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Your Ref: TP/IP/02266/2022 7 July 2022
Our Ref : CI/TPD22004871/N

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

INSPECTION REPORT OF MOTORCYCLE JSQ 1480

1. We refer to your request dated 15 March 2022 to conduct a physical inspection of a motorcycle bearing registration number JSQ 1480 (herein referred to as **"Motorcycle"**), which was involved in a fatal road traffic accident on 27 January 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

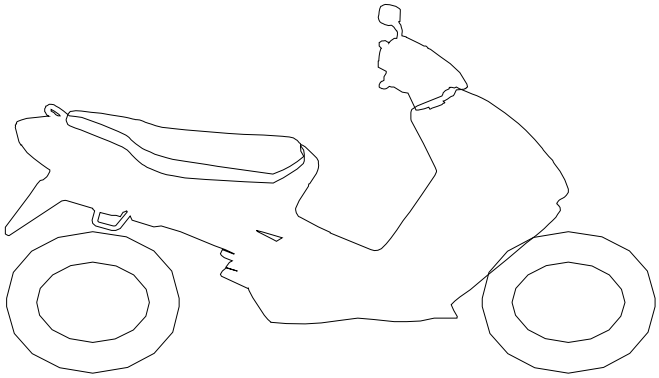
4. The mileage of the Motorcycle at the time of our inspection was 58, 277km.

5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its front fork assembly, head cowling, front cowling, front mudguard, right cowling, right side mirror, front brake lever, rear brake pedal, right front footrest, rear side covers, exhaust muffler heat shield and left pillion footpeg, 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:-



Maxxis 80/90 - 17 (5mm)

Maxxis 70/90 - 17 (4mm)

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 and rear wheel rim of the Motorcycle. 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 58, 277km (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 left 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 right 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 front fork assembly, head cowling, front cowling, front mudguard, right cowling, right side mirror, front brake lever, rear brake pedal, right front footrest, rear side covers, exhaust muffler heat shield and left pillion footpeg

Photo 5 shows a closer view of the front mudguard (arrowed) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 6 shows the grazed head cowling (arrowed) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

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

Photo 8 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.

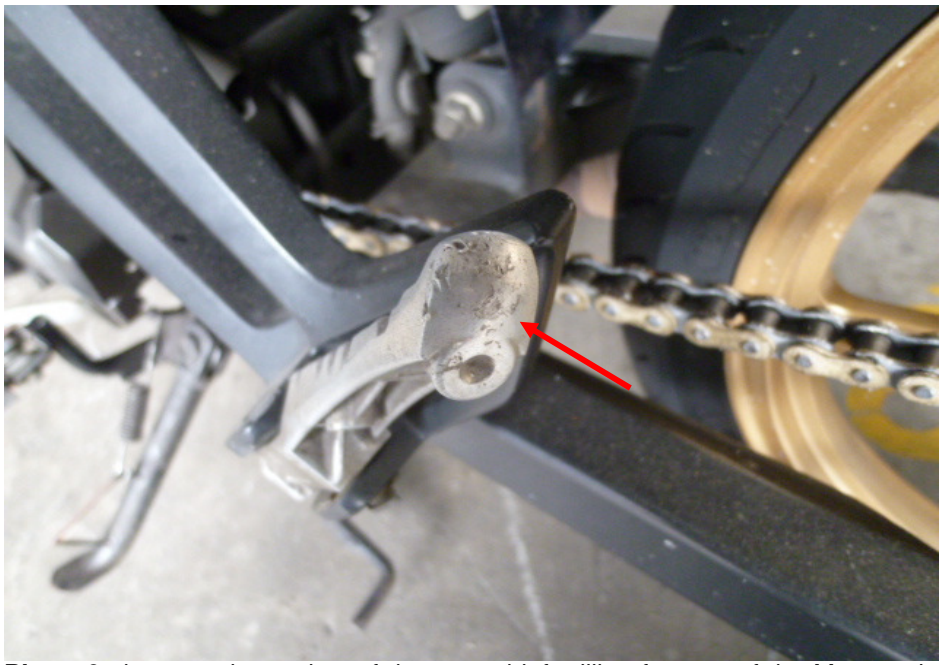


Photo 9 shows a closer view of the grazed left pillion footpeg of the Motorcycle as a result of the accident (arrowed).

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

Photo 11 shows a closer view of the grazed left rear 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 (arrowed) of the Motorcycle as a result of the accident.

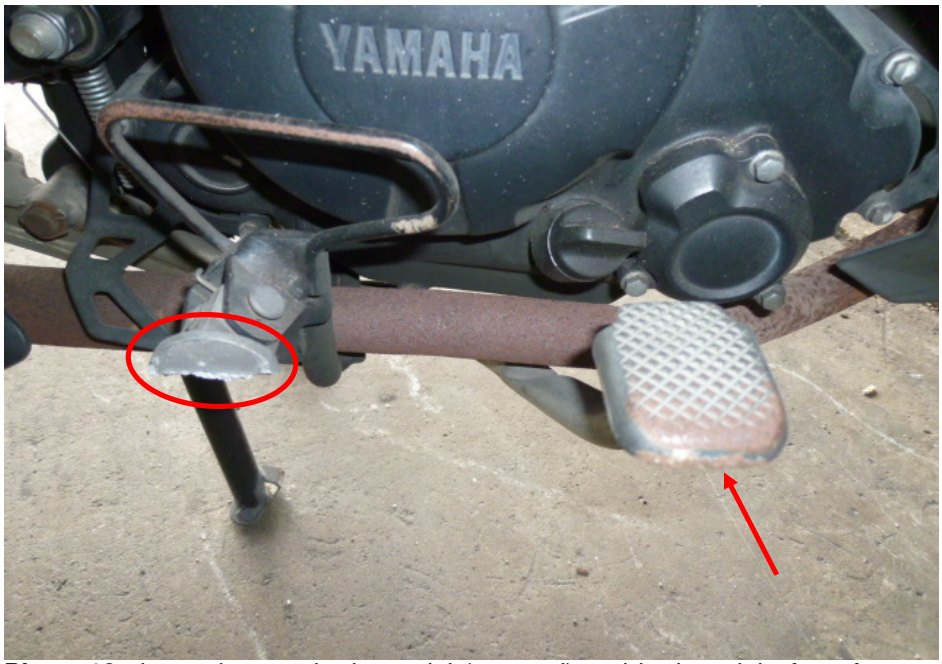


Photo 13 shows the rear brake pedal (arrowed) and broken right front footrest (circled) of the Motorcycle that had sustained damage as a result of the accident.

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

Photo 15 shows the front tyre of the Motorcycle at the time of our inspection. The front tyre was observed to be in serviceable condition with remaining tread depth of approximately 4mm. The pattern of the tread was also clearly visible. 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 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 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 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. 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 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 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 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.

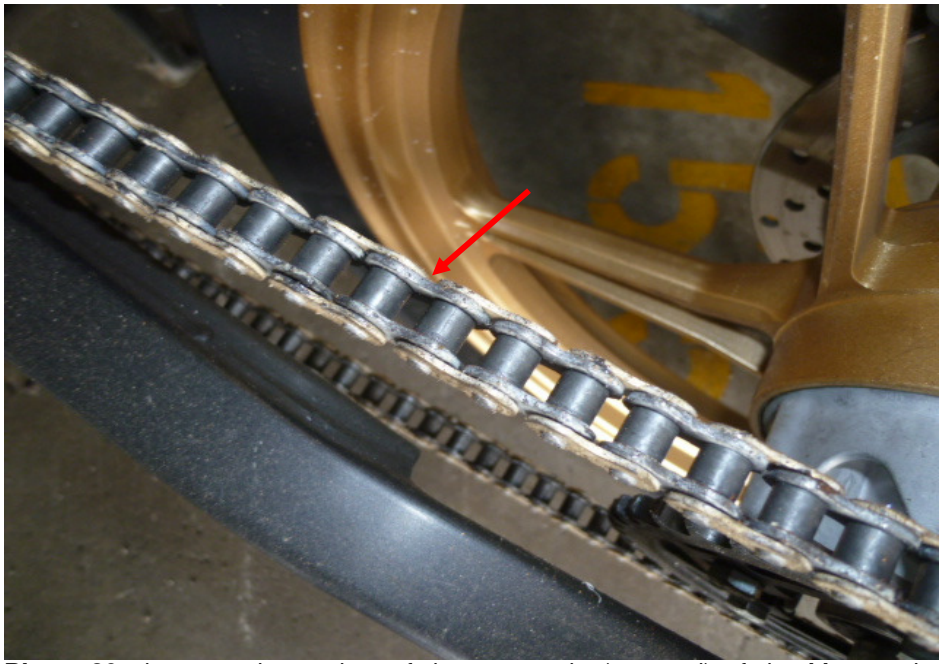


Photo 20 shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

Steering System & Braking System

11. 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 were found to be bent 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 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. The brake fluid for the front brake and rear brake was observed to be of sufficient level for operational purposes. However the brake fluid for the front brake and rear brake was found to be slightly contaminated.

15. However we observed that part of the front brake lever had broken off as a result of the accident. Hence static as well as operational brake tests could not be conducted on the Motorcycle's front braking system. We were unable to determine if there was any leakage of pressure/vacuum in the front brake system.

16. Static brake tests conducted on the Motorcycle had appear to indicate that the rear braking system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon stepping on the brake pedal. This would indicate that there was no leakage of pressure/vacuum in the rear 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 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 21 – 26 below.

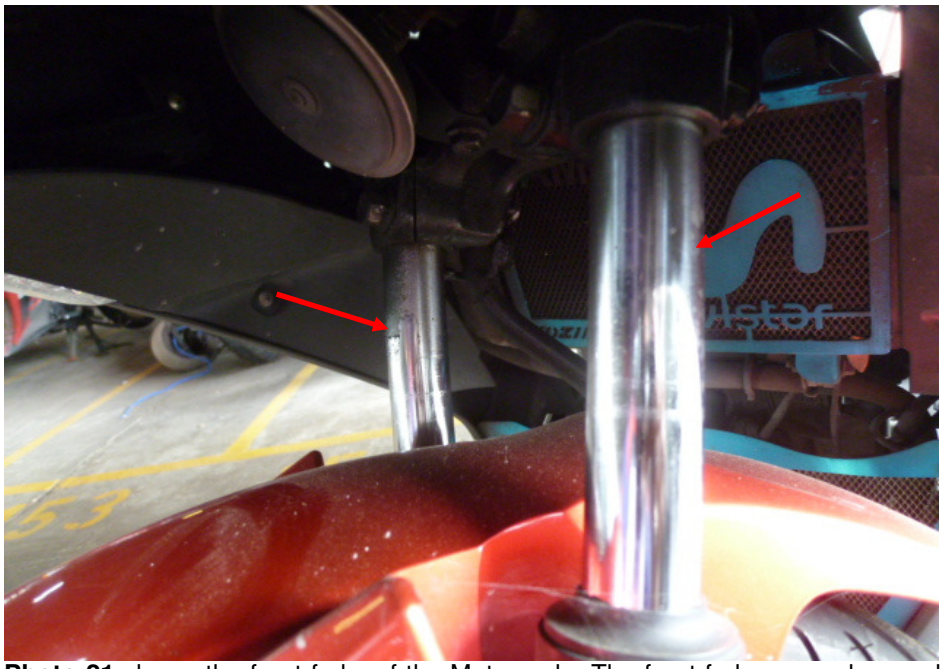


Photo 21 shows the front forks of the Motorcycle. The front forks were observed to be bent (arrowed) as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.

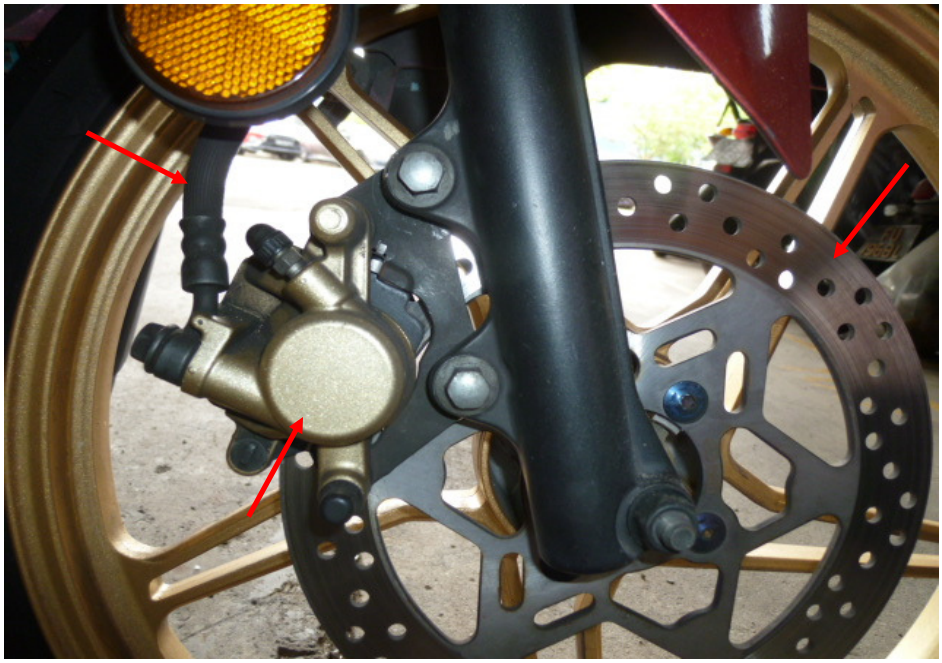


Photo 22 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no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

Photo 23 shows a close up view of the brake fluid reservoir for the front brake of the Motorcycle. The front brake fluid was observed to be of sufficient level for operational purposes. However it was found to be slightly contaminated (arrowed).

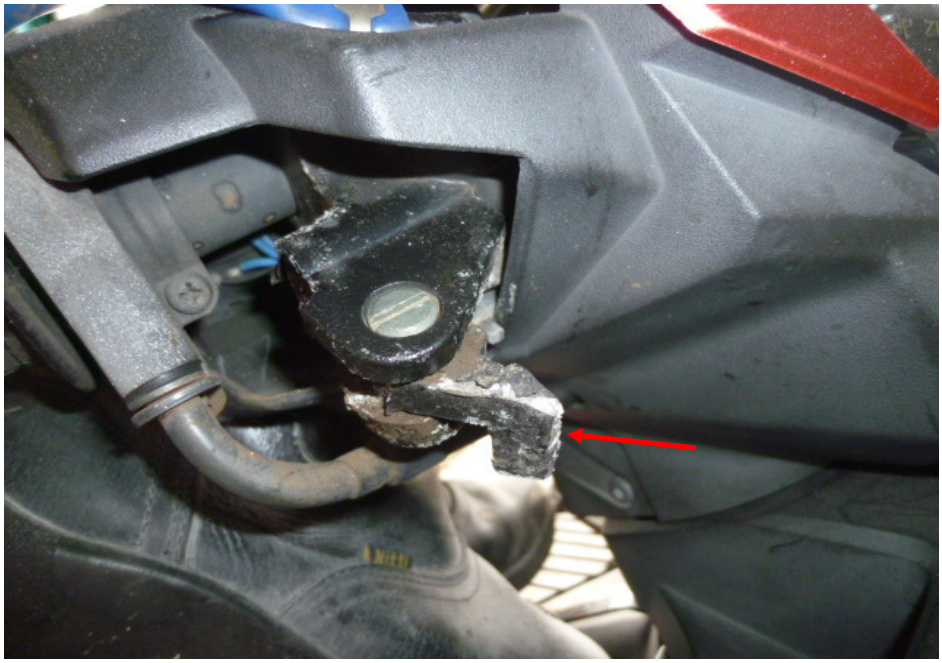


Photo 24 shows the front brake reservoir. We were unable to depress the front brake lever as part of it had broken off as a result of the accident (arrowed). Hence we were unable to determine if there was any leakage of pressure/vacuum in the front brake system.

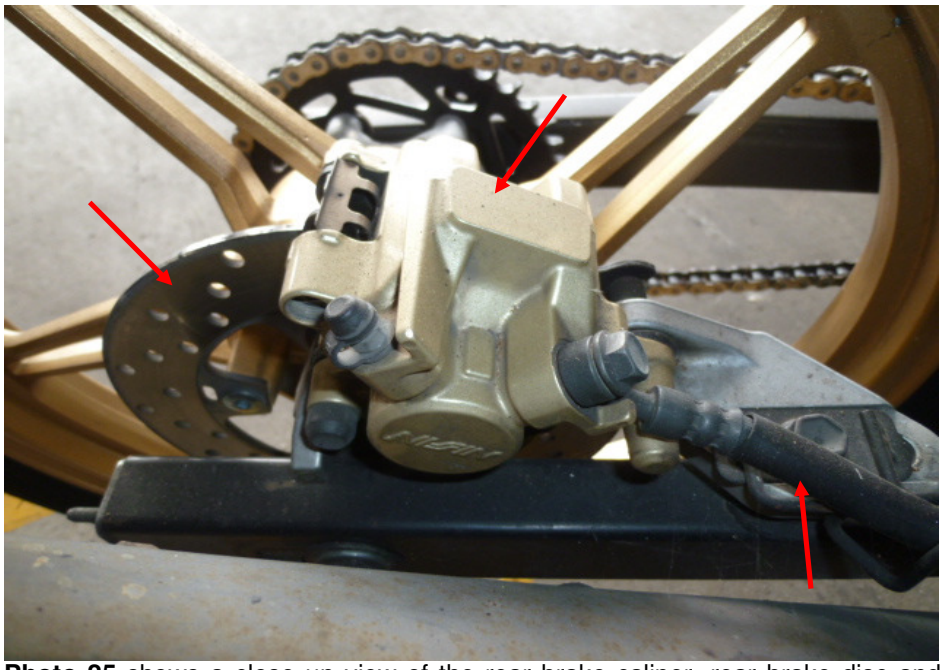


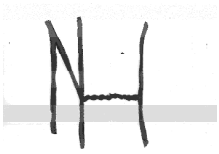
Photo 25 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible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

Photo 26 shows a close up view of the brake fluid reservoir for the rear brake of the Motorcycle. The rear brake fluid was observed to be of sufficient level for operational 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 and front braking system were 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.

19. 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 4mm and 5mm.



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