

Your Ref: TP/IP/34802/2022
Our Ref : CI/TPD23001376/N

27 April 2023

Fatal Accident Investigation Team

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

**INSPECTION REPORT OF BICYCLE (YELLOW) - TRAFFIC POLICE POUND
REPORT NO. 5026/22**

1. We refer to your request dated 7 February 2023 to conduct a physical inspection of a Bicycle bearing Traffic Police Pound Report no. 5026/22 (herein referred to as "**Bicycle**"), which was involved in a fatal road traffic accident on 24 December 2022.
2. The purpose of this inspection is to primarily determine if there was any possible mechanical failure to the Bicycle that may have contributed to the accident.
3. Following the request, we had carried out a physical inspection of the Bicycle on 19 April 2023 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 Bicycle was observed to have sustained damages at its right body. The body parts that were found to have been damaged include its front basket, right handlebar grip, front mudguard, right hand brake lever, right pedal and seat, amongst others as a result of the accident. See photos 1 – 10 below.

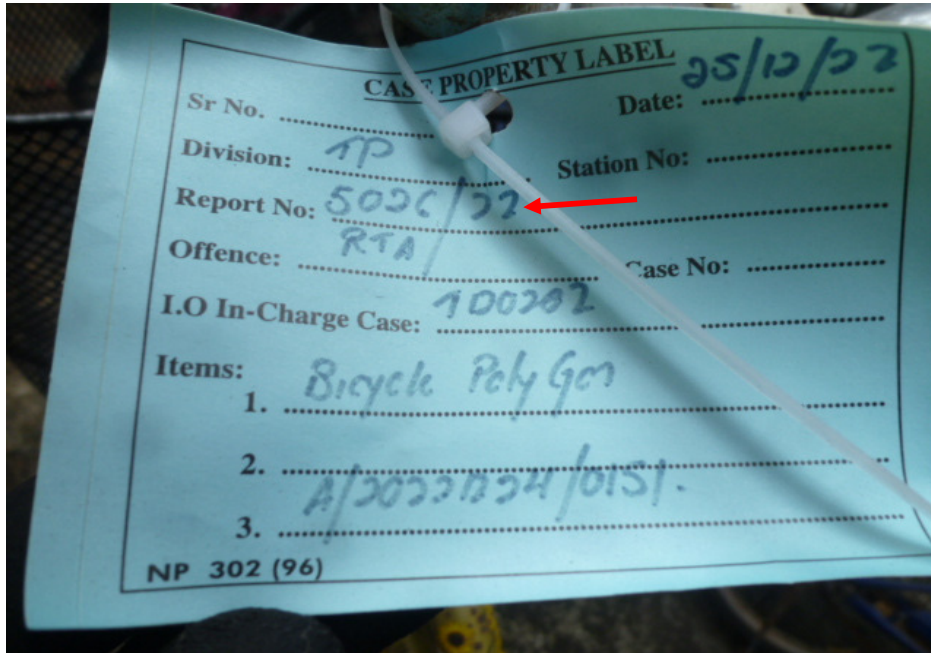


Photo 1 shows the identification of the Bicycle with reference to Traffic Police Pound Report No. 5026/22 (arrowed).



Photo 2 shows the frontal portion of the Bicycle at time of our inspection. The Bicycle had sustained damages at its right body.



Photo 3 shows the left body of the Bicycle at time of our inspection. The Bicycle had sustained damages at its right body.



Photo 4 shows the right body of the Bicycle at time of our inspection. The Bicycle had sustained damages at its right body. The body parts that were found to have been damaged include its front basket, right handlebar grip, front mudguard, right hand brake lever, right pedal and seat, amongst others as a result of the accident.



Photo 5 shows the frontal portion of the Bicycle (top view) at the time of our inspection. There was a misalignment of the handle bar & front tyre observed as a result of the accident.



Photo 6 shows the damaged right handlebar grip and right hand brake lever (arrowed) of the Bicycle at the time of our inspection.



Photo 7 shows the damaged front mudguard (arrowed) of the Bicycle at the time of our inspection.



Photo 8 shows the damages of grazing nature on the right pedal of the Bicycle at the time of our inspection.



Photo 9 shows the deformed front basket of the Bicycle at the time of our inspection (arrowed).



Photo 10 shows a close-up view of the deformed seat (arrowed) of the Bicycle as a result of the accident.

Tyres and Wheel Rims

5. The condition of the Bicycle's front & rear 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. Both tyres were observed to be sufficiently inflated for vehicular operation.



Cheng Shin Tire 24 x 2.125 (57 – 507) Cheng Shin Tire 47 – 507 (24 x 1.75)

6. Both tyres were wrapped around alloy spoke wheel rims. At the time of our inspection, we did not observe any visible damage on the front and rear wheel rim of the Bicycle. See photos 11 & 12 below.



Photo 11 shows the front tyre of the Bicycle. The pattern of the tread was 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. The front tyre was also observed to be sufficiently inflated for vehicular operation.



Photo 12 shows the rear tyre of the Bicycle. The pattern of the tread was 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 rear tyre. The rear tyre was also observed to be sufficiently inflated for vehicular operation.

Drive Train

7. The gear train of the Bicycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 13 & 14 below.



Photo 13 shows the general view of the gear train of the Bicycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes. However the chain was observed to be dislodged from the gear train most likely as a result of the accident (arrowed).



Photo 14 shows a closer view of the dislodged chain from the gear train of the Bicycle, most likely as a result of the accident. It was found to be adequately lubricated for operating purposes (arrowed).

Steering System & Braking System

8. Our checks on the various steering components of the Bicycle revealed that its steering system was in serviceable condition. Its front fork was found to be intact and undamaged. Turning the handle bar towards the left and right did not produce any abnormal free play and/or resistance.
9. The brake system of the Bicycle was controlled by mechanical means (cables and springs). Our visual examination of the various components in the brake system, like the hand brake levers (left & right), brake clamps (front & rear) revealed all to be intact without any damages. We also did not observe any visible tear or cut on the connecting cables.
10. A static brake test was conducted on the front brake of the Bicycle. There was some resistance felt upon pressing the right hand brake lever. This was further confirmed by looking at the front brake clamps while we pressed the right hand brake lever. It shows that the front brake clamps responded to the gripping action. The rubber brake blocks pressed against the front wheel rim. This had appeared to indicate that the front brake of the Bicycle was in serviceable condition.

11. A static brake test was conducted on the rear brake of the Bicycle. There was some resistance felt upon pressing the left hand brake lever. This was further confirmed by looking at the rear brake clamps while we pressed the left hand brake lever. It shows that the rear brake clamps responded to the gripping action. The rubber brake blocks pressed against the rear wheel rim. This had appeared to indicate that the rear brake of the Bicycle was in serviceable condition.

Operational Test

12. We subsequently carried out an operational test of the Bicycle's braking system. This was done by manually pushing the Bicycle forward and backward, simulating the Bicycle in motion, and thereafter engaging the front brake and rear brake levers of the Bicycle. At the end of the short operational test, we did not observe any abnormal behaviour of the Bicycle's braking system. The front and rear wheel of the Bicycle was able to stop rotating immediately upon depressing both brake levers. See photos 15 – 21 below.



Photo 15 shows the front forks (arrowed) of the Bicycle. The front forks and fork bracket of the Bicycle were both found to be intact and undamaged. Turning the Bicycle's handle bar towards the left and right did not produce any abnormal free play. The steering system of the Bicycle was in serviceable condition at the time of our inspection.



Photo 16 shows the front wheel of the Bicycle turned towards its full right. Turning the Bicycle's handle bar towards the right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Bicycle was in serviceable condition at the time of our inspection.



Photo 17 shows the front wheel of the Bicycle turned towards its full left. Turning the Bicycle's handle bar towards the left did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Bicycle was in serviceable condition at the time of our inspection.



Photo 18 shows a static brake test conducted on the Bicycle's front brake. There was some resistance felt upon pressing the right hand brake lever (arrowed). It also shows that the front brake clamps responded to the gripping action (circled) after depressing the right hand brake lever.



Photo 19 shows a close up view of the front brake clamps responding to the gripping action. The rubber brake blocks pressed against the front wheel rim upon depressing the right hand brake lever (arrowed). This had appeared to indicate that the front brake of the Bicycle was in serviceable condition.



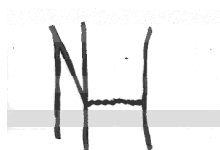
Photo 20 shows a static brake test conducted on the Bicycle's rear brake. There was some resistance felt upon pressing the left hand brake lever (arrowed). It also shows that the rear brake clamps responded to the gripping action (circled) after depressing the left hand brake lever.



Photo 21 shows a close up view of the rear brake clamps responding to the gripping action. The rubber brake blocks pressed against the rear wheel rim upon depressing the left hand brake lever (arrowed). This had appeared to indicate that the rear brake of the Bicycle was in serviceable condition.

Conclusion

13. Basing on our physical inspection of the Bicycle, it appears that the steering system and braking system of the Bicycle were all in serviceable condition. We did not find any evidence(s) to suggest that there was possible mechanical failure to the Bicycle that may have caused and/or contributed to the accident.
14. The 2 tyres of the Bicycle 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 front tyre and rear tyre was sufficiently inflated for vehicular operation.

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