

Your Ref: TP/IP/38627/2019  
Our Ref : CI/TPD19012882/N

2 August 2019

**Fatal Accident Investigation Team**

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

**INSPECTION REPORT OF MOTORCYCLE FW 3550S**

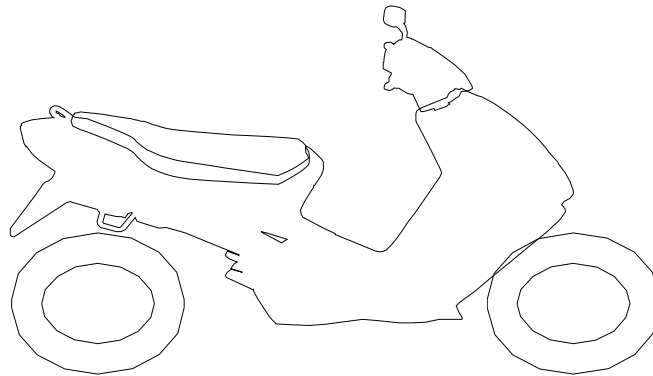
1. We refer to your request dated 3 July 2019 to conduct a physical inspection of a motorcycle bearing registration number FW 3550S (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 19 June 2019.
2. The purpose of this inspection is to primarily determine 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 August 2019 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 not recorded due to the damage sustained to the speedometer display screen as a result of the accident.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its speedometer gauge, headlight assembly, side cowlings, front mudguard, side mirrors, clutch lever, front brake lever, handlebars, petrol tank, rear brake pedal, exhaust muffler and rear side covers, 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. The tyre brand, tyre size and remaining tread depth of the 2 tyres of the Motorcycle were recorded as follows:-
7. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Duro 110/70 - 17 (3mm)

Maxxis 90/80 - 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 – 18 below.



**Photo 1** shows a general view of the rear body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.



**Photo 2** shows a general view of the left rear body 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 right front 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 front 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 speedometer gauge, headlight assembly, side cowlings, front mudguard, side mirrors, clutch lever, front brake lever, handlebars, petrol tank, rear brake pedal, exhaust muffler and rear side covers, amongst others.



**Photo 5** shows a closer view of the damaged speedometer gauge of the Motorcycle. The mileage of the Motorcycle at the time of our inspection was not recorded due to the damage sustained to the speedometer display screen as a result of the accident.



**Photo 6** shows a closer view of the headlight assembly (arrowed) which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.





**Photo 7** shows a closer view of the front mudguard (arrowed) which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.



**Photo 8** shows a closer view of the side mirrors, clutch lever, front brake lever, handlebars and handlebar ends of the Motorcycle. These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.



**Photo 9** shows a closer view of the petrol tank, which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 10** shows a closer view of the rear brake pedal (arrowed) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.





**Photo 11** shows the right cowling of the Motorcycle which had sustained extensive damages (arrowed) as a result of the accident.



**Photo 12** shows the exhaust muffler of the Motorcycle which was observed to be dented as a result of the accident (circled).





**Photo 13** shows the right rear side cover (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 14** shows the top box rack (circled) which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.



**Photo 15** shows the dislodged rear signal lamps (arrowed) and deformed rear mudguard (circled) which was amongst the body parts at the rear of the Motorcycle that had sustained damage as a result of the accident.



**Photo 16** shows the broken top box which was amongst the body parts at the rear of the Motorcycle that had sustained damage as a result of the accident.





**Photo 17** 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 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 18** 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 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.

**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 chain of the motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 19 – 22 below.



**Photo 19** 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.

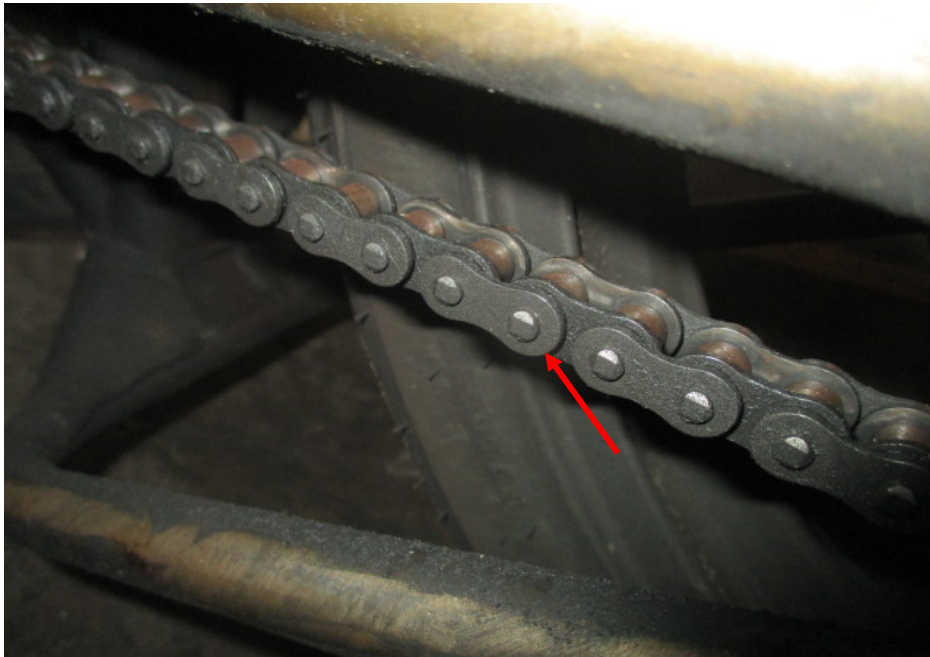




**Photo 20** shows the right side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the right engine area of the Motorcycle.



**Photo 21** 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.



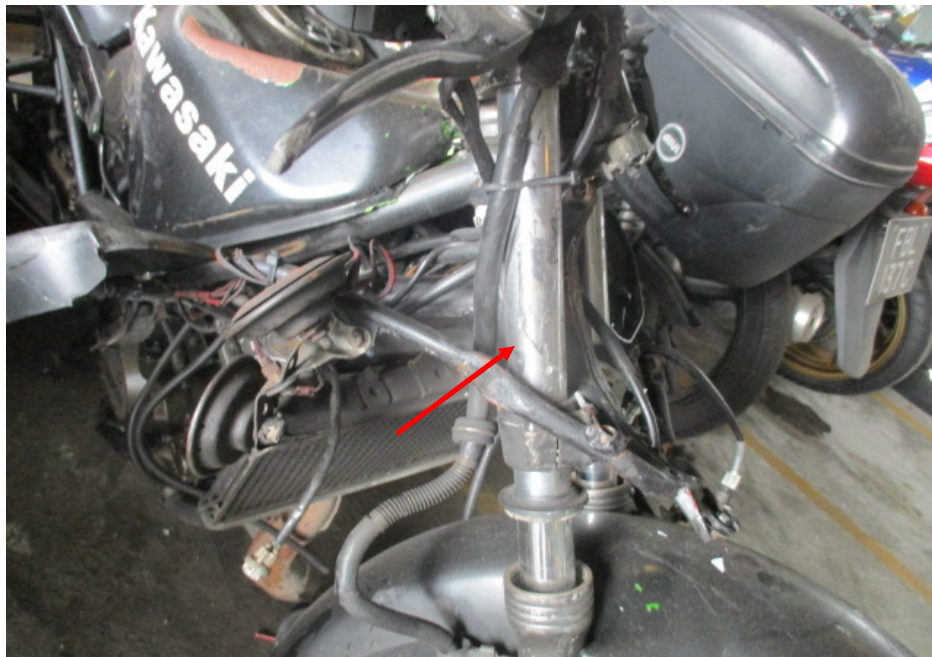
**Photo 22** shows a closer view of the gear train (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

### **Steering System & Braking System**

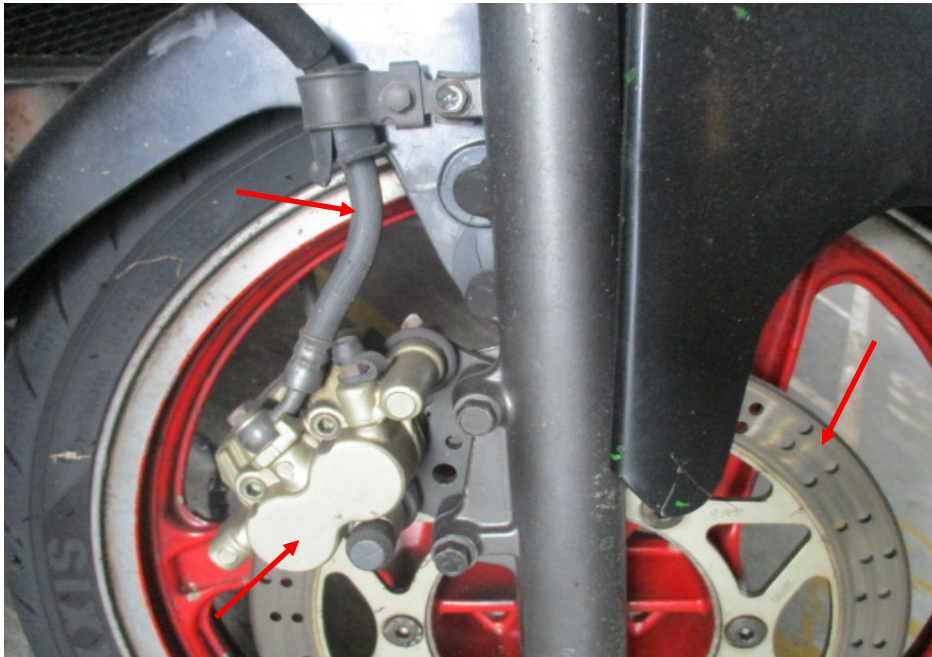
11. For this case, we were not able to conduct any test(s) on the steering system of the Motorcycle due to the damage of its front fork. The front fork was found to be bent inwards as a result of the accident.
12. The braking system of the Motorcycle was observed to be of a full hydraulic type, where 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. The brake fluid for the front brake and rear brake was also found to be of sufficiently level and without any contamination.



14. 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.
15. 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, 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 23 – 27 below.



**Photo 23** shows the front forks of the Motorcycle. The right front fork (arrowed) was observed to be bent inwards as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.

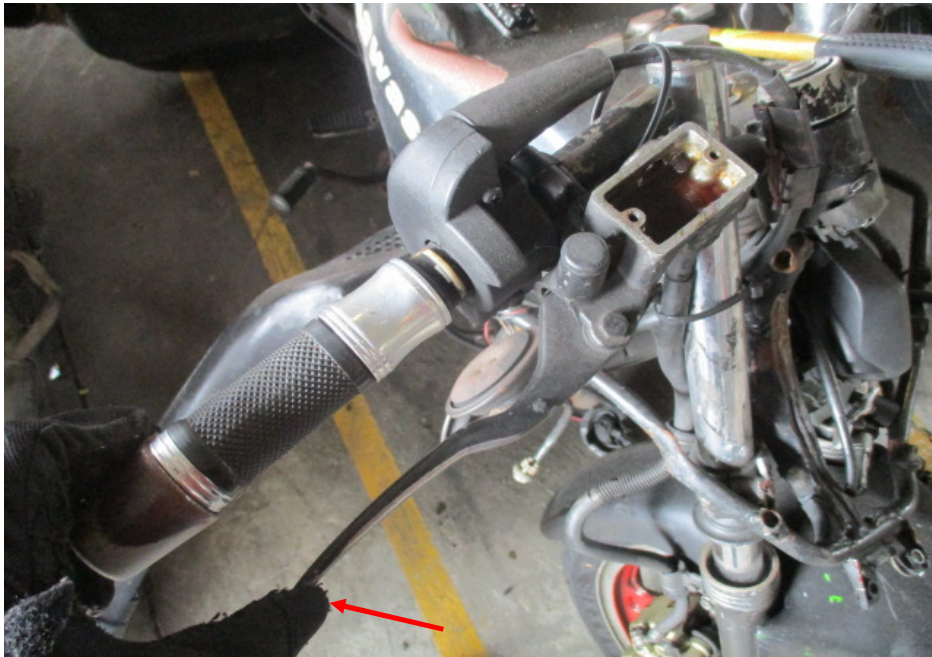


**Photo 24** shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

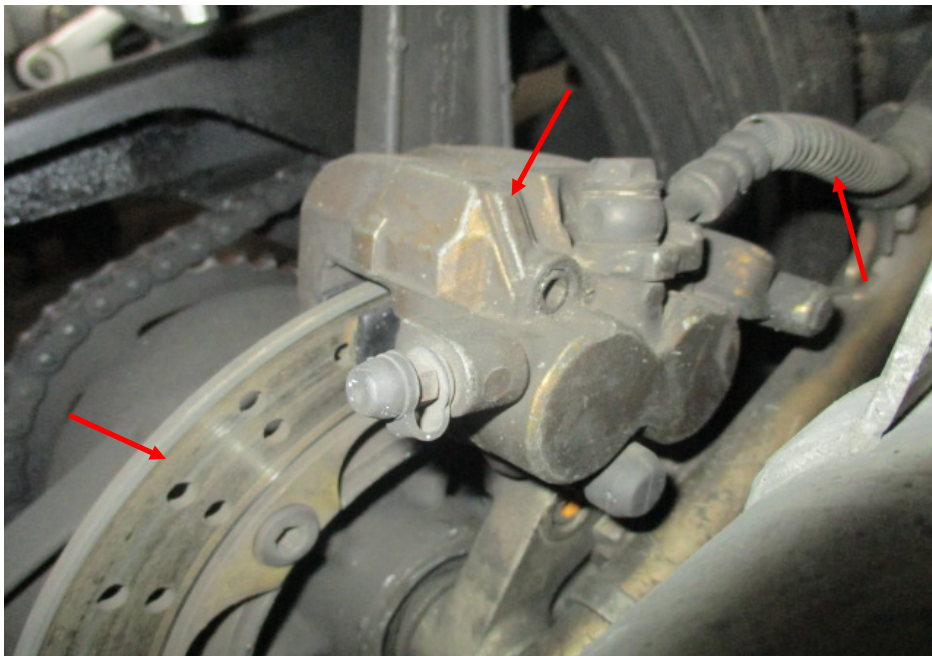


**Photo 25** shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be of sufficient level and without contamination for operational purposes (arrowed).





**Photo 26** 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 brake system.



**Photo 27** 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.

## **Conclusion**

16. 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.
17. 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 depths of approximately 4mm and 3mm each.

### **Muhd Nazril**

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