



Your Ref: TP/IP/53769/2018
Our Ref :CI/TPD18018437/Z

19th November 2018

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

MECHANICAL INSPECTION REPORT OF MOTORCYCLE JSH 9356

1. We refer to your request dated 27th September 2018 to conduct a physical inspection of a Motorcycle bearing registration number JSH 9356 (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 19th September 2018.
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 26th October 2018 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 recorded at 310941km.
5. The Motorcycle was observed to have sustained severe damages at the frontal portion, rear portion & along both its left side and right side. The body parts that were found to have been damaged includes its front head lamp, handle bar, missing wing mirrors, radiator, rider right foot rest, rear brake pedal, seat assembly, IU unit, rear tail lamp, exhaust muffler, missing licence plate and rear box rack amongst others. Its front forks assemblies were also observed to be severely damaged as a result of the accident.

6. This was likely due to the consistency of the accident's case fact that on 19th September 2018 at about 1554hrs, a Malaysian Motor Cycle (JSH 9356) was travelling along Sungei Kadut Avenue towards Woodlands Road when a Motor Taxi (SHC 7938M) from the opposite direction lost control, mounted the kerb and collided onto a Motor Lorry (GBD 2447L) and the said motorcycle which was travelling on the opposite direction. See photos 1 to 7.



Photo 1 shows the mileage of the Motorcycle at the time of our inspection was recorded at 310941km.



Photo 2 shows the Motorcycle rear portion that was observed to be severely damaged by the accident's impact collision. The rear parts that were observed to be damaged include its rear tail lamp, compartment rack, seat assembly and missing licence plate amongst others.



Photo 3 shows a close-up view of the frontal portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained relatively extensive impact including damages to the steering system due to the accident collision.



Photo 4 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 at the frontal portion, rear portion, along both its left side and right side.



Photo 5 shows a general view of the right portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained relatively extensive impact due to the accident collision.



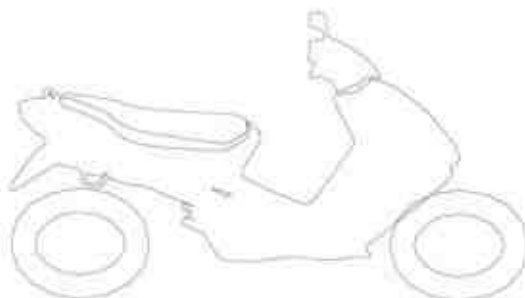
Photo 6 shows a close-up view of the dislodged handle bar. The Motorcycle was observed to have sustained relatively extensive impact including damages to the steering system to the accident collision.



Photo 7 shows a close-up view of the damaged rear brake pedal. The Motorcycle was observed to have sustained relatively extensive impact including damages to the braking system to the accident collision.

Tyres and Wheel Rims

7. The condition of the Motorcycle's front & rear tyres were observed to be in serviceable condition. The tread patterns of both tyres were 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 both tyres. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



Maxxis 90/80 – 17(5mm)

Maxxis 70/90 – 17(4mm)

8. The front & rear tyres were observed to be wrapped around alloy wheel rims that were found to be without any significant damage. They were found to be in serviceable condition with adequately inflated for operational purpose. See photo 8 & 9 below.



Photo 8 shows the rear tyre of the Motorcycle at the time of our inspection. 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. There was no significant damage observed on the rear wheel rim & tyre.



Photo 9 shows the front tyre of the Motorcycle at the time of our inspection. The pattern of the tread was clearly visible with remaining tread depth of approximately 4mm. 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 wheel rim was observed to be broken as a result of the accident.

Engine & Drive Train

9. Upon examination of the engine area of the Motorcycle, we had observed that the various engine related parts and components were intact with no visible damage. The engine underside was however observed to be covered with brownish fluid, suggesting leakage of fluid as a result of the accident.
10. The gear chain of the Motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photo 10 – 13 below.



Photo 10 shows sign(s) or indication(s) of fluid leakage observed around the engine's underside area of the Motorcycle.



Photo 11 shows sign(s) or indication(s) of fluid leakage observed at the engine's undercarriage of the Motorcycle.



Photo 12 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 13 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.

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 damages on its handle bar and front fork. It was found to be damaged as a result of the accident, hence causing the whole steering system to be in a state of immobility.
12. The brake system of the Motorcycle was of a semi-hydraulic type, where hydraulic (brake fluid) pressure controls the brake for the front wheel while the brake for the rear wheel is controlled by mechanical means (cables and springs). Our visual examination of the various components in the front brake system, like the brake disc, brake pad & brake calliper, revealed to be unaffected by the accident. However, brake fluid leakage was observed upon gripping the front hand brake lever. Brake fluid leakage was observed to be coming from the connection hose after the brake reservoir on the right hand side of the handle bar. This was likely due to the accident's impact collision.
13. Braking components such as brake foot pedal for the rear brake was noted to be damaged (buckled inwards) by the accident at the material time of our inspection.
14. Static brake tests was unable to be conducted on the Motorcycle front & rear braking system due to some braking components were noted to be extensively damaged as a result of the accident's impact collision.
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 damages on its handle bar, front forks, braking components which had rendered the Motorcycle immobility for the operational tests. See photo 14 to 20 below.



Photo 14 shows the handle bar (arrowed) was observed to be damaged as a result of the accident.



Photo 15 shows the front brake fluid leakage was observed to be caused by the accident. The brake fluid leakage was observed to be coming from the connecting hose when we grip the hand brake lever at the time of our inspection.



Photo 16 shows the front brake fluid was still at a sufficient level despite leakage observed at the connecting hose.



Photo 17 shows the rear brake pedal (arrowed) was observed to be in damaged due to the accident's impact collision.



Photo 18 shows the rear brake drum spring & cable was observed to be in serviceable condition unaffected by the accident despite the damage sustained on the foot brake pedal.



Photo 19 shows the handle bar (circled) was observed to be damaged as a result of the accident. Hence, we are unable to conduct any tests on the steering system of the Motorcycle.



Photo 20 shows the brake pad was noted to be with sufficient frictional material at time of our inspection.

Conclusion

16. At the time of our inspection of the Motorcycle, its steering system & braking system could not be tested likely due to the damages as a result of the accident.
17. The condition of the Motorcycle's front & rear tyre was observed to be in serviceable condition. The tread patterns of the both tyres were 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. Its tread depth was measured & found to be around approximately 4mm & 5mm.
18. Notwithstanding that the steering system & braking system could not be tested, the observations gathered from our physical inspection of the Motorcycle had indicated no evidence to suggest possible mechanical failure to the Motorcycle that may have contributed to the accident.

19. Our findings were based solely on a static and visual inspection of the Motorcycle. No operational test(s) could be carried out to the Motorcycle due to the damages on its steering system & braking system (as a result of the accident), which had rendered the Motorcycle's immobility.



Rohaizal A. Rahim
Technical Investigator



Ang Bryan Tani
AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF Inst.AEA
Senior Technical Investigator
Technical Investigation & Reconstructionist (SAE-A)

DISCLAIMER OF LIABILITY TO THIRD PARTIES:- This Report is made solely for the use and benefit of the Client named on the front page of this Report. No liability or responsibility whatsoever, in contract or tort, is accepted to any third party who may rely on the Report wholly or in part. Any third party acting or relying on this Report, in whole or in part, does so at his or her own risk.