage of the Motorcycle could not be recorded at the time of our inspection.



**Photo 2** 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.



**Photo 3** 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 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.



**Photo 5** shows a general view of the right rear body 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 steering stem, headlight assembly, front cowling, front mudguard, side cowlings, side mirrors, front brake lever and right rear side cover, amongst others.



**Photo 6** shows a closer view of the cracked front mudguard which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 7** shows the grazed headlight assembly (arrowed), which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 8** shows a closer view of the missing right cowling of the Motorcycle as a result of the accident.



**Photo 9** shows a closer view of the missing front cowling of the Motorcycle as a result of the accident (arrowed).



**Photo 10** shows the right handlebar end, front brake lever 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 11** shows the left handlebar end, clutch brake lever and left side mirror (arrowed), which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 12** shows a closer view of the cracked right centre cover (arrowed) 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 cracked left cowling of the Motorcycle as a result of the accident (arrowed).



**Photo 14** shows a closer view of the grazed right rear side cover of the Motorcycle as a result of the accident (arrowed).



**Photo 15** shows the gear shift pedal (circled) and left front footrest (arrowed) of the Motorcycle that had sustained damage as a result of the accident.



**Photo 16** shows the rear brake pedal (circled) and right front footrest (arrowed) of the Motorcycle that had sustained damage as a result of the accident.



**Photo 17** shows the grazed exhaust muffler heat shield of the Motorcycle as a result of the accident (arrowed).



**Photo 18** 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 5mm. 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 front tyre.



**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. There was no tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the rear tyre. However the rear tyre was observed to be deflated.



**Photo 20** shows the bent rear wheel rim (circled) and deflated rear tyre (arrowed) of the Motorcycle at the time of our inspection.

**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. There was also no sign(s) or indication(s) of fluid leak observed around the engine area of the Motorcycle.
10. The gear train of the Motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 21 – 24 below.



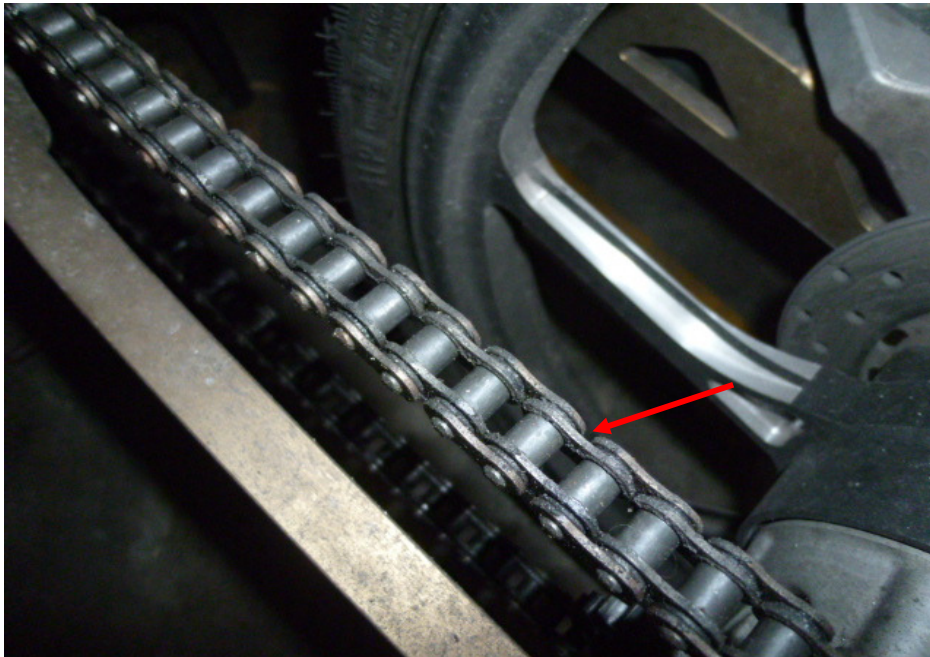
**Photo 21** shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.



**Photo 22** 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 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 steering stem. The steering stem was observed to be broken 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.

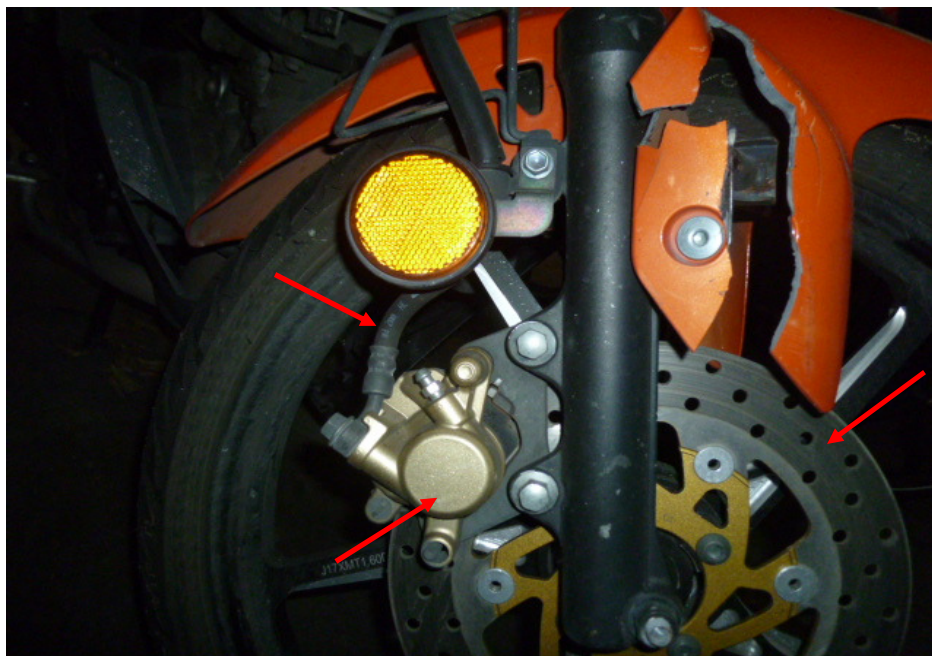
14. We were unable remove the front brake reservoir cover to examine whether the front brake fluid was without contamination due to a worn out screw. However the front brake fluid was observed to be of sufficient level for operational purposes.
15. The brake fluid for the rear brake was observed to be of sufficient level for operating purposes. However it was found to be slightly contaminated.
16. 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.
17. 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 steering stem, 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 25 – 32 below.



**Photo 25** shows the steering stem of the Motorcycle. The steering stem was observed to be broken as a result of the accident (arrowed). We were hence not able to conduct any tests on the steering system of the Motorcycle.



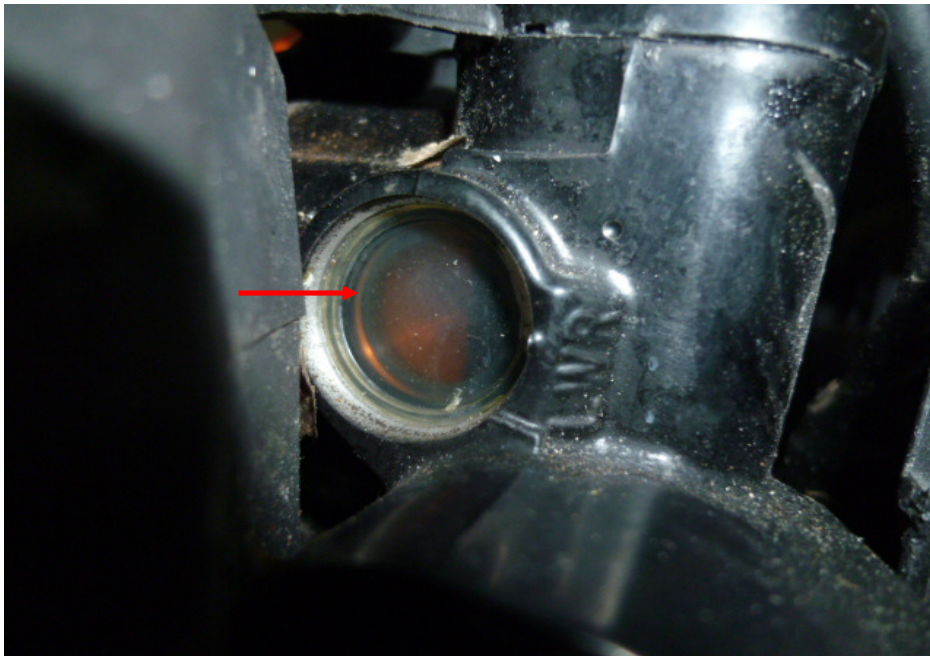
**Photo 26** shows a close up view of the steering stem of the Motorcycle. The steering stem was observed to be broken as a result of the accident (arrowed). We were hence not able to conduct any tests on the steering system of the Motorcycle.



**Photo 27** 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.



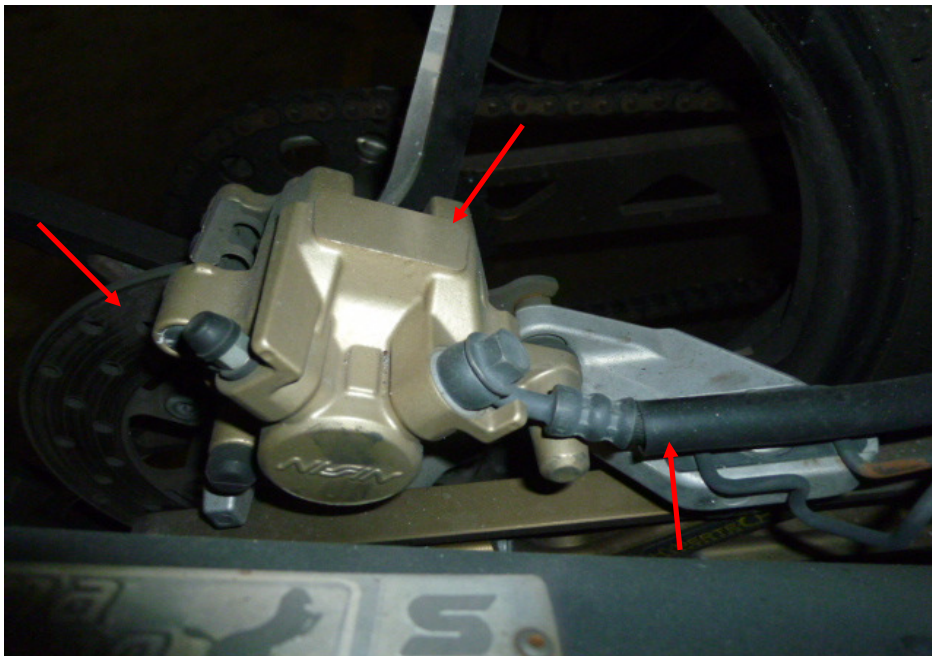
**Photo 28** shows the brake fluid reservoir cover for the front brake of the Motorcycle. We were unable to examine whether the front brake fluid was without contamination due to the worn out screw (circled).



**Photo 29** shows a close up view of the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operational purposes (arrowed).



**Photo 30** 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 front brake system.



**Photo 31** 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.

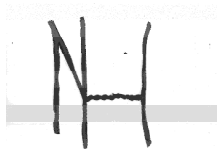


**Photo 32** shows the brake fluid reservoir for the rear brake of the Motorcycle. The brake fluid was observed to be of sufficient level for operating purposes. However it was found to be slightly contaminated (arrowed).

### **Conclusion**

18. 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.

19. The tyres of the Motorcycle were found to be in a serviceable condition (which had included the deflated rear 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. The rear tyre was sufficiently inflated for vehicular operation. Both tyres had remaining tread depth of approximately 5mm and 4mm.

**Muhd Nazril***Senior Technical Investigator***Ang Bryan Tani***AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA**Senior Technical Investigator**Technical Investigation & Reconstructionist (SAE-A)*

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