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Your Ref: TP/IP/22175/2021 22nd July 2021
Our Ref : CI/TPD21007269/P

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

MECHANICAL INSPECTION REPORT OF MOTOR BUS, PC 3857U

1. I refer to your request on 30th June 2021 to conduct a visual inspection of a Motor Bus bearing registration number PC 3857U (herein referred to as "**Motor Bus**"), which was involved in a road traffic accident on 3rd May 2021.

2. The objective of this inspection is to determine if there was any possible mechanical failure to the Bus that may have contributed to the accident.

3. Following the request, I had carried out a visual inspection of the Bus on 21st July 2021 at the premises of Traffic Police vehicle pound, 517 Airport Road Singapore 539942. I now set out below my observations and comments with respect to this inspection.

General Condition

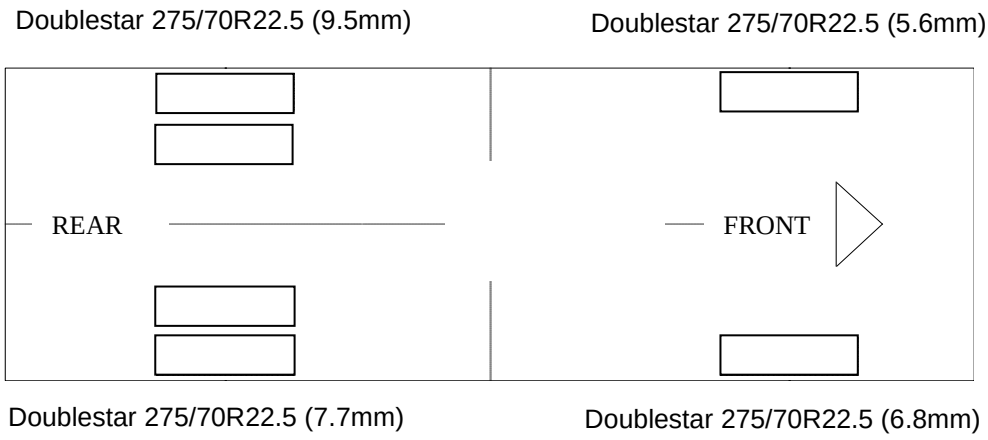
4. The mileage of the Motor Bus at the time of my inspection was not recorded, as the Motor Bus was not started up.

5. There was no visible damage observed on Motor Bus at the time of my inspection.

Tyres and Wheel Rims

6. The 2 front tyres and 4 rear tyres of the Motor Bus were observed to be in serviceable condition and sufficiently inflated for vehicular operation. I did not find any tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 6 tyres of the Motor Bus. The tyre brand, tyre size and remaining tread depth of the 6 tyres of the Motor Bus were recorded as follows:-

Motor Bus



7. The 6 tyres of the Motor Bus were observed to be wrapped around standard steel wheel rims that were found to be without any damage. See photo 1 – 8 below.

Photo 1 shows a general view of the front body of the Motor Bus at the time of my inspection. The Motor Bus was observed to be intact and unaffected by the accident.

Photo 2 shows a general view of the right body of the Motor Bus at the time of my inspection. The Motor Bus was observed to be intact and unaffected by the accident.

Photo 3 shows a general view of the left body of the Motor Bus at the time of my inspection. The Motor Bus was observed to be intact and unaffected by the accident.

Photo 4 shows a general view of the Motor Bus's rear body at the time of my inspection. The Motor Bus was observed to be intact and unaffected by the accident.

Photo 5 shows the condition of the front right tyre of the Motor Bus, which was observed to be in serviceable condition with remaining tread depth of approximately 6.8 mm. The tyre, which was wrapped around standard steel wheel rim, was also observed to be sufficiently inflated for vehicular operation. There was no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 6 tyres that were fitted on the Motor Bus.

Photo 6 shows the condition of the rear right tyre of the Motor Bus, which was observed to be in serviceable condition with remaining tread depth of approximately 7.7mm. The tyre, which was wrapped around standard steel wheel rim, was also observed to be sufficiently inflated for vehicular operation.

Photo 7 shows the condition of the rear left tyres of the Motor Bus, which was observed to be in serviceable condition with remaining tread depth of approximately 9.5mm. The tyres, which were wrapped around standard steel wheel rim, were also observed to be sufficiently inflated for vehicular operation. There was also no damage found on all 6 steel wheel rims of the Bus.

Photo 8 shows the condition of the front left tyres of the Motor Bus, which were observed to be in serviceable condition with remaining tread depth of approximately 5.6mm. There was also no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 6 tyres that were fitted on the Bus.

Steering System & Braking System

8. Static brake and steering tests was unable to be conducted on the Motor Bus as this components requires the engine to be started. However, my visual examination of the braking and steering components, there was no sign(s) of air leakage along the brake hoses, brake pipes, air cylinders and of the various steering components which had included the rack and pinion, tie rods, tie rod ends and ball joints had revealed that these components were all generally in good condition. See photo 9 - 16 below.

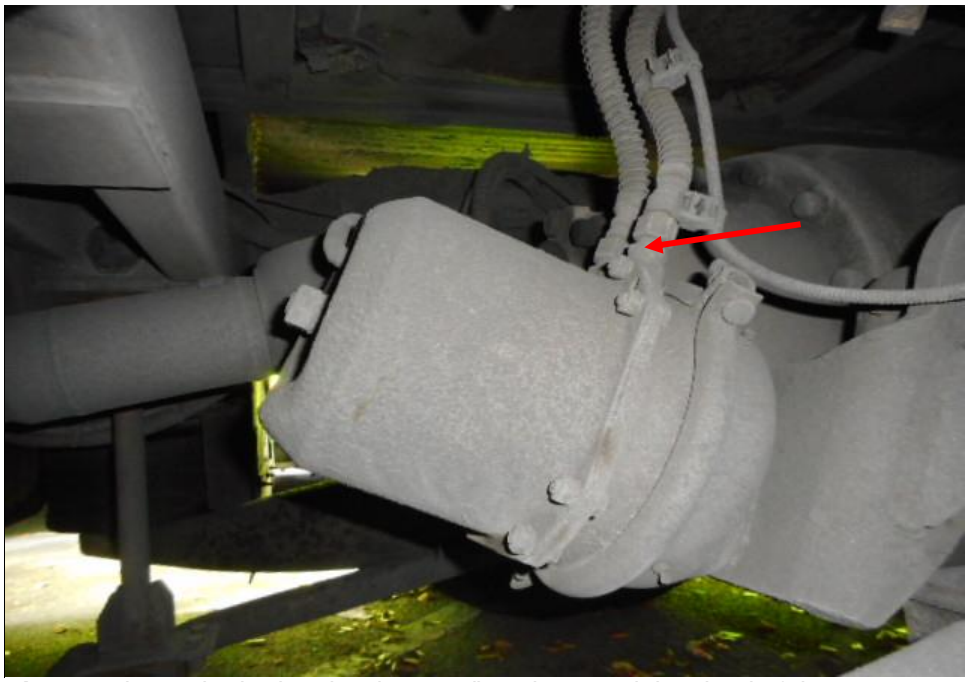


Photo 9 shows the brake pipe (arrowed) at the rear right wheel of the Motor Bus. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Bus. My visual examination of the various mechanical components in the braking system, had indicated that there was no internal leakage of pressure/vacuum and there components were generally in good condition.

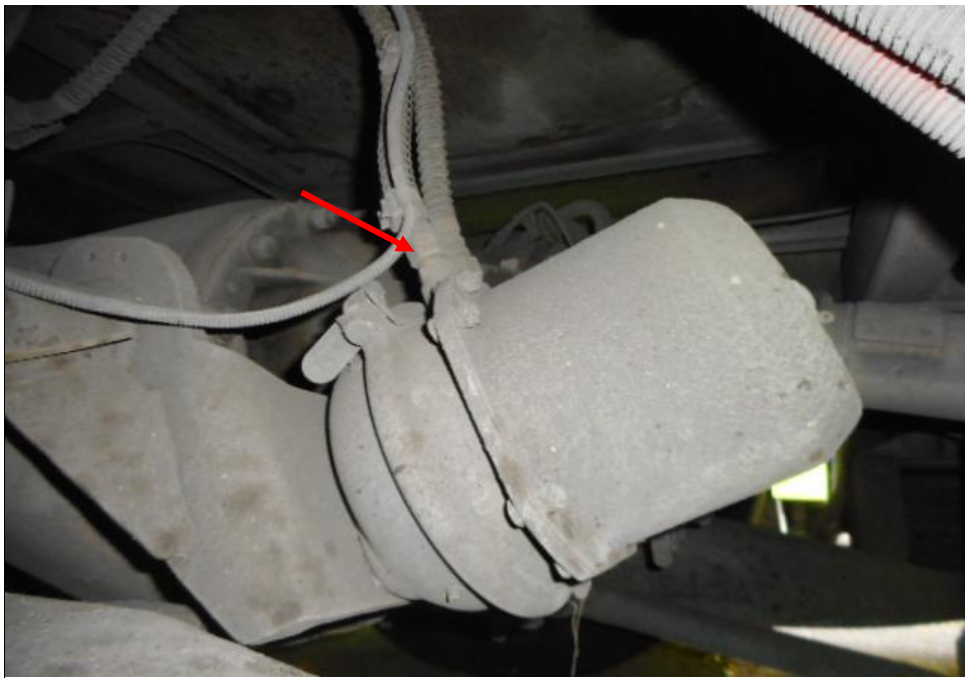


Photo 10 shows the brake pipe (arrowed) at the rear left wheel of the Motor Bus. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Bus. My static tests of the Motor Bus's braking system, along with my visual examination of the various mechanical components in the braking system, had indicated that there was no internal leakage of pressure/vacuum and there components were generally in good condition.

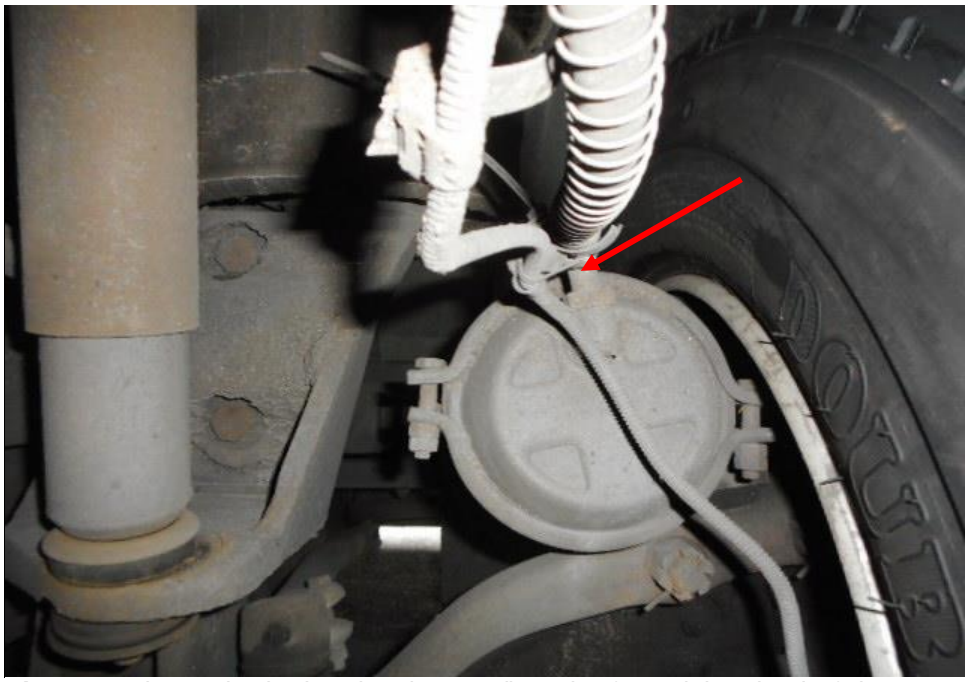


Photo 11 shows the brake pipe (arrowed) at the front right wheel of the Motor Bus. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Bus. My static tests of the Motor Bus's braking system, along with my visual examination of the various mechanical components in the braking system, had indicated that there was no internal leakage of pressure/vacuum and there components were generally in good condition.

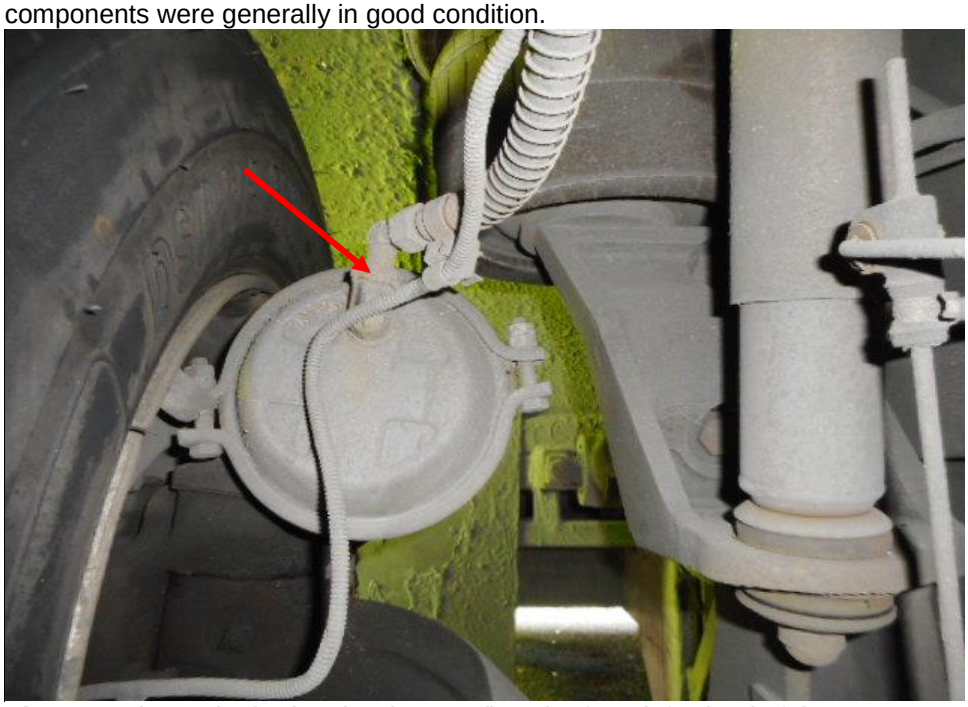


Photo 12 shows the brake pipe (arrowed) at the front left wheel of the Motor Bus. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Bus. My visual examination of the various mechanical components in the braking system had indicated that there was no internal leakage of pressure/vacuum and there components were generally in good condition.

Photo 13 shows the air brake cylinders (arrowed) at the undercarriage of the Motor Bus. I did not observe any leakage of air brake fluid at the time of my inspection of the Motor Bus. My visual examination of the various mechanical components in the braking system had indicated that there was no internal leakage of pressure/vacuum and there components were generally in good condition.

Photo 14 shows the various undercarriage components at the front right wheel of the Motor Bus, in particular the steering tie rod end (arrowed). The various steering components were all found to be intact, suggesting that the steering system of the Motor Bus was likely to be in serviceable condition at the material time of accident. There was also no sign of fluid stain(s) observed on the various undercarriage components.

Photo 15 shows the various undercarriage components at the front left wheel of the Motor Bus, in particular the steering tie rod end (arrowed). The various undercarriage components of the Motor Bus were all found to be intact without any visible damage. There was also no sign of fluid stain(s) observed on the various undercarriage components.

Photo 16 shows the steering box component (arrowed) at the undercarriage of the Motor Bus was found to be intact without any visible damage. There was also no sign of fluid stain(s) observed on the various undercarriage components.

Electronic Safety / Warning Indicators

9. The Motor Bus automatic self-test of the functionality of its various electronic operating systems was not conducted as the Motor Bus was not started up.

Operational Behaviour of the Bus

10. As the engine of the Motor Bus was not be started, I was hence not able to carry out any operational test(s) to primarily determine whether there was any operational abnormality to its engine system, transmission system, steering system and braking system.

Conclusion

11. this particular case, the time of my inspection of the Motor Bus, its steering system and braking system could not be tested as the Motor Bus's engine could not be started. However basing on my observations, it would appear that the steering system and braking system of the Motor Bus were in serviceable condition. This takes into consideration that the various mechanical components of the steering system and braking system were found to be intact and undamaged.

12. The observation gathered from my physical inspection of the Motor Bus had indicated no evidence to suggest possible mechanical failure to the Bus that may have contributed to the accident.

13. The 2 front tyres, 4 rear tyres fitted on the Motor Bus were also found to be in serviceable condition. I did not find any tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the Motor Bus 6 tyres. The 6 tyres of the Motor Bus were also observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 5.6mm – 9.5mm.

14. My findings were based solely on a static and visual inspection of the Motor Bus. No operational test(s) could be carried out to the Motor Bus, as its engine was not started at the time of my inspection.

Sherwin Beh
Technical Investigator

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