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Our Ref :CI/TPD20001856/N

3 April 2020

General Investigation Team

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

INSPECTION REPORT OF MOTORCYCLE FBG 6445A

1. We refer to your request dated 3 February 2020 to conduct a physical inspection of a motorcycle bearing registration number FBG 6445A (herein referred to as "**Motorcycle**"), which was involved in a non- fatal road traffic accident on 3 January 2020.
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 3 April 2020 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 could not be recorded at the time of our inspection despite several attempts to jumpstart the battery.
5. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its windshield, front cowling, front brake lever, clutch lever, side mirrors, side cowlings, rear side covers, shock absorbers, exhaust muffler and exhaust muffler heat shield, amongst others as a result of the accident. See photos 1 – 12 below.



Photo 1 shows a general view of the front body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.



Photo 2 shows a general view of the left body of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around.



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

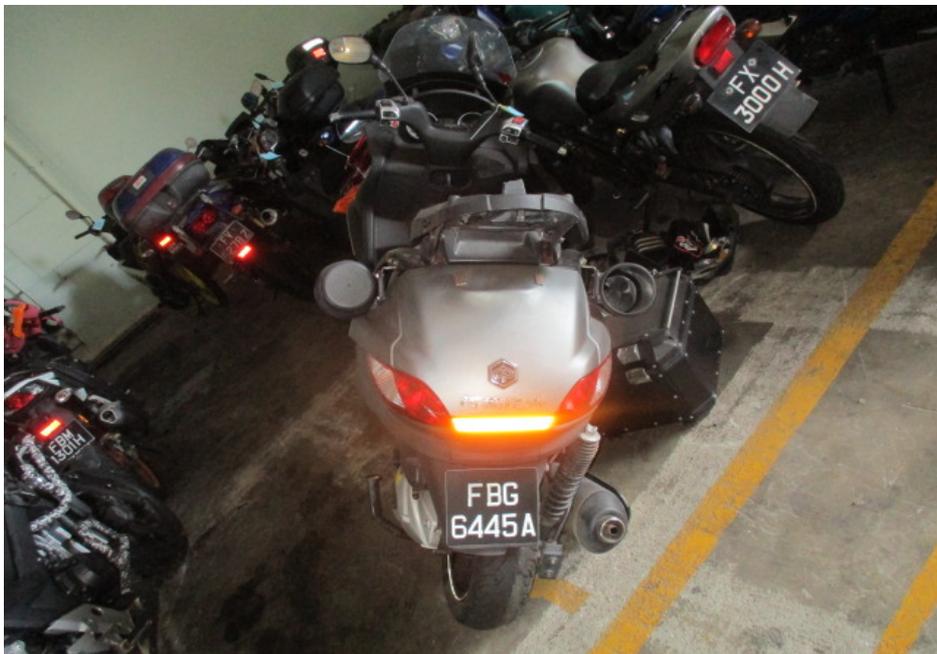


Photo 4 shows a general view of the rear portion of the Motorcycle at the time of our inspection. The Motorcycle was observed to have sustained damages all around. The body parts that were found to have been damaged include its windshield, front cowling, front brake lever, clutch lever, side mirrors, side cowlings, rear side covers, shock absorbers, exhaust muffler and exhaust muffler heat shield, amongst others as a result of the accident.



Photo 5 shows a closer view of the windshield and front cowling (circled) which were amongst the body parts at the front of the Motorcycle that had sustained damage as a result of the accident.



Photo 6 shows a closer view of the right rear side cover which was amongst the body parts at the rear body of the Motorcycle that had sustained damage as a result of the accident.



Photo 7 shows a closer view of the right cowling of the Motorcycle which was observed to be damaged due to the accident.



Photo 8 shows a closer view of the rear brake lever and left handlebar end (arrowed) as well as the left side mirror (circled) of the Motorcycle which were observed to be damaged due to the accident



Photo 9 shows a closer view of the front brake lever and right handlebar end (arrowed) as well as the right side mirror (circled) of the Motorcycle which were observed to be damaged due to the accident



Photo 10 shows a closer view of the damaged left cowling (circled) of the Motorcycle at the time of our inspection.



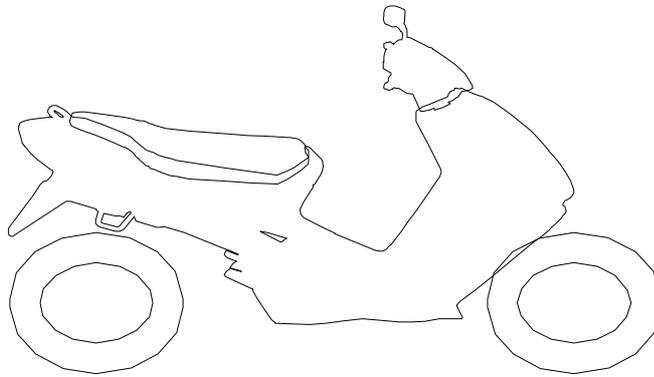
Photo 11 shows a closer view of the exhaust muffler and exhaust muffler heat shield of the Motorcycle which had sustained damage due to the accident.



Photo 12 shows a closer view of the left rear side cover which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident.

Tyres and Wheel Rims

6. The condition of the Motorcycle's 3 tyres was observed to be in serviceable condition. The tread pattern of the 3 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 3 tyres. The 3 tyres were both observed to be sufficiently inflated for vehicular operation. The tyre brand, tyre size and remaining tread depth of the 3 tyres were recorded as follows:-



Michelin 140/60 - 14 (3mm)

Michelin 120/70 - 12 (3mm) (FLT)

Michelin 120/70 - 12 (3mm) (FRT)

7. The 3 tyres were wrapped around alloy wheel rims. At the time of our inspection, we did not observe any visible damage on the front wheel rims and rear wheel rim of the Motorcycle. See photos 13 - 15 below.



Photo 13 shows the condition of the Motorcycle's front left tyre. The front left tyre was observed to be in serviceable condition with remaining tread depth of approximately 3mm. There was no tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the front left tyre.



Photo 14 shows the condition of the Motorcycle's front right tyre. The front right tyre was observed to be in serviceable condition with remaining tread depth of approximately 3mm. There was no tear, burst mark(s) and/or punctured hole(s) on the sidewalls as well as across the tread of the front right tyre.



Photo 15 shows the condition of the Motorcycle's rear tyre. 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. 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 rear tyre.

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 drive train of the motorcycle was found to be intact without any misalignment. There was also no visible tear or cut observed on the connecting hoses and cables. However both the rear shock absorbers of the Motorcycle were observed to be damaged as a result of the accident. See photos 16 - 19 below.



Photo 16 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 17 shows the drive train of the Motorcycle which was found to be intact without any misalignment.

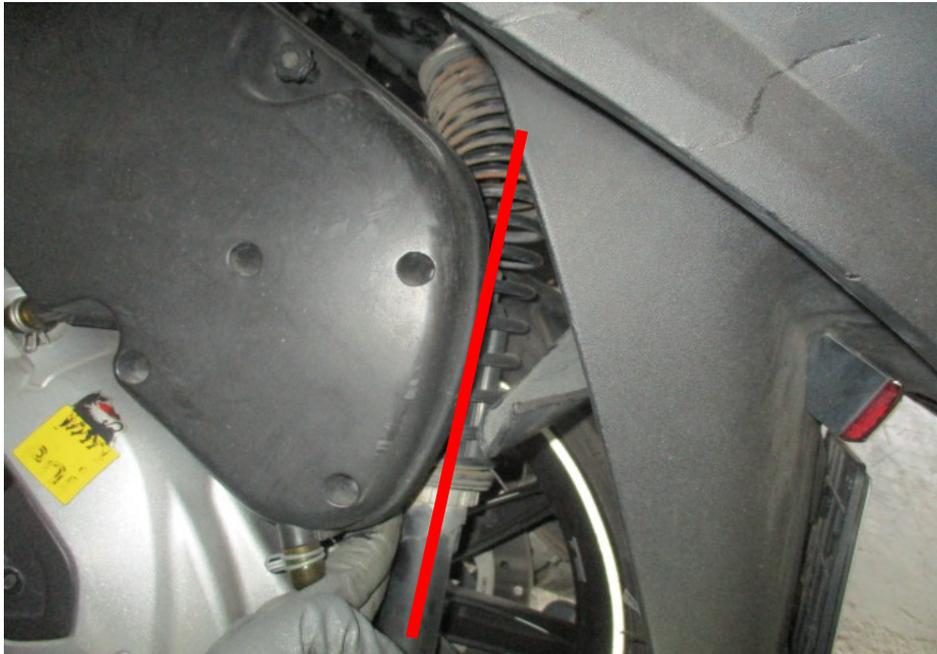


Photo 18 shows the left shock absorber of the motorcycle which was found to be intact but observed to be bent as a result of the accident.

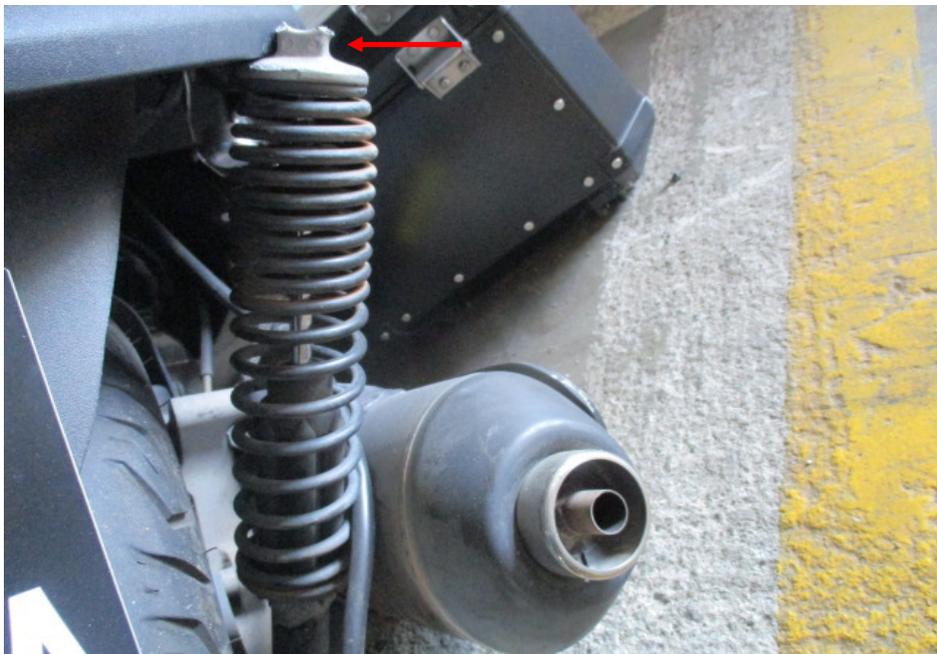


Photo 19 shows the right shock absorber of the Motorcycle which was found to be broken as a result of the accident (arrowed).

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 forks and fork brackets were both 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.
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 pulling the brake lever at the left side of the Motorcycle's handle bar.
12. Our visual examination of the various components in the Motorcycle's braking system like the brake discs, brake calipers, brake levers and brake hoses revealed all to be intact and without damage. There was also no leakage of brake fluid observed along the brake hoses. This was from the respective brake fluid reservoirs to the front brake calipers and rear brake caliper of the Motorcycle. The brake fluid for the front brake and rear brake was also found to be of sufficiently level and without any contamination.
13. Static brake tests conducted on the Motorcycle had appeared to indicate that the front braking system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon pressing the front brake lever. This would indicate that there's no leakage of pressure/vacuum in the front braking 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. Static brake tests conducted on the Motorcycle had appeared to indicate that the rear braking system of the Motorcycle was not in serviceable condition. There was no resistance felt (spongy like feel) upon pressing the rear brake lever. This would indicate that there may be a leakage of pressure/vacuum in the rear braking system.

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 damages sustained to its rear shock absorbers, which had rendered the Motorcycle immobile 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 photos 20 – 30 below.

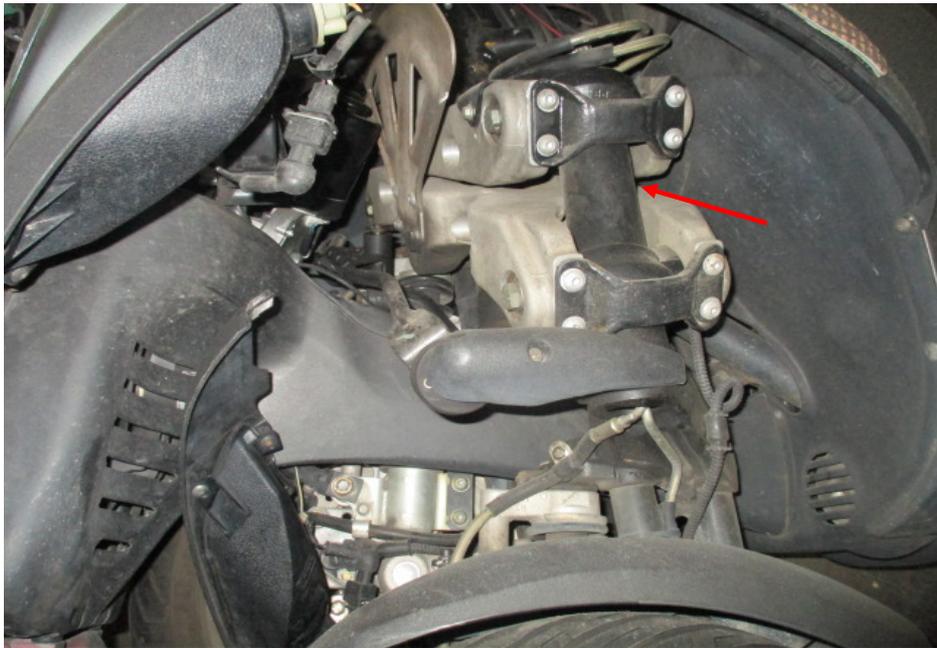


Photo 20 shows the left front fork (arrowed) of the Motorcycle. The left front fork and fork bracket of the Motorcycle were both found to be intact and undamaged. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. The steering system of the Motorcycle was in serviceable condition at the time of our inspection.



Photo 21 shows the right front fork (arrowed) of the Motorcycle. The right 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 22 shows the front right wheel of the Motorcycle turned towards its full right. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.



Photo 23 shows the front left wheel of the Motorcycle turned towards its full left. Turning the Motorcycle's handle bar towards the left and right did not produce any abnormal free play and/or resistance. This would indicate that the steering system of the Motorcycle was in serviceable condition at the time of our inspection.

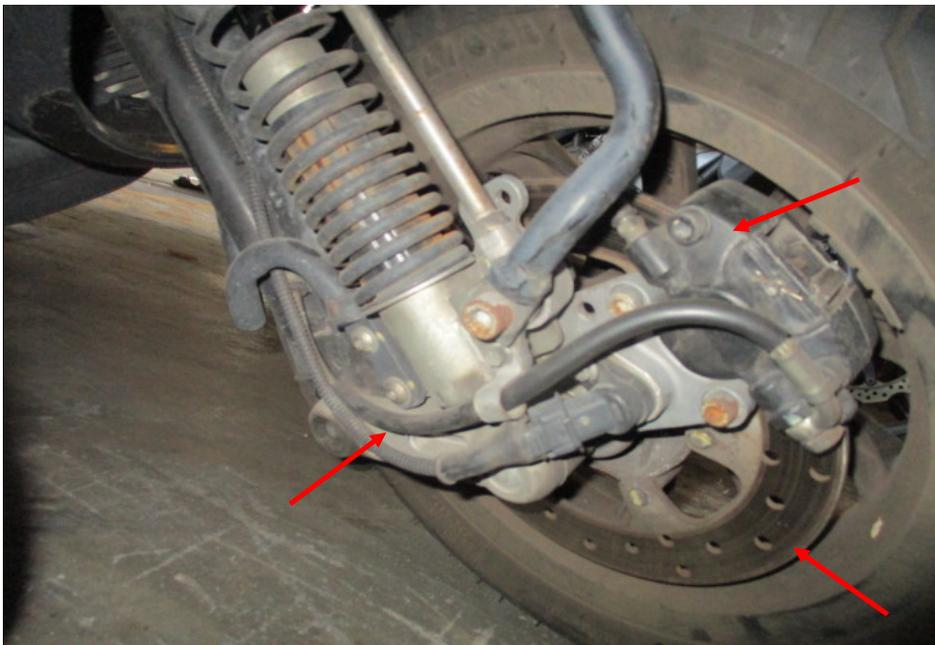


Photo 24 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the front left wheel of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 25 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the front right wheel 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 26 shows a close up view of 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 27 shows the front brake lever being depressed. There was some resistance felt (spongy like feel) upon pressing the front brake lever (arrowed). This would indicate that there is no leakage of pressure/vacuum in the front braking system.



Photo 28 shows the rear brake lever being depressed. There was no resistance felt (spongy like feel) upon pressing the rear brake lever (arrowed). This would indicate that there may be a leakage of pressure/vacuum in the rear braking system.



Photo 29 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.



Photo 30 shows the broken rear right shock absorber as a result of the accident (arrowed), which had rendered the Motorcycle immobile 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.

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. However the rear braking system of the Motorcycle was found not to be in serviceable condition.
17. 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 tyres. It was 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 damages sustained to its rear shock absorbers (as a result of the accident), which had rendered the Motorcycle immobile.



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