

Your Ref: TP/IP/22827/2022
Our Ref : CI/TPD23001384/N

14 February 2023

Fatal Accident Investigation Team

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

**INSPECTION REPORT OF BICYCLE (ALPOLA BLACK) - TRAFFIC POLICE
POUND REPORT NO. 3181/2022**

1. We refer to your request dated 7 February 2023 to conduct a physical inspection of a Bicycle bearing Traffic Police Pound Report no. 3181/2022 (herein referred to as "**Bicycle**"), which was involved in a fatal road traffic accident on 29 August 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 9 February 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 brake clamp assembly, right handlebar grip, right pedal and baby seat, amongst others as a result of the accident. See photos 1 – 8 below.

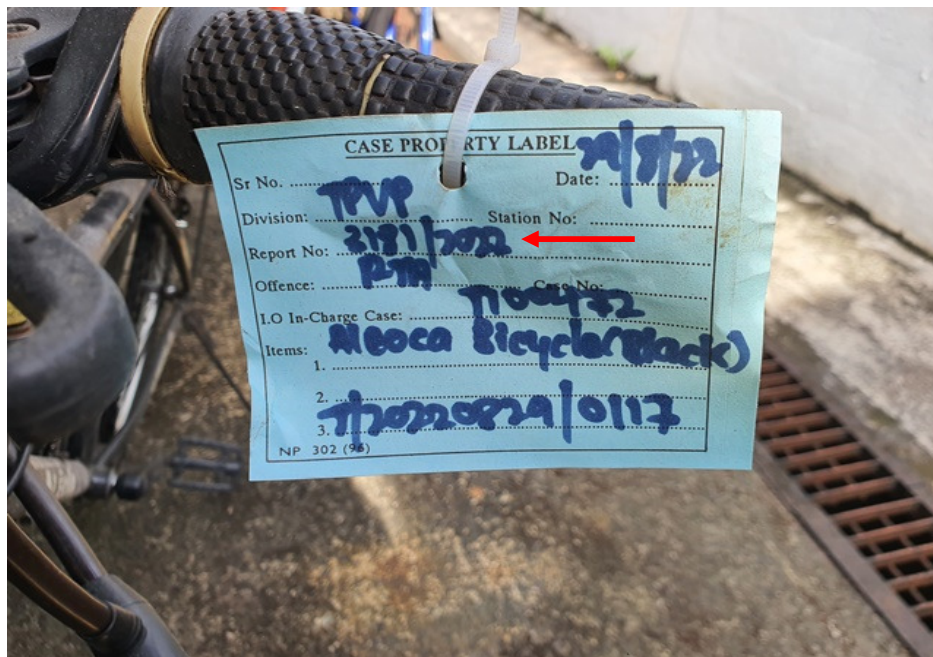


Photo 1 shows the identification of the Bicycle with reference to Traffic Police Pound Report No. 3181/2022 (arrowed).



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



Photo 3 shows the left body of the Bicycle at the 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 brake clamp assembly, right handlebar grip, right pedal and baby 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 (arrowed) of the Bicycle at the time of our inspection.



Photo 7 shows the damages of grazing nature on the right pedal of the Bicycle at the time of our inspection (arrowed).



Photo 8 shows a close-up view of the damaged baby 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. The rear tyre was observed to be sufficiently inflated for vehicular operation. However the front tyre was observed to be deflated at the time of our inspection.



CST Tyres (26 x 1.95) Chao Yang 37 – 349 (26 x 1.95 / 54-559)
(Deflated)

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 rear wheel rim of the Bicycle. However the front wheel rim was observed to be bent. See photos 9 - 11 below.



Photo 9 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. However the front tyre was observed to be deflated at the time of our inspection.



Photo 10 shows the deflated front tyre and bent front wheel rim of the Bicycle (arrowed).



Photo 11 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 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 12 & 13 below.



Photo 12 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 13 shows a closer view of the gear train of the Bicycle, which was observed to be intact with no misalignment (arrowed). It was also adequately lubricated for operating purposes.

Steering System & Braking System

8. For this case, we were not able to conduct any test(s) on the steering system of the Bicycle due to the damages on its front forks. The front forks were found to be bent as a result of the accident, hence causing the whole steering system to be out of alignment and rendering the Bicycle immobile for any static or operational tests.
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 some of the components sustained damages. The front brake clamp assembly of the Bicycle was intact however was found to be misaligned as a result of the accident. The rear brake clamp assembly of the Bicycle was found to be intact and without damage. 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. However the front brake clamp had not responded to the gripping action. Upon closer examination, we observed that the front brake clamp assembly was misaligned as a result of the accident. Hence the rubber brake blocks had pressed against the front tyre instead of the front wheel rim. This had appeared to indicate that the front brake of the Bicycle was not 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. The rear brake clamps had responded to the gripping action. The rubber brake blocks pressed against the rear wheel rim upon depressing the left hand brake lever. This had appeared to indicate that the rear brake of the Bicycle was in serviceable condition.

Operational Test

12. We were unable to carry out an operational test of the Bicycle's braking system due to the damages sustained to the steering system and front braking components as a result of the accident. See photos 14 – 18 below.



Photo 14 shows the front forks (arrowed) of the Bicycle. The front forks of the Bicycle were found to be bent as a result of the accident, hence causing the whole steering system to be out of alignment and rendering the Bicycle immobile for any static or operational tests.



Photo 15 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). However the front brake clamps had not responded to the gripping action (circled) after depressing the right hand brake lever.



Photo 16 shows a close up view of the front brake clamp assembly of the Bicycle. There was some resistance felt upon pressing the right hand brake lever. However the front brake clamp had not responded to the gripping action. Upon closer examination, we observed that the front brake clamp assembly was misaligned as a result of the accident (circled). Hence the rubber brake blocks had pressed against the front tyre instead of the front wheel rim (arrowed). This had appeared to indicate that the front brake of the Bicycle was not in serviceable condition.



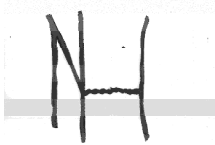
Photo 17 shows a static brake test conducted on the Bicycle's rear brake. There was some resistance felt upon pressing the left hand brake lever (arrowed). It also shows that the rear brake clamps responded to the gripping action (circled) after depressing the left hand brake lever.



Photo 18 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. At the time of our inspection of the Bicycle, its steering system & front braking system could not be tested due to the damages as a result of the accident.
14. The 2 tyres of the Bicycle were found to be in serviceable condition (which 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 2 tyres. The rear tyre was sufficiently inflated for vehicular operation.
15. Our findings were based solely on a static and visual inspection of the Bicycle. No operational test(s) could be carried out to the Bicycle due to the damage of its steering system and front braking system as a result of the accident which had rendered the Bicycle immobile.

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