

Your Ref: J/20190706/2041
Our Ref : CI/SPF20009396/N

28 August 2020

General Investigation Team

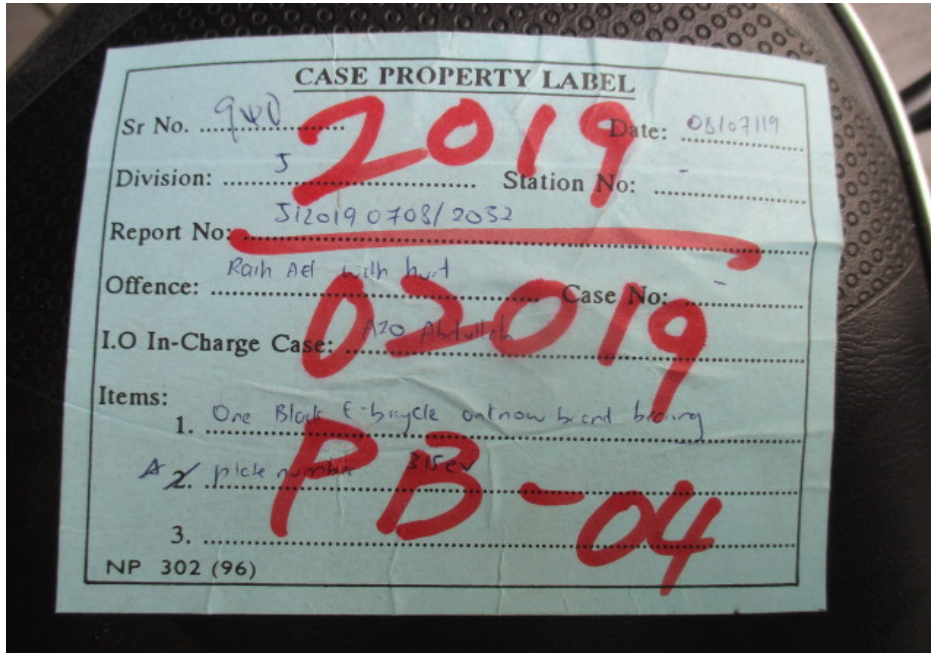
Singapore Police Force
Jurong Division
2 Jurong West Avenue 5
Singapore 649482

**INSPECTION REPORT OF ELECTRIC SCOOTER - TRAFFIC POLICE POUND
REPORT NO. J/20190706/2041**

1. We refer to your request on 24 Aug 2020 to conduct a physical inspection of the Electric Scooter bearing Singapore Police Force Report no. J/20190706/2041 (herein referred to as “**Electric Scooter**”), which was involved in a non- fatal road traffic accident on 4 July 2019.
2. The objective of the inspection is to determine if there was any possible mechanical failure to the Electric Scooter that may have contributed to the accident.
3. Following the request, we had carried out a physical inspection of the Electric Scooter on 26 August 2020 at the premises of Jurong Police Division Headquarters, 2 Jurong West Avenue 5, Singapore 649482. We now set out below our observations and comments with respect to this inspection.

General Condition

4. The Electric Scooter had sustained damages all around. The body parts that were found to have been damaged include its handlebar ends, left hand brake lever, seat, right foot peg, right cowl and top rack, amongst others as a result of the accident. See photos 1 - 12 below.



CASE PROPERTY LABEL

Sr No. 940 Date: 08/07/19

Division: 5 Station No: -

Report No: 512019 0708/2052

Offence: Rakh Ael with hurt Case No: -

I.O In-Charge Case: 170 Abdulwahid

Items:

1. One Black E-bicycle on know brand bearing
2. pick number 3155
- 3.

NP 302 (96)

2019

PB-04

Photo 1 shows the identification of the Electric Scooter with reference to the Singapore Police Force.



Photo 2 shows the front portion of the Electric Scooter at the time of our inspection. The Electric Scooter was observed to have sustained damages all around.



Photo 3 shows the right body of the Electric Scooter at the time of our inspection. The Electric Scooter was observed to have sustained damages all around.



Photo 4 shows the left body of the Electric Scooter at the time of our inspection. The Electric Scooter was observed to have sustained damages all around.



Photo 5 shows the rear portion of the Electric Scooter at the time of our inspection. The Electric Scooter was observed to have sustained damages all around. The body parts that were found to have been damaged include its handlebar ends, left hand brake lever, seat, right foot peg, right cowling and top rack, amongst others as a result of the accident.



Photo 6 shows the frontal portion of the Electric Scooter (top view) at the time of our inspection. A slight misalignment of the handle bar & front tyre was observed.



Photo 7 shows the damages on the left handlebar end and left hand brake lever (arrowed) of the Electric Scooter as a result of the accident.



Photo 8 shows damages on the right handlebar end (arrowed) of the Electric Scooter as a result of the accident.

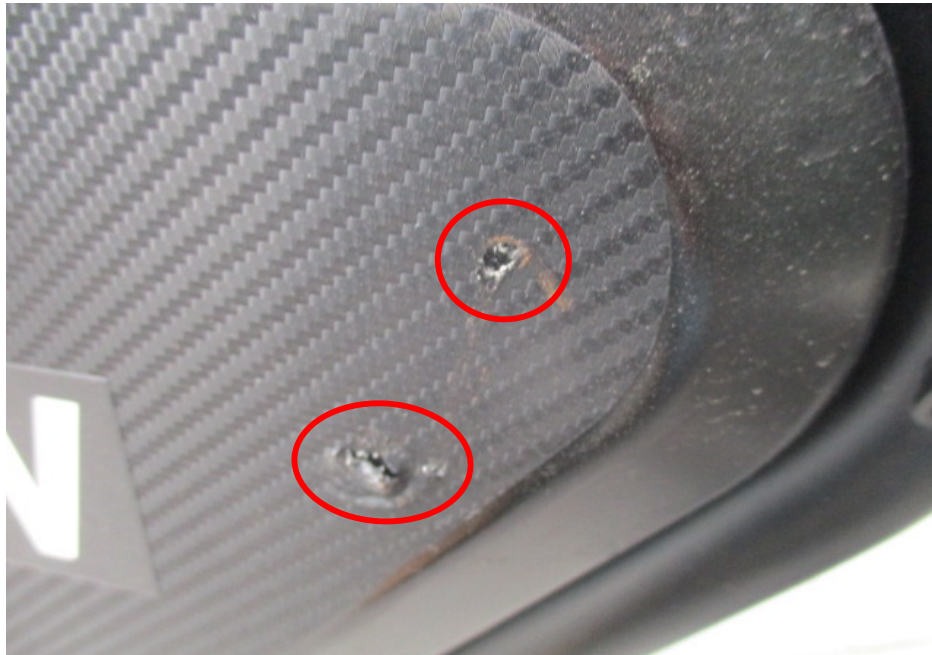


Photo 9 shows the damages on the right cowling (circled) of the Electric Scooter as a result of the accident.



Photo 10 shows the deformed seat of the Electric Scooter (arrowed) at the time of our inspection.



Photo 11 shows the missing right foot peg of the Electric Scooter at the time of our inspection (arrowed).



Photo 12 shows the deformed top rack of the Electric Scooter at the time of our inspection (arrowed).

Tyres and Wheel Rims

5. The condition of the Electric Scooter'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 2 tyres were both observed to be sufficiently inflated for vehicular operation. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Continental 62 – 203 (12 ½ X 2 ¼ (3mm) Innova 12 ½ X 2 ¼ (57 – 203) (3mm)

6. The tyres were wrapped around alloy wheel rims that were found to be without any significant damage. See photos 13 & 14 below.



Photo 13 shows the front tyre of the Electric Scooter at the time of our inspection. The front tyre was observed to be in serviceable condition with remaining tread depth of approximately 3mm. 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 14 shows the rear tyre of the Electric Scooter at the time of our inspection. The rear tyre was observed to be in serviceable condition with remaining tread depth of approximately 3mm. 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.

Drive Motor

7. The Electric Scooter was controlled by a motor to drive the rear tyre. The motor was originally installed on the rear portion of the rear tyre & found adequately acceptable. The motor of the Electric Scooter was found to be intact without any misalignment or damages. It was also observed to be in operational condition. See photos 15 & 16 below.



Photo 15 shows the general view of the drive motor (arrowed) of the Electric Scooter which was observed to be intact with no misalignment.



Photo 16 shows the general view of the drive motor of the Electric Scooter which was observed to be in operational condition (arrowed).

Steering System & Braking System

8. Our checks on the various steering components of the Electric Scooter 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 braking system of the Electric Scooter was controlled by mechanical means (cables, calliper, brake disc and brake pads). Our visual examination of the various components in the brake system, like the left hand brake lever, brake disc and rear brake calliper, revealed all to be intact and without damage. There was also no visible tear or cut observed on the connecting hoses and cables. However, the brake pads were observed to be worn.
10. A static brake test was conducted on the Electric Scooter's braking system. The test was conducted by lifting the rear wheel above ground & rotating the rear wheel. The left hand brake lever was then gripped in order to stop the spinning rear tyre. The result was unsatisfactory. It did not stop after gripping the left hand brake to the fullest due to the worn brake pads.
11. This had appeared to indicate that the braking system of the Electric Scooter was not in a serviceable condition. See photos 17 - 22 below.



Photo 17 shows the front fork (arrowed) of the Electric Scooter. The front fork and fork bracket of the Electric Scooter were both found to be intact and undamaged. Turning the Electric Scooter's handle bar towards the left and right did not produce any abnormal free play. The steering system of the Electric Scooter was in serviceable condition at the time of our inspection.



Photo 18 shows the front wheel of the Electric Scooter turned towards its full right. Turning the Electric Scooter'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 Electric Scooter was in serviceable condition at the time of our inspection.



Photo 19 shows the front wheel of the Electric Scooter turned towards its full left. Turning the Electric Scooter'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 Electric Scooter was in serviceable condition at the time of our inspection.



Photo 20 shows a static brake test conducted on the Electric Scooter's rear brake. There was some resistance felt upon pressing the left hand brake lever (arrowed).

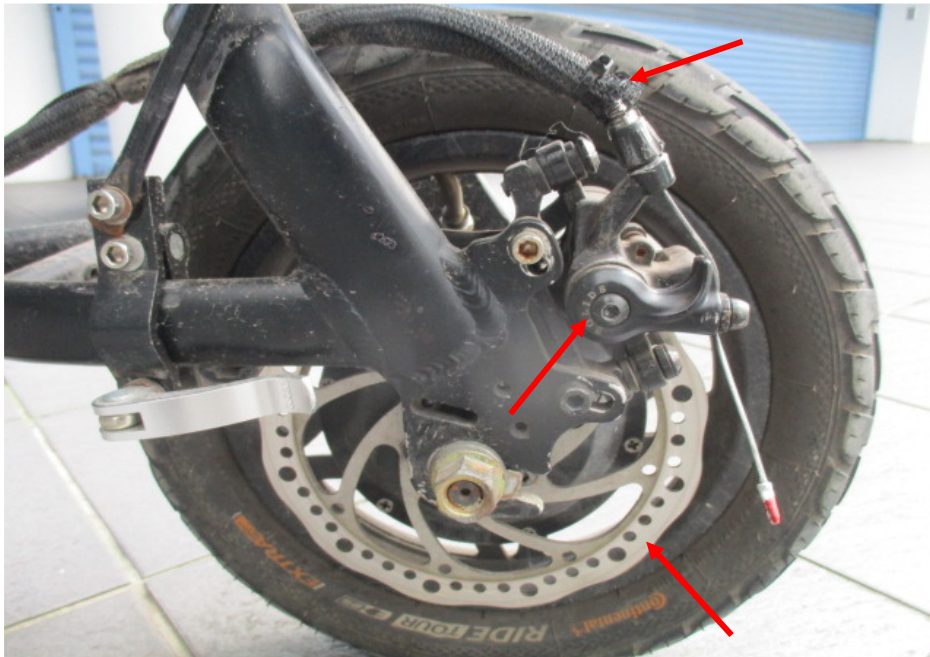


Photo 21 shows the rear wheel of the Electric Scooter. The type of brake system for the rear wheel was of a mechanical type, controlled by the left hand lever of the Electric Scooter. Our checks on the cable, calliper and brake disc which are all part of the components in the rear brake system of the Electric Scooter reveal all to be intact and without damage (arrowed).

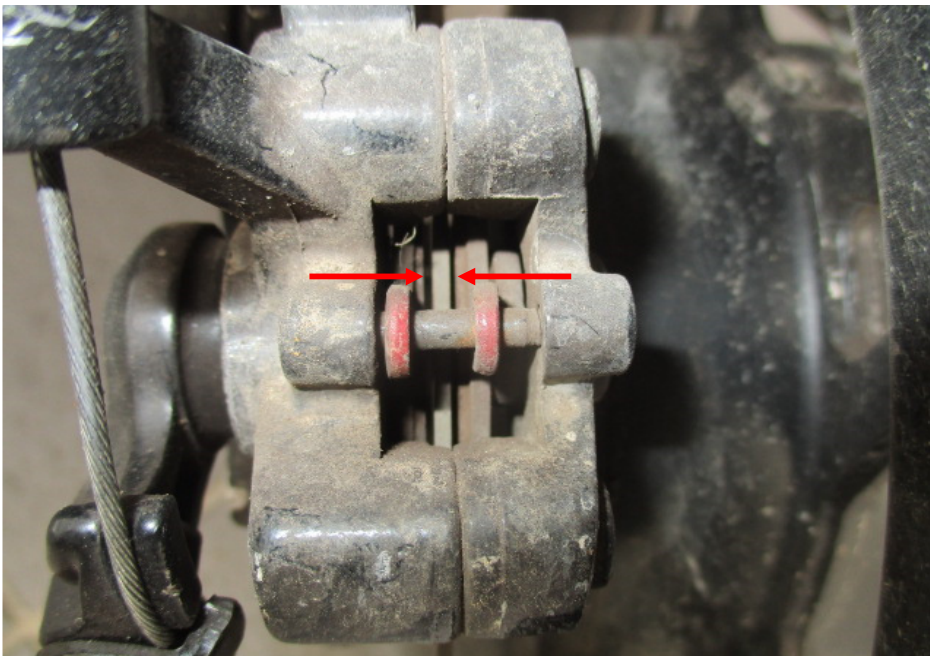


Photo 22 shows the close-up view of the rear brake calliper of the Electric Scooter, which was observed to be intact with no damages. However, the brake pads were observed to be worn (arrowed). Hence the rear tyre was unable to come to a stop after gripping the left hand brake to the fullest.

Operational Test

12. We subsequently carried out an operational test of the Electric Scooter's braking system. This was done by manually pushing the Electric Scooter forward and backward, simulating the Electric Scooter in motion, and thereafter engaging the rear brake of the Electric Scooter. At the end of the short operational test, the rear wheel of the Electric Scooter was unable to stop rotating upon depressing the left hand brake lever.

Conclusion

13. The condition of the Electric Scooter'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 2 tyres were both observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 3mm each.

14. Our findings were based partially on a static, operational and visual inspection of the Electric Scooter's steering system & braking system. The steering system of the Electric Scooter was found to be in serviceable condition. However the braking system of the Electric Scooter was found not to be in serviceable condition.



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