LVK Auto Consultants Pte Ltd

Company Registration No. 199607198R

51 UBI AVE 1, #01-25 PAYA UBI INDUSTRIAL PARK, SINGAPORE 408933 TEL : (065) 62563561 FAX : (065) 67414108

Your Ref: TP/IP/70099/2018
Our Ref : CI/TPD19002522/N

22 April 2019

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

INSPECTION REPORT OF MOTORCYCLE FX 8854C

1. We refer to your request dated 1 February 2019 to conduct a physical inspection of a motorcycle bearing registration number FX 8854C (herein referred to as **"Motorcycle"**), which was involved in a fatal road traffic accident on 22 December 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 25 March 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 15,505km.

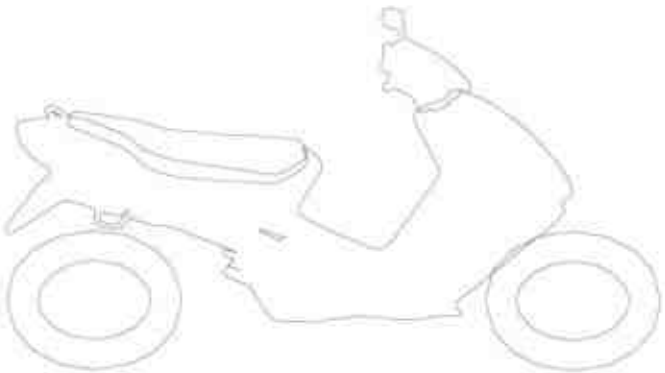
5. The Motorcycle was observed to have sustained damages along its left side. The body parts that were found to have been damaged include its headlamp assembly, front left signal lamp, left side mirror, clutch lever, left handlebar end, front mudguard, gear shift rod, gear shift pedal, left front footrest, left front footrest bracket, left rear side cover, rear wheel rim and rear tyre amongst others.

Tyres and Wheel Rims

6. The condition of the Motorcycle's front tyre was observed to be in serviceable condition. The tread pattern of the front tyre 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 front tyre. The front tyre was observed to be sufficiently inflated for vehicular operation.

7. However we did observe that the left sidewall of the rear tyre had burst and torn off from the rear wheel rim as a result of the accident. The tread pattern of the rear tyre was clearly visible.

8. The tyre brand, tyre size and remaining tread depth of the 2 tyres were recorded as follows:-



FKR 90/80 - 18 (5mm) FKR 80/80 - 18 (5mm)

9. 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 wheel rim of the Motorcycle. We had however found some relatively minor marks of grazing nature on the edges of the rear wheel rim, at the left side of the Motorcycle. See photos 1 – 11 below

Photo 1 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 along its left side. The mileage at the time of inspection was recorded to be 15,505km.

Photo 2 shows a general view of the left front body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages along its left side. Amongst the body parts that were found to have been damaged include its headlamp assembly, front left signal lamp, left side mirror, clutch lever, left handlebar end, front mudguard, gear shift rod, gear shift pedal, left front footrest, left front foot rest bracket, left rear side cover, rear wheel rim and rear tyre amongst others.

Photo 3 shows a closer view of the headlamp assembly (circled) and speedometer (arrowed) which were amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.

Photo 4 shows a close up view of the left side mirror, clutch lever and left handlebar end of the Motorcycle. These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.

Photo 5 shows a closer view of the gear shift rod, gear shift pedal, left front footrest and left front footrest bracket, which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 6 shows the damaged left rear side cover (circled) and pillion grab bar (arrowed) which were amongst the body parts of the Motorcycle that had sustained damage as a result of the accident.

Photo 7 shows the front wheel rim and 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 5mm. The tyre was also observed to be sufficiently inflated for vehicular operation. There was no significant damage observed on the front wheel rim.

Photo 8 shows the front tyre of the Motorcycle at the time of our inspection. The front tyre was observed to be in serviceable condition. The pattern of the tread was also clearly visible. 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.

Photo 9 shows the rear tyre of the Motorcycle at the time of our inspection. We observed that the left sidewall of the rear tyre had burst (circled). The tread pattern of the rear tyre was clearly visible with remaining tread depth of approximately 5mm. The rear rim had sustained significant damage due to the burst left sidewall of the rear tyre (arrowed).

Photo 10 shows the left side of the rear wheel rim and tyre of the Motorcycle at the time of our inspection. Some relatively minor marks of grazing nature were observed on the edges of the rear wheel rim (arrowed).

Photo 11 shows the condition of the Motorcycle's rear tyre. The tread pattern of the rear tyre was clearly visible with remaining tread depth of approximately 5mm.

Engine & Drive Train

10. 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.

11. The gear chain of the motorcycle was found to be intact without any misalignment. It was also adequately lubricated for operating purposes. See photos 12 – 15 below.

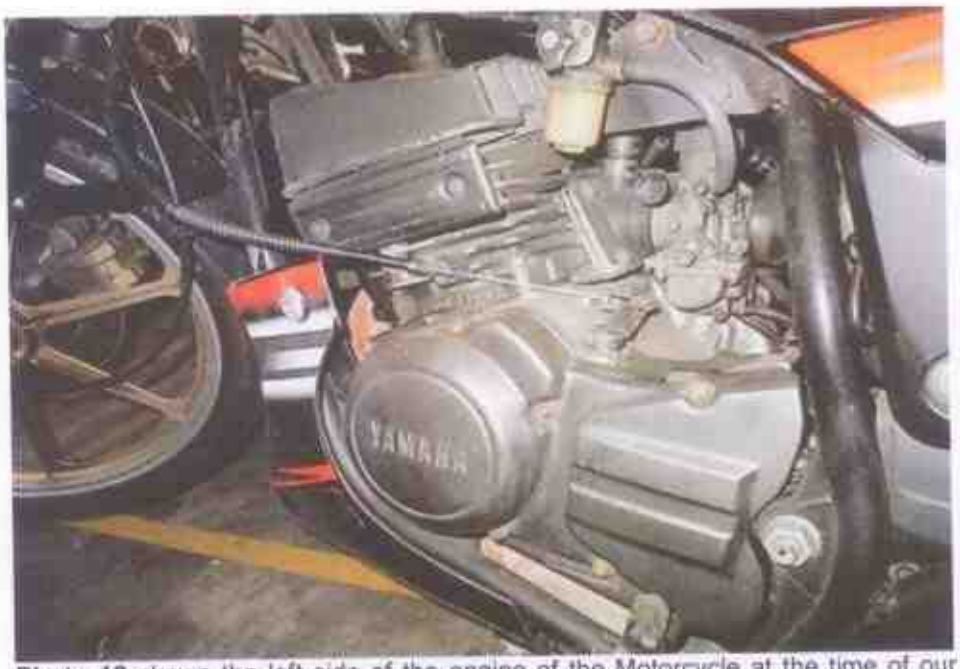


Photo 12 shows the left side of the engine of the Motorcycle at the time of our inspection. The various engine related parts and components were found to be intact with no visible damage. There was also no sign(s) or indication(s) of fluid leak observed around the left engine area of the Motorcycle.

Photo 13 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 14 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 15 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

12. Our checks on the various steering components of the Motorcycle 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 also did not produce any abnormal free play and/or resistance.

13. 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 brake system, like the brake disc, brake caliper, drum, brake lever 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.

14. We subsequently carried out an operational test of the Motorcycle's front braking system. This was done by firstly putting the Motorcycle on its main stand. We then proceeded to turn the front wheel, allowing it to spin freely, simulating the Motorcycle in motion. We thereafter engaged the front brake lever of the Motorcycle. At the end of the short operational test, we did not observe any abnormal behaviour of the Motorcycle's front braking system. The front wheel of the Motorcycle was able to stop rotating immediately upon depressing the brake lever.

15. We were not able to conduct any operational test(s) on the Motorcycle's rear braking system due to the damage of its rear tyre and rim. The left sidewall of the rear tyre had burst and caused significant damage to the rear rim. As a result of this, we could not release the Motorcycle from its main stand to conduct the operational test on the Motorcycle's rear braking system. See photos 16 - 19 below.

Photo 16 shows the front fork (arrowed) of the Motorcycle. The front fork and fork bracket of the Motorcycle were both found to be intact and undamaged. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. The steering system of the Motorcycle was in serviceable condition at the time of our inspection.

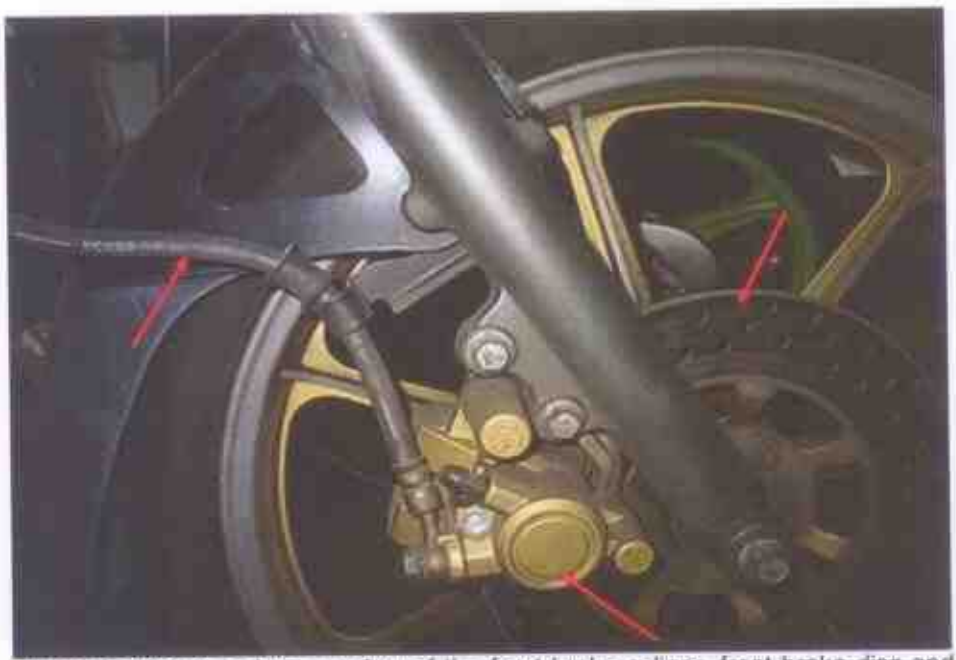


Photo 17 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

Photo 18 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.

Photo 19 shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of a 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. Basing on our physical inspection of the Motorcycle, it appears that the steering system and front braking system of the Motorcycle were all in serviceable condition. Notwithstanding that the rear 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.

17. The front tyre of the Motorcycle was 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 its tread. The front tyre was sufficiently inflated for vehicular operation with remaining tread depth of approximately 5mm.

18. The rear tyre on the other hand was observed to have burst at the left outer sidewall as a result of the accident. The rear tyre had sufficient remaining tread depth of approximately 5mm.

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 damage of the rear tyre, which had rendered the Motorcycle immobile.

Muhd Nazril
Senior Technical Investigator

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

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