



Your Ref: TP/IP/09205/2018
Our Ref :CI/TPD18008067/Z

15th March 2018

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

MECHANICAL INSPECTION REPORT OF MOTORCYCLE JLE 2293

1. We refer to your request dated 07th March 2018 to conduct a physical inspection of a motorcycle bearing registration number JLE 2293 (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 08th February 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 14th March 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 787,664km.
5. The Motorcycle was observed to have sustained damages at the frontal portion & along its left & right side. The body parts that were found to have been damaged include its front tyre mud guard, left wing mirror, left & right pillion foot pedal, left rider foot pedal and left signal lamp amongst others. Its front fork was also observed to be misaligned as a result of the accident.
6. This was likely due to the consistency of the accident's case facts that the motorcyclist had lost control of his Motorcycle while travelling straight along KJE towards Tuas which resulted in him to skid and fall off his Motorcycle. See photo 1 to 5.



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Photo 1 shows the mileage at the time of inspection was recorded to be 787,664km.



Photo 2 shows a general view of the front right body of the Motorcycle at the time of our inspection. The Motorcycle was observed to be sustained with damages due to the accident collision. Amongst the body parts damaged was its handle bar (arrowed), which was observed to be bent.



Photo 3 shows a general view of the rear left body of the Motorcycle at the time of our inspection. The Motorcycle was observed to be in good condition without any damage at time of our inspection.



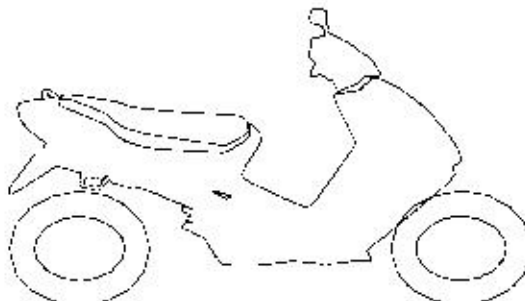
Photo 4 shows a close-up view of the frontal left portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained relatively minor impact due to the accident collision.



Photo 5 shows a close-up view of the left pillion foot pedal of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained relatively minor impact due to the accident collision.

Tyres and Wheel Rims

7. The condition of the Motorcycle'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:-



Sandstone 80/90 - 17 (5mm)

Viva Racing Sport FT-9000 70/90 - 17 (4mm)

8. The front & rear tyre was wrapped around alloy wheel rim that was found to be without any significant damage. See photo 6 & 7 below.



Photo 6 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. There was no significant damage observed on the front wheel rim & tyre.



Photo 7 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. It was also sufficiently inflated for vehicular operation.

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. See photo 8 below.

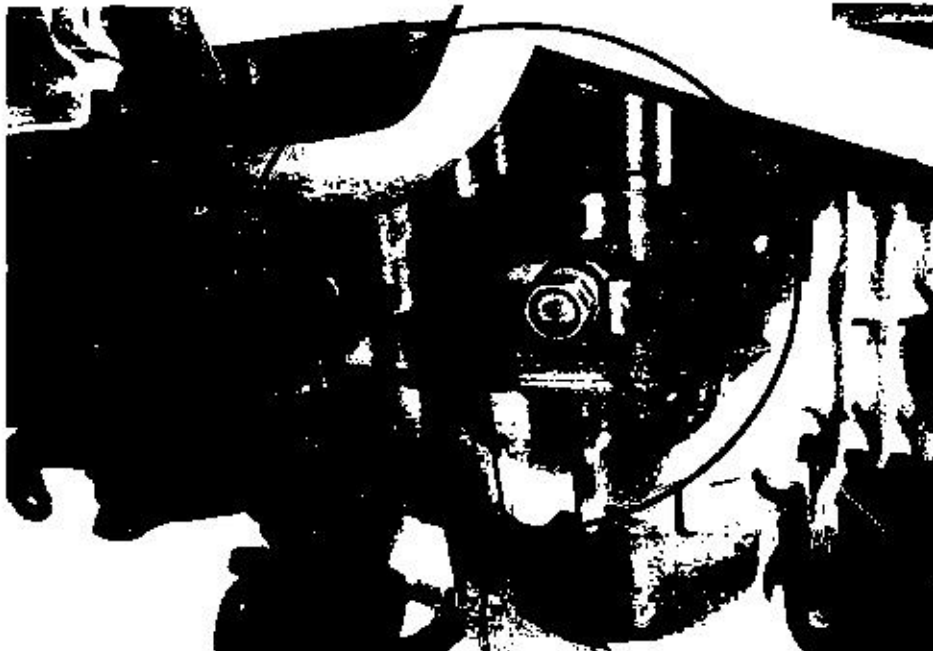


Photo 8 shows sign(s) or indication(s) of fluid leakage stain observed around the engine undercarriage area of the Motorcycle likely due to the accident's impact.

10. As for the gear chain of the motorcycle, our observation found that a red & white coloured jacket was stuck in between the gear and the chain of the Motorcycle. Free play tension test was conducted & found that it was too loose. Therefore it was not acceptable for operational purposes. See photo 9 & 10 below.

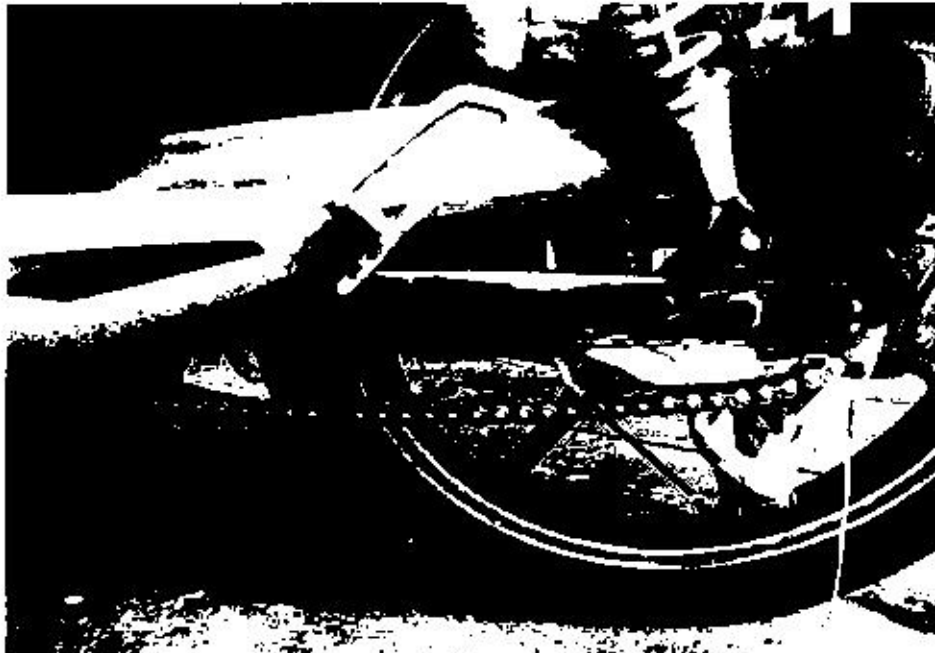


Photo 9 shows the general view of the gear train (arrowed) of the Motorcycle, which was observed to be too loose for operational purposes despite it was observed to be lubricated. A red & white coloured jacket was also found stuck in between the chain & gear at time of our inspection.



Photo 10 shows the general view of the gear train (arrowed) of the Motorcycle, which was observed to be too loose for operational purposes despite it was observed to be lubricated.



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 on its front fork. It was found to be misaligned as a result of the accident, hence causing the whole steering system not to be in a serviceable condition.
12. The brake system of the Motorcycle was controlled by mechanical means (cables and springs). Our visual examination of the various components in the brake system, like the hand brake lever, cable & springs, brake drum and brake foot pedal, revealed all to be intact and without damage. There was also no visible tear or cut observed on the connecting hoses and cables.
13. A static brake test was conducted only on the Motorcycle's front brake. The test was conducted by lifting the front tyre above ground & applies a little spinning action to it. The right hand brake lever was then gripped in order to stop the spinning front tyre. The result was satisfactory. It stopped after gripping the right hand brake to the fullest. It shows that the front brake drum was responding to the gripping action. This had appeared to indicate that the front brake was in a serviceable condition.
14. As for the rear brake due to the stuck jacket (Red & white coloured) to the gear & chain, no static brake test was able to be conducted.
15. For this case, we were not able to carry out any operational tests to the steering system and brake system of the Motorcycle due to the damage of its front fork & stuck gear chain, which had rendered the Motorcycle immobility for the operational tests. We were not able to push the motorcycle manually forward and backward normally, simulating movement of the Motorcycle, for the operational tests. See photo 11 - 13 below.



Photo 11 shows the front fork was observed to be with slight misaligned as a result of the accident. Hence, we are not able to conduct any tests on the steering system of the Motorcycle.

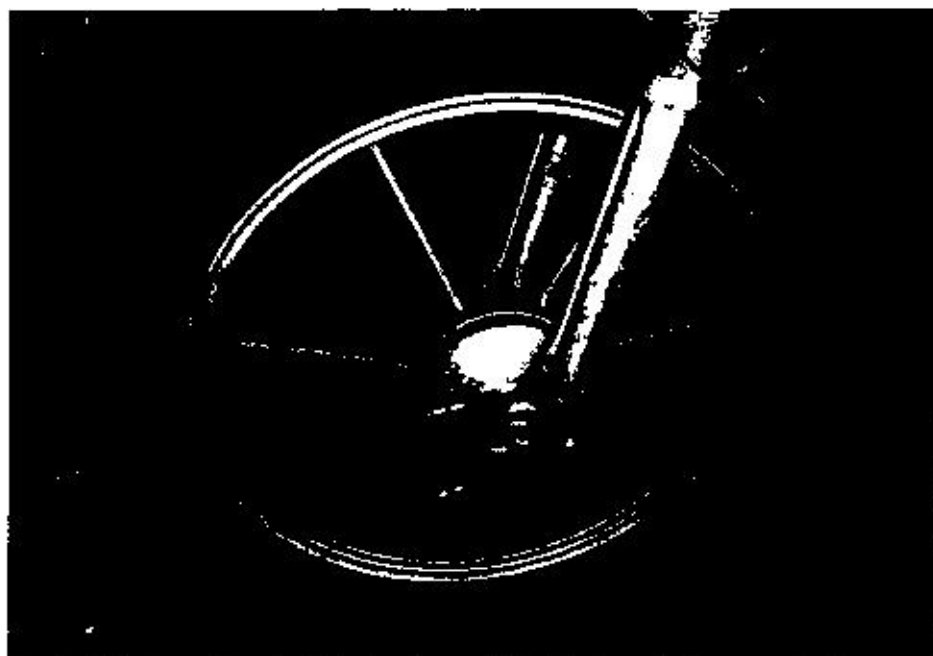


Photo 12 shows the front brake drum of the Motorcycle (arrowed). Our visual checks of these various components had revealed all to be intact with no visible damage was observed.



Photo 13 shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of mechanical type, controlled by the brake foot pedal of the Motorcycle. Our checks of the cable (arrowed), spring and drum, which are all part of the components in the rear brake system of the Motorcycle reveal all to be intact and without damage.

Conclusion

16. At the time of our inspection of the Motorcycle, its steering system could not be tested (due to damage as a result of the accident). Its front brake was however found to be in serviceable condition.
17. Notwithstanding that the steering 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.
18. However, we had found a red & white coloured jacket stuck in between the chain & gear on the rear wheel area. Hence, landing the Motorcycle in a state of immobility.



19. The tyres of the Motorcycle were found to be in a 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 tyres. It was sufficiently inflated for vehicular operation with remaining tread depth of approximately 4 & 5mm.
20. 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 damage of its front fork (as a result of the accident) & stuck rear gear & chain, which had rendered the Motorcycle immobility.

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