



Your Ref: TP/IP/33377/2018  
Our Ref :CI/TPD18011360/Z

30<sup>th</sup> August 2018

**Fatal Accident Investigation Team**

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

**MECHANICAL INSPECTION REPORT OF MOTORCYCLE JRY 8130**

1. We refer to your request dated 08<sup>th</sup> June 2018 to conduct a physical inspection of a motorcycle bearing registration number JRY 8130 (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident.
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 04<sup>th</sup> July 2017 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 recorded at time of our inspection was 227920km.
5. The Motorcycle was observed to have sustained minor damages at the rear left portion. The body parts that were found to have been damaged was its rear left signal lamp & missing wing mirror as a result of the accident.
6. This was likely to be the consistency of the accident's case fact that on 06<sup>th</sup> June 2018 at about 0704hrs, the motorcyclist was riding along Upper Jurong Road towards Pioneer Road North on the left most lane of 3 lanes road when he lost control of the Motorcycle, skidded & landed on the grass patch. See photo 1 to 5 below.



**Photo 1** shows the mileage of the Motorcycle recorded at time of our inspection was 227920km.



**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 in good general condition at time of inspection.



Photo 3 shows a general view of the rear body of the Motorcycle at the time of our inspection. The Motorcycle was observed to sustained minor damage at the rear left signal lamp at time of inspection.



Photo 4 shows a general view of the front left body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained minor damages on the rear portion at time of inspection.

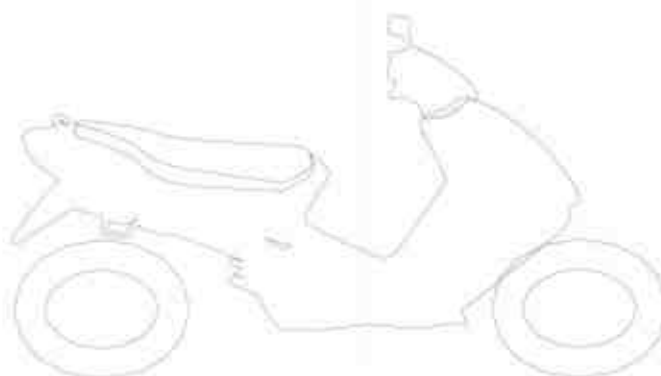




Photo 5 shows a closer view of the rear left signal lamp of the Motorcycle at the time of our inspection. It was observed to be damage likely due to the accident. (Circled)

### 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:-



Speedy Boy 80/90 - R17  
(3mm)

Dunlop T100 70/90 - R17  
(3mm)

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



**Photo 6** shows the rear tyre of the Motorcycle. 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.



**Photo 7** shows the front tyre of the Motorcycle. 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.

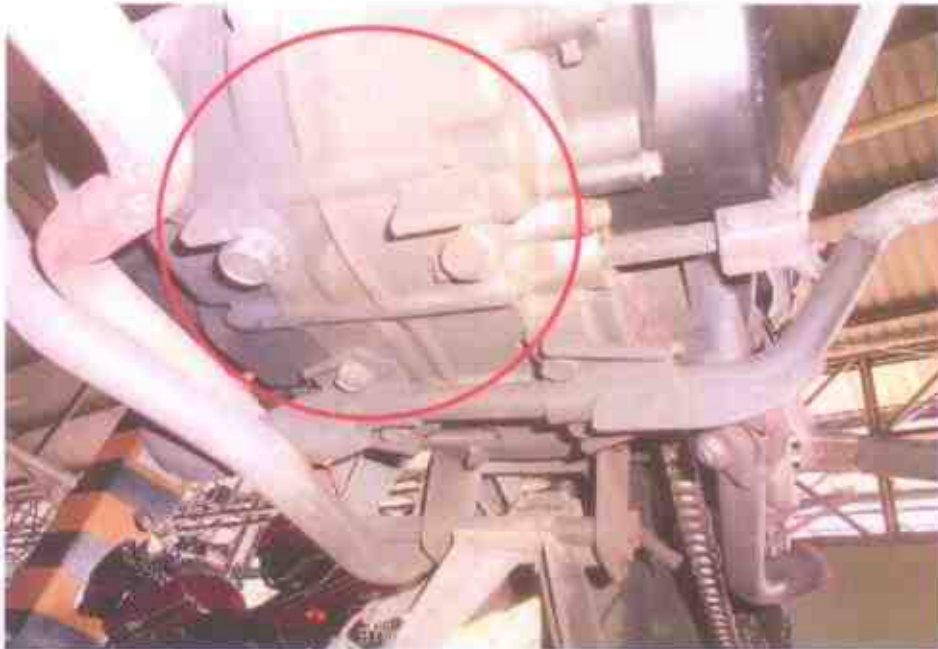
### Engine & Drive Train

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. However, there was sign(s) or indication(s) of fluid leak observed around the left side of 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. Free play tension test was also conducted & found adequately acceptable. See photo 8 to 11 below.



**Photo 8** shows sign(s) or indication(s) of fluid leak observed around the left side of the engine area of the Motorcycle.





**Photo 9** shows no sign(s) or indication(s) of fluid leakage stain observed undercarriage of the engine area of the Motorcycle.



**Photo 10** 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 11** 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. Free play tension was also observed & found adequately acceptable.

### Steering System & Braking System

11. Our checks on the various steering components of the Motorcycle had revealed that its steering system was in serviceable condition. Its front fork was found to be intact and undamaged. Functional test to the handle bar towards the fullest left and fullest right did not produce any abnormal free play and/or resistance.
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).



13. Static brake tests conducted on the Motorcycle front & rear brakes had appeared to indicate that the braking system of the Motorcycle was in serviceable condition. The Motorcycle's braking system like the brake discs, brake callipers, brake lever, brake foot pedal and brake hoses revealed all to be intact and without damage. There was some resistance felt (spongy like feel) upon pressing the brake lever. This would indicate that there was no leakage of pressure/vacuum in the brake system. Our checks on the brake fluid had also indicated that the brake fluid was of sufficient level for operational purposes, and without contamination.
14. We subsequently carried out an operational test of the Motorcycle's braking system. This was done by riding on the Motorcycle moving forward and backward, getting the Motorcycle in motion via 1<sup>st</sup> & 2<sup>nd</sup> gear, and thereafter engaging the front brake and rear brake of the Motorcycle. At the end of the short operational test, we did not observe any abnormal behaviour of the Motorcycle's braking system. The front wheel and rear wheel of the Motorcycle were able to stop rotating immediately upon depressing the brake lever and stepping on the brake pedal.

In general, the observations gathered during the brake test had indicated that the braking system of the Motorcycle was in serviceable condition. See photo 12 - 16 below.



**Photo 12** shows the steering system was observed to be in a serviceable condition. It was able to be steered to the full left at time of our inspection.



Photo 13 shows the steering system was observed to be in a serviceable condition. It was able to be steered to the full right at time of our inspection.



Photo 14 shows our checks on the brake fluid reservoir had also indicated that the brake fluid was of sufficient level for operational purposes, and without contamination.



**Photo 15** shows testing of the braking of the front brake in progress. There was some resistance felt (spongy like feel) upon pressing the brake lever.



**Photo 16** shows testing of the braking of the rear brake in progress. There was some resistance felt (spongy like feel) upon stepping on the brake pedal.



## Conclusion

15. Basing on our physical inspection & operational test of the Motorcycle, it appears that the steering system and braking system of the Motorcycle were all in serviceable condition. We did not find any evidence(s) to suggest that there was possible mechanical failure to the Motorcycle that may have caused and/or contributed to the accident.
16. 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 tyre. It was sufficiently inflated for vehicular operation with remaining tread depth of approximately 3mm.



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