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Your Ref: TP/IP/06231/2018
Our Ref :CI/TPD18010452/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 FBK 7228H

1. We refer to your request dated 07th March 2018 to conduct a physical inspection of a motorcycle bearing registration number FBK 7228H (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 28th January 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 17922km.

5. The Motorcycle was observed to have sustained damages at the frontal portion & along both its left side and right side. The body parts that were found to have been damaged include its front head lamp, ERP unit & bracket, left wing mirrors, front left & right fairing, radiator, rear box & bracket, foot brake pedal and exhaust header manifold amongst others. Its front fork assembly was also observed to be buckled inwards as a result of the accident.

6. This was likely due to the consistency of the accident's case facts that the Motor Cycle rider together with his pillion rider was travelling along PIE towards Tuas believed to have collided onto the rear of a Motor Car which was in front of them. See photo 1 to 8 below.

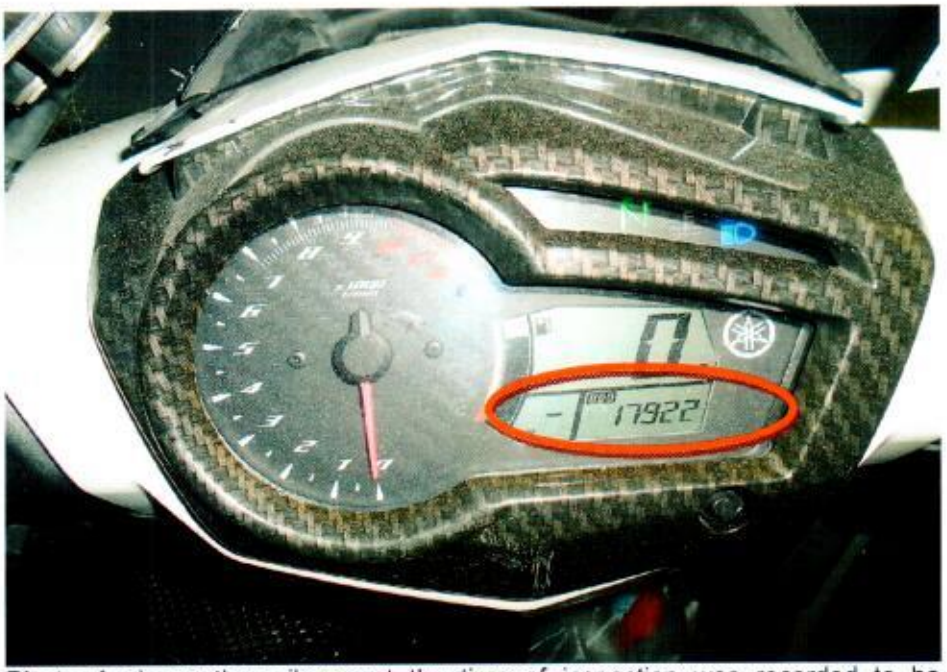


Photo 1 shows the mileage at the time of inspection was recorded to be 179,22km.

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 relatively extensive impact due to the accident collision. Amongst the body parts damaged was its front fork (arrowed), which was observed to be bent inwards.

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 have sustained damages at the frontal & rear portion, along both its left side and right side.

Photo 4 shows a general view of the frontal portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to be sustained relatively extensive impact due to the accident collision.

Photo 5 shows a close-up view of the exhaust muffler of the Motorcycle at the time of our inspection. It was observed to have sustained with damages due to the accident collision.

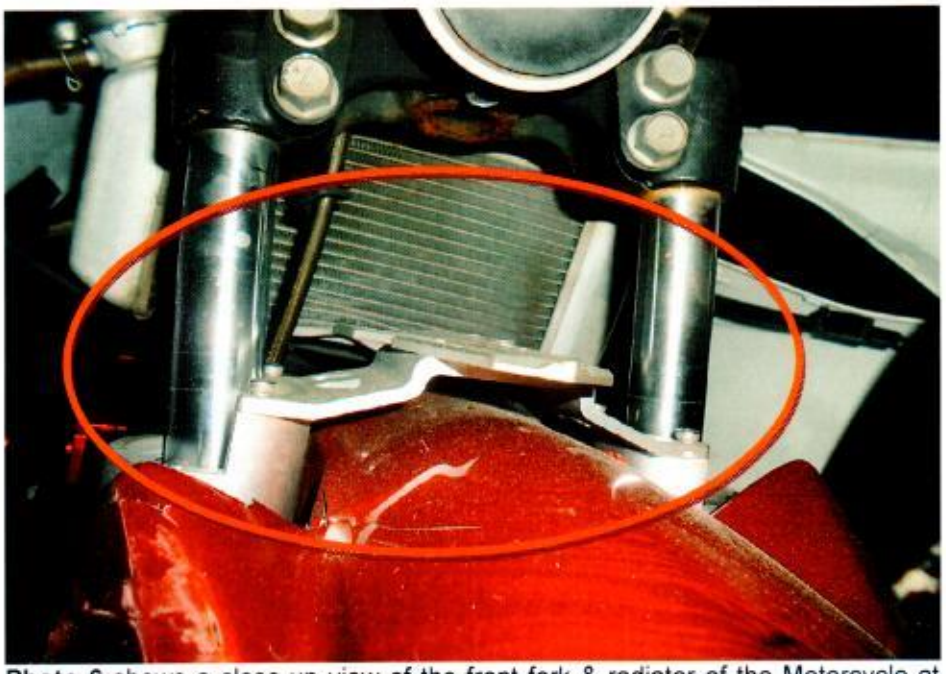


Photo 6 shows a close-up view of the front fork & radiator of the Motorcycle at the time of our inspection. It was observed to have sustained with damages due to the accident collision.

Photo 7 shows a close-up view of the ERP unit c/w bracket of the Motorcycle at the time of our inspection. It was observed to have sustained with damages due to the accident collision.

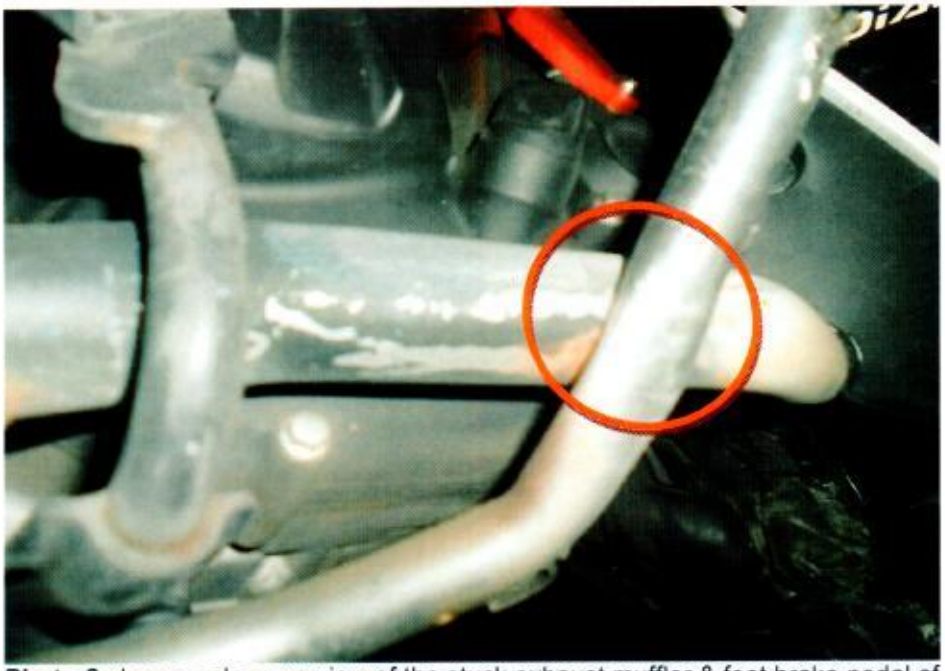
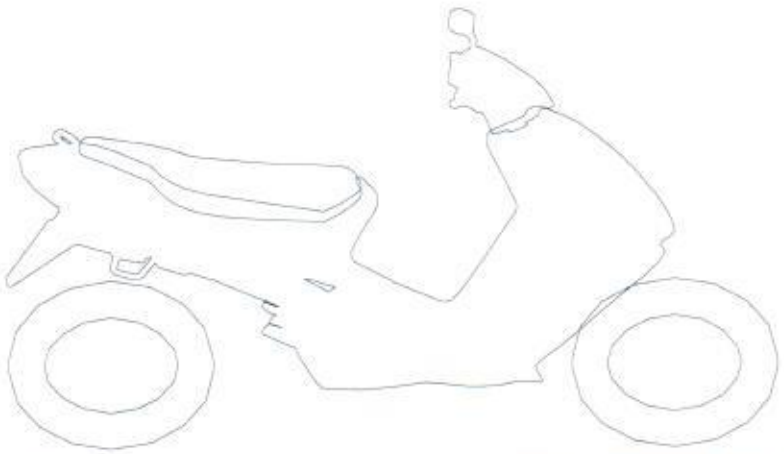


Photo 8 shows a close-up view of the stuck exhaust muffler & foot brake pedal of the Motorcycle at the time of our inspection. It was observed to have sustained with damages due to the accident collision.

Tyres and Wheel Rims

7. The condition of the Motorcycle's 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. Both tyres were 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:-



IRC NFG7 120/70-17 (3mm)

IRC NFG7 70/90-17 (3mm)

8. The rear tyre was wrapped around alloy wheel rim that was found to be without any significant damage. See photo 9– 10 below

Photo 9 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 3mm. 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 10 shows the front tyre of the Motorcycle. The pattern of the tread was 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.

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. There was also no sign(s) or indication(s) of fluid leak observed around 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 11 – 15 below.

Photo 11 shows sign(s) or indication(s) of fluid leakage stain observed around the engine undercarriage area of the Motorcycle.

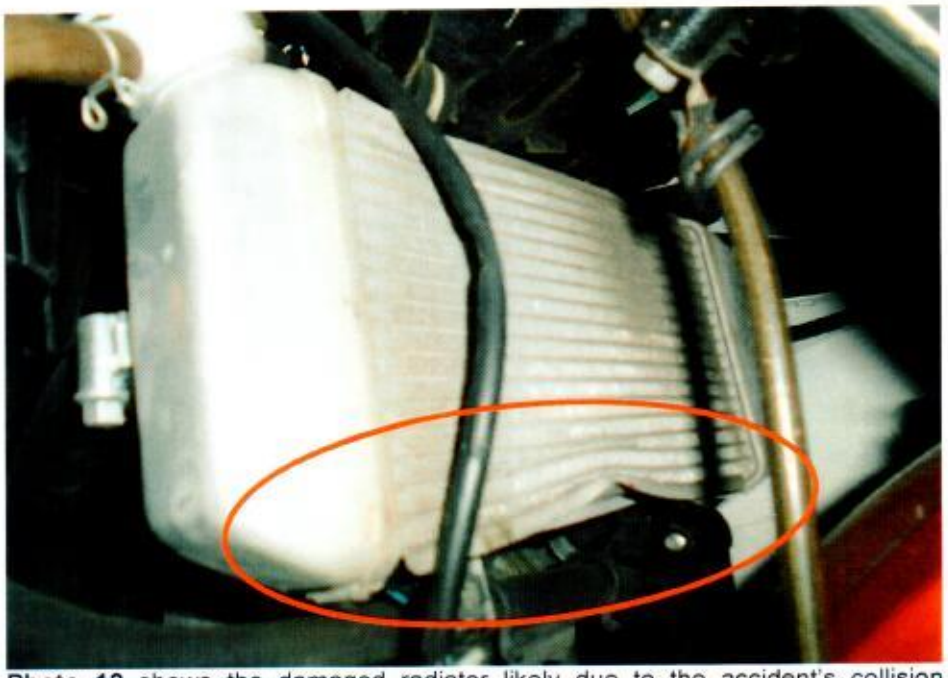


Photo 12 shows the damaged radiator likely due to the accident's collision impact.

Photo 13 shows the radiator reservoir was not affected by the accident's collision impact.

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 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. 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. The front fork was found to be buckled inwards 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 fully-hydraulic type, where hydraulic (brake fluid) pressure controls the brake for the front & rear wheel. Our visual examination of the various components in the brake system, like the brake disc, brake calliper, drum and brake foot pedal, revealed all to be intact. Except for the rear foot brake pedal was observed to be stuck likely due to the accident's impact. However, there was also no visible tear or cut observed on the connecting hoses and cables.

13. Static brake tests conducted on the Motorcycle had appeared to indicate that the brake system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon gripping the hand brake lever & stepping on the rear brake foot paddle. This would indicate that there was no leakage of pressure/vacuum in the brake system also on the rear brake drum mechanical parts. Our checks on the brake fluid had also indicated that the brake fluid was of sufficient level for operational purposes, and without contamination.

14. For this case, we was not able to carry out any operational tests to the steering system and braking system of the Motorcycle due to the damage of its front fork, which had rendered the Motorcycle immobility for the operational tests. We were not able to push the motorcycle manually forward and backward, simulating movement of the Motorcycle, for the operational tests. See photo 16 - 18 below.

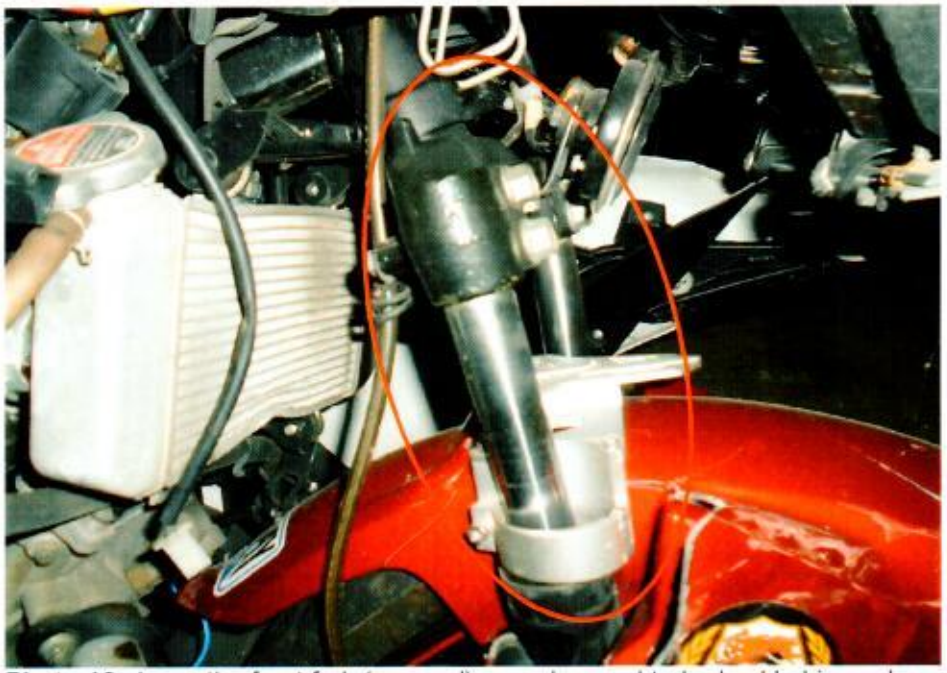


Photo 16 shows the front fork (arrowed) was observed to be buckled inwards as a result of the accident. Hence, we are not able to conduct any tests on the steering system of the Motorcycle.

Photo 17 shows the front brake calliper, front brake disc and front brake hose of the Motorcycle (arrowed), which are all part of the components in the 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.

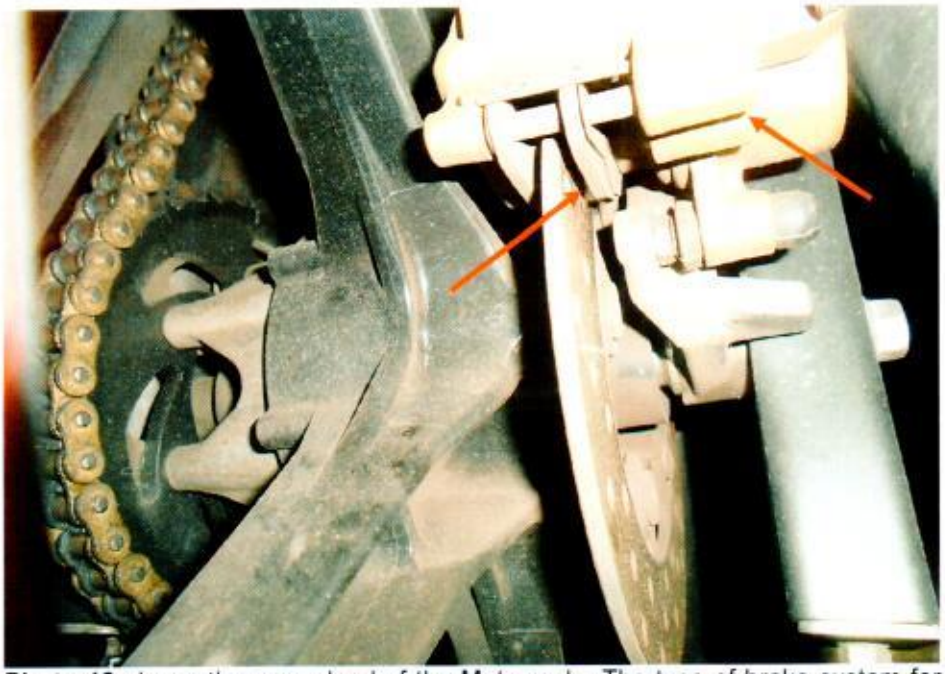


Photo 18 shows the rear wheel of the Motorcycle. The type of brake system for the rear wheel was of hydraulic type, controlled by the brake foot pedal of the Motorcycle. Our checks of the calliper (arrowed) & brake pad which are all part of the components in the rear brake system of the Motorcycle reveal all to be intact and without damage.

Conclusion

15. 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 brake system was however found to be in serviceable condition.

16. 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.

17. The condition of the Motorcycle's 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. Both tyres were sufficiently inflated for vehicular operation with remaining tread depth of approximately 3mm.

18. 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), which had rendered the Motorcycle immobile.

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