

Your Ref: TP/IP/59521/2017
Our Ref :CI/TPD17023258/Z

08th December 2017

Fatal Accident Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBE 3545A

1. We refer to your request dated 24th November 2017 to conduct a physical inspection of a motorcycle bearing registration number FBE 3545A (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 07th December 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 39,182km.
5. The Motorcycle was observed to have sustained minor damages at the frontal portion & at its left side. The body parts that were found to have been damaged include its left handle bar (throttle area), left front wheel protector, left rear wheel protector & left signal lamp amongst others as a result of the accident.



Photo 1 shows the mileage of the Motorcycle recorded at time of our inspection was 39,182km.



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.

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Photo 3 shows a general view of the rear 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 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 at time of inspection.



Photo 5 shows a closer view of the left handle of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained with relatively minor damages due to the accident collision. (Circled)



Photo 6 shows a closer view of the front left signal lamp of the Motorcycle at the time of our inspection. It was observed to be damage likely due to the accident. (Circled)



Photo 7 shows a close-up view of the front handle of the Motorcycle at the time of our inspection. It was observed to have sustained slight misalignment due to the accident collision. (Arrowed)



Photo 8 shows a closer view of the left front wheel protector of the Motorcycle at the time of our inspection. It was observed to be damage due to the accident impact. (Circled)



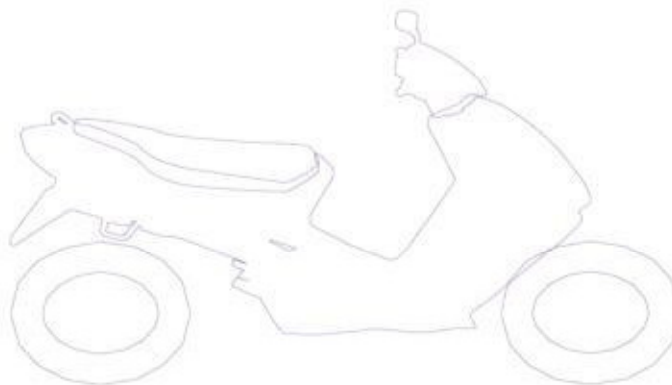
Photo 9 shows a closer view of the left rear wheel protector of the Motorcycle at the time of our inspection. It was observed to be damage due to the accident impact. (Circled)



Photo 10 shows a general view of the rear portion of the Motorcycle. The Motorcycle was observed to be in good general condition at time of inspection.

Tyres and Wheel Rims

6. 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:-



Metzeler 160/60 - R17
(3mm)

Metzeler 110/70 - R17
(2mm)

7. The rear tyre was wrapped around alloy wheel rims that were found to be without any significant damage. See photo 11 & 12 below



Photo 11 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 12 shows the front tyre of the Motorcycle. The front tyre was observed to be in serviceable condition with remaining tread depth of approximately 2mm. The tyre was also observed to be sufficiently inflated for vehicular operation.

Engine & Drive Train

8. 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.
9. 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 13 – 17 below.

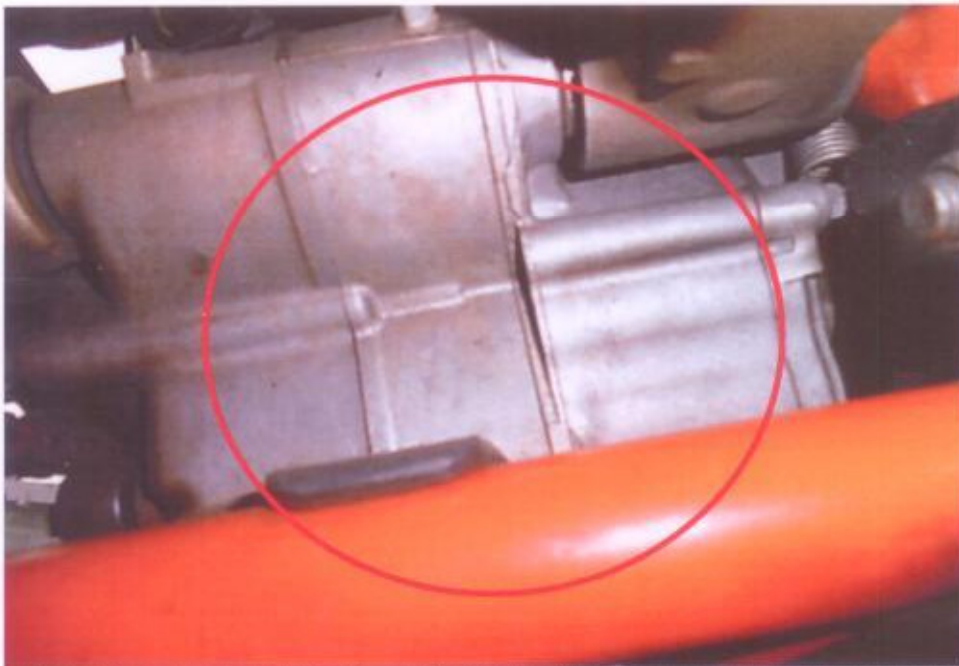


Photo 13 shows no sign(s) or indication(s) of fluid leak observed around the underside of the engine area of the Motorcycle.

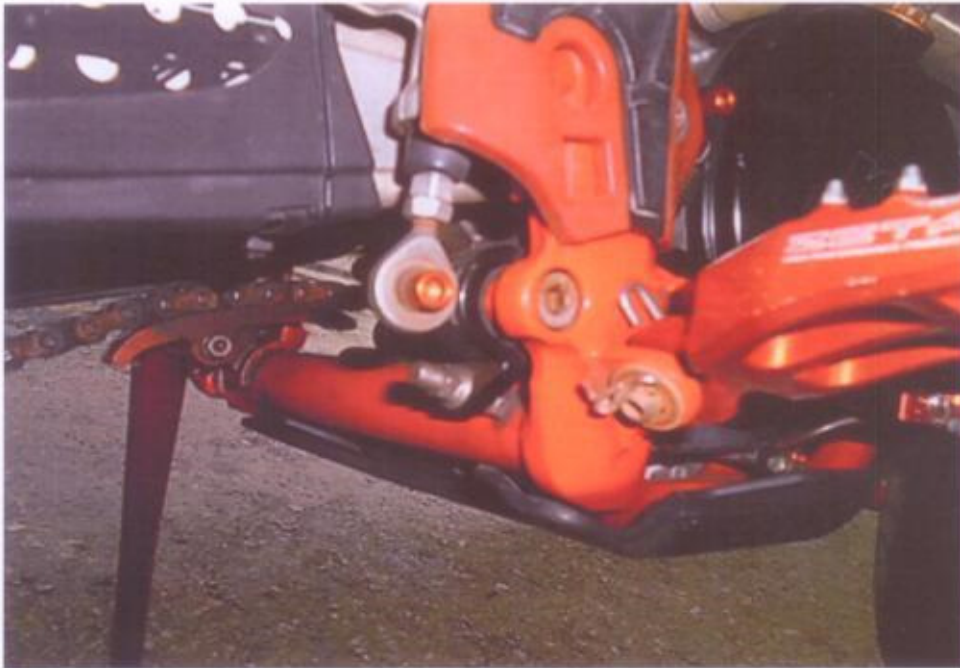


Photo 14 shows no sign(s) or indication(s) of fluid leakage stain observed around the right side of the engine area of the Motorcycle.



Photo 15 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 16 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 17 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

10. 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. Despite a slight bend to the handle bar (due to the accident) an operational test towards the left and right also did not produce any abnormal free play and/or resistance.
11. 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 pulling 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.
12. 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.
13. 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 1st & 2nd 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 18 - 21 below.



Photo 18 shows the steering system was observed to be in a serviceable condition. It was able to be steered to the full left & right at time of our inspection.



Photo 19 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 20 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 21 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

14. Basing on our physical inspection 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.
15. 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 2 & 3mm.



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