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Your Ref: TP/IP/31659/2018
Our Ref :CI/TPD18011364/Z

29th August 2018

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

MECHANICAL INSPECTION REPORT OF MOTORCYCLE JQV 4563

1. We refer to your request dated 08th June 2018 to conduct a physical inspection of a motorcycle bearing registration number JQV 4563 (herein referred to as "**Motorcycle**"), which was involved in a fatal road traffic accident on 29th May 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 06th July 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 560489km.

5. The Motorcycle was observed to have sustained extensive damages at the frontal portion & along its left side, right side and rear portion. The body parts that were found to have been damaged include its front fairing, headlamp, front wing mirrors, handle bar, radiator and dislodged chain amongst others. Its front fork assembly was also observed to be buckled to the left side as a result of the accident.

6. This was likely to be the consistency of the accident's case facts that on 29th May 2018 at about 0623hrs along ECP towards Airport, the Motorcycle had collided onto the rear of a Motor Trailer. See photo 1 to 6 below.

Photo 1 shows the mileage at the time of inspection was recorded to be 560489km.

Photo 2 shows a general view of the front left 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, which was observed to be bent to the left.

Photo 3 shows a general view of the rear body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages at the rear portion.

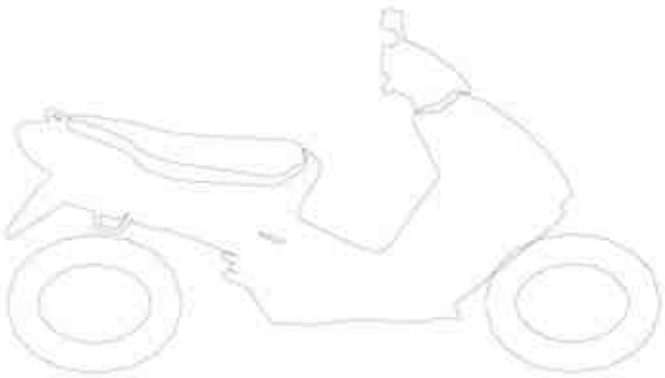
Photo 4 shows a general view of the frontal portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to be sustained with relatively extensive impact due to the accident collision.

Photo 5 shows a semi close-up view of the frontal portion 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.

Photo 6 shows a general view of the front right portion 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.

Tyres and Wheel Rims

7. The condition of the Motorcycle's rear tyre was observed to be in serviceable condition whereas the front tyre was found to be deflated likely due to the accident impact. However, 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 rear tyre was 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:-



Maxxis Diamond MA-3D
70/90 - 17 (4mm)

Maxxis Diamond MA-3D
70/90 - 17 (3mm)

8. The tyres were wrapped around alloy wheel rims that were found to be without any significant damage despite the front tyre was deflated likely due to the accident's collision impact at the material time of the accident. See photo 7– 9 below

Photo 7 shows the front 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 observed to be deflated as a result of the accident. However, there was no significant damage observed on the front wheel rim & tyre.

Photo 8 shows the rear tyre of the Motorcycle. The pattern of the tread was clearly visible with remaining tread depth of about 4mm. There was no tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the rear tyre unaffected by the accident's impact collision.

Photo 9 shows further observation on the front tyre that was deflated at time of our inspection likely due to the accident's collision impact.

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 but with visible damages found on the engine compartment. Damages such as corrugated radiator, cut hoses, broken engine fittings amongst others. However, there was no sign(s) or indication(s) of fluid leak observed around the engine area/ undercarriage of the Motorcycle.

10. The chain of the motorcycle was found to be dislodged out from the rear gear sprocket likely due to the accident's impact collision. However, it was observed to be adequately lubricated for operating purposes. See photo 10 to 14 below.

Photo 10 shows the damaged (corrugated) radiator as a result of the accident's impact collision.

Photo 11 shows the damages sustained on the engine compartment as a result of the accident's collision.

Photo 12 shows the undercarriage of the Motorcycle's engine. No signs or indication of any engine leakage at time of our inspection.

Photo 13 shows the general view of the gear chain of the Motorcycle, which was observed to be dislodged from the rear sprocket as a result of the accident's impact collision.

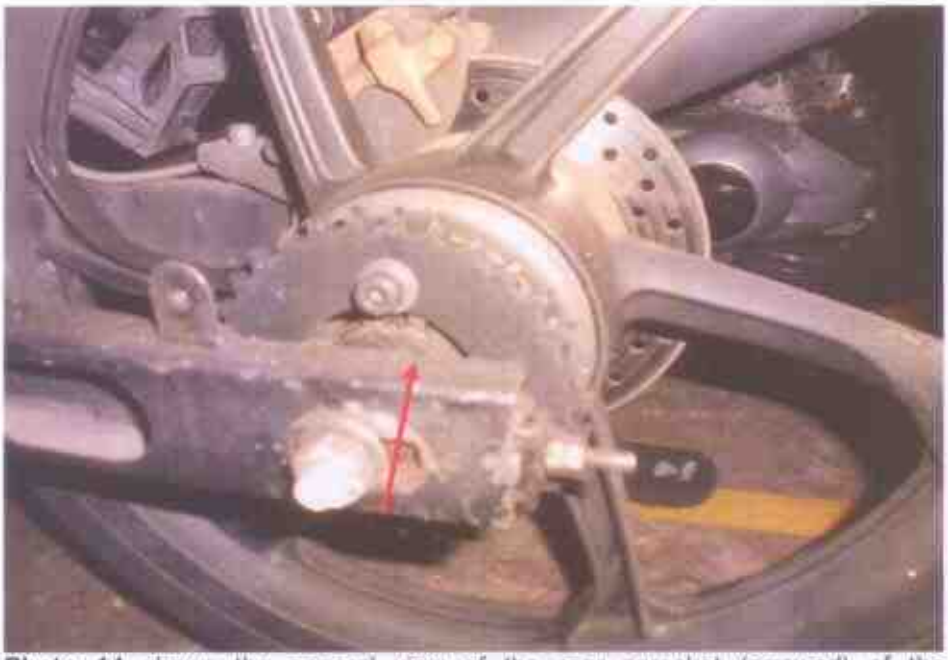


Photo 14 shows the general view of the rear sprocket (arrowed) of the Motorcycle, which was observed to be undamaged despite its separation with the gear chain as a result of the accident's impact collision.

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 to the left side as a result of the accident, hence causing the whole steering system to be in a state of immobility.

12. 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.

13. A static brake test was unable to be conducted on the Motorcycle's rear brake due to the brake pedal was stuck likely due to the accident. However, our checks on the brake fluid had indicated that the brake fluid was of sufficient level for operational purposes, and without contamination. The Motorcycle's rear braking system like the brake discs, brake callipers, brake pad and brake hoses revealed all to be intact and without damage.

14. Whereas for the front brake despite the damages sustained on the steering system, we were able to conduct static brake test. There was some resistance felt (spongy like feel) upon pressing the brake lever at the right side of the handle bar. This would indicate that there's 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. It's braking system like the brake discs, brake callipers, brake pad and brake hoses revealed all to be intact and without damage.

15. For this case, we were 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, due to the damages sustained on the Motorcycle. See photo 15 to 20 below.

Photo 15 shows the front fork (circled) was observed to be buckled to the left side as a result of the accident. Hence, we are not able to conduct any tests on the steering system of the Motorcycle.

Photo 16 shows the front brake fluid reservoir had indicated that the brake fluid was of sufficient level for operational purposes, and without contamination.

Photo 17 shows the front brake calliper, front brake disc, front brake pad and front brake hose of the Motorcycle, which are all part of the components in the front brake system of the Motorcycle. Our observation found that the front braking components were unaffected by the accident.

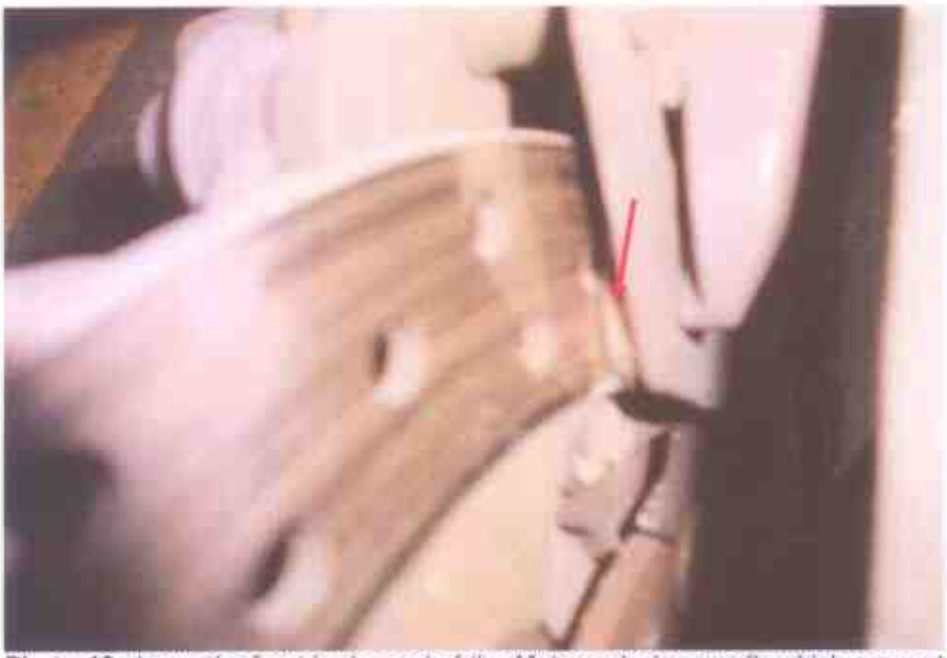


Photo 18 shows the front brake pad of the Motorcycle (arrowed), which are part of the components in the front brake system of the Motorcycle reveal to be adequately sufficient for operational purposes.

Photo 19 shows the rear brake fluid reservoir of the Motorcycle. It was found to be at a sufficient level at time our inspection.

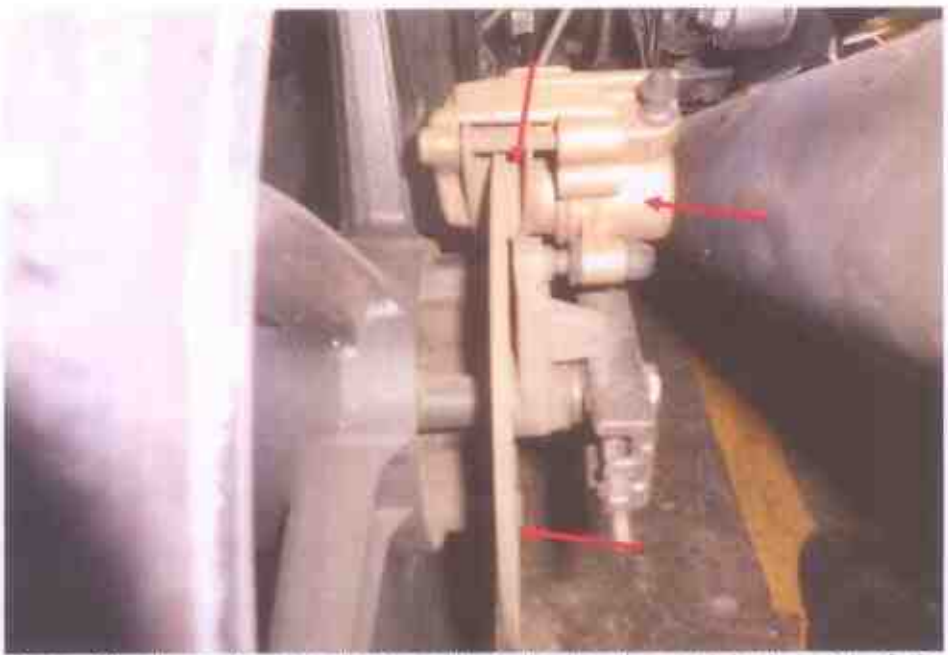


Photo 20 shows the rear brake calliper, brake disc and brake pad of the Motorcycle (arrowed), which are all part of the components in the rear brake system of the Motorcycle reveal all to be intact and without damage.

Conclusion

16. At the time of our inspection of the Motorcycle, its steering system & brake system could not be tested (due to damage as a result of the accident).

17. Notwithstanding that the steering & 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.

18. The rear tyre of the Motorcycle was 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 4mm. Except for the front tyre that was deflated at time of our inspection likely due to the accident's collision impact. However, it was 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 & tread depth of approximately 3mm.

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 its steering system (as a result of the accident), which had rendered the Motorcycle immobility.

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