

Your Ref: TP/IP/19813/2021
Our Ref : CI/TPD21007272/P

29th September 2021

Fatal Accident Investigation Team

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

MECHANICAL INSPECTION REPORT OF MOTOR TRUCK, XE 7733L

1. I refer to your request on 30th June 2021 to conduct a visual inspection of a Motor Truck bearing registration number XE 7733L (herein referred to as "**Motor Truck**"), which was involved in a road traffic accident on 20th April 2021.
2. The objective of this inspection is to determine if there was any possible mechanical failure to the Truck that may have contributed to the accident.
3. Following the request, I had carried out a visual inspection of the Motor Truck on 28th September 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 Motor Truck was observed to sustained damage at its rear portion. Its rear right brake lamp were damage at the time of my inspection as a result of the accident.

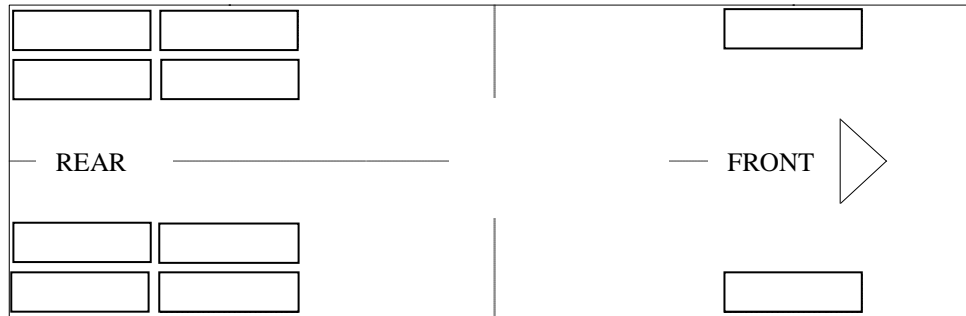
Tyres and Wheel Rims

5. The 2 front tyres and 7 rear tyres of the Motor Truck 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 10 tyres of the Motor Truck. However, observed that the rear left inner tyre was deflated and slipped out of the wheel rim. The tyre brand, tyre size and remaining tread depth of the 10 tyres of the Motor Truck were recorded as follows:-

Motor Truck

Lavnvigator 295/80R22.5 (6.5mm)
(Deflated)

Fireway 295/80R22.5 (12.4mm)



Lavnvigator 295/80R22.5 (6.5mm)

Fireway 295/80R22.5 (11mm)

6. The 9 tyres of the Motor Truck were observed to be wrapped around standard steel wheel rims that were found to be without any damage. However, observed that the rear left inner tyre was deflated and slipped out of the wheel rim. See photo 1 – 11 below.



Photo 1 shows a general view of the Motor Truck's rear body at the time of my inspection. The Motor Truck was observed to sustained damage at its rear portion. Its rear right brake lamp were damage at the time of my inspection as a result of the accident.



Photo 2 shows a close up view of the Motor Truck's rear body at the time of my inspection. The Motor Truck was observed to sustained damage at its rear portion. Its rear right brake lamp (circled) were damage at the time of my inspection as a result of the accident.

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



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

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Photo 5 shows a general view of the left body of the Motor Truck at the time of my inspection. The Motor Truck was observed to be intact and unaffected by the accident.



Photo 6 shows the condition of the front right tyre of the Motor Truck, which was observed to be in serviceable condition with remaining tread depth of approximately 11mm. 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 10 tyres that were fitted on the Motor Truck.

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Photo 7 shows the condition of the rear right tyre of the Motor Truck, which was observed to be in serviceable condition with remaining tread depth of approximately 6.5mm. The tyre, which was wrapped around standard steel wheel rim, was also observed to be sufficiently inflated for vehicular operation.



Photo 8 shows the condition of the rear right tyre of the Motor Truck, which was observed to be in serviceable condition with remaining tread depth of approximately 6.5mm. The tyre, which was wrapped around standard steel wheel rim, was also observed to be sufficiently inflated for vehicular operation.

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Photo 9 shows the close up view of the rear left inner tyre of the Motor Truck, which was observed to be deflated and slipped off the wheel rim.



Photo 10 shows the close up view of the rear left inner tyre of the Motor Truck, which was observed to be deflated and slipped off the wheel rim (arrowed).



Photo 11 shows the condition of the front left tyres of the Motor Truck, which were observed to be in serviceable condition with remaining tread depth of approximately 12.4mm. 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 10 tyres that were fitted on the Truck.

Engine Compartment & Operating Fluids

7. The engine compartment of the Motor Truck was located below the front cabin of the Truck. I was not able to carry out any checks on the engine compartment as the cabin of the Motor Truck was not able to be lifted to the engine compartment as it requires the battery powered. The various operating fluids were also not able to be checked.

Steering System & Braking System

8. Static brake and steering tests were unable to be conducted on the Motor Truck as these components require 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 12 - 19 below.



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

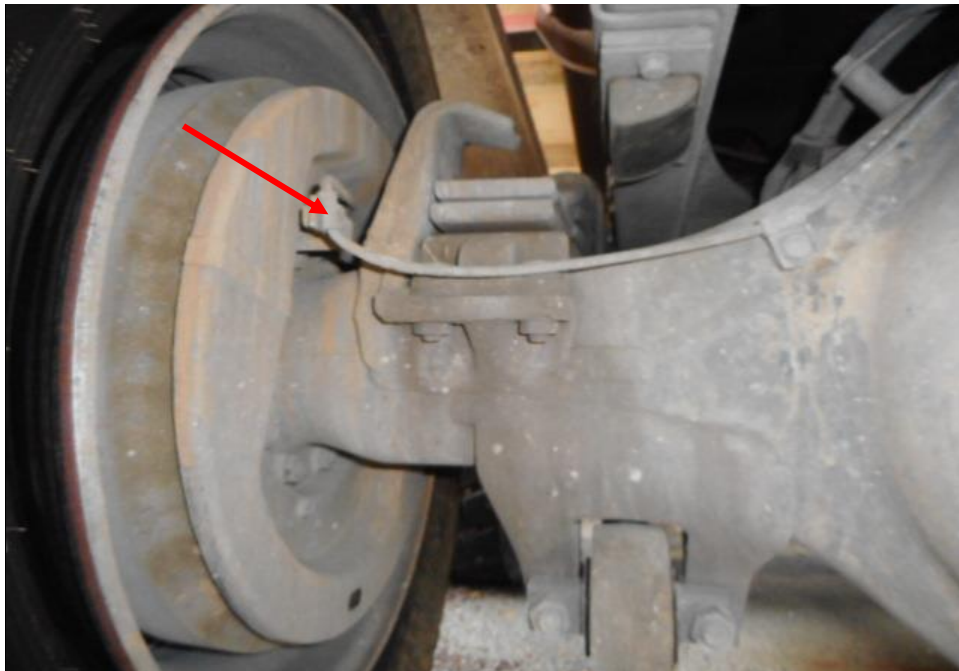


Photo 13 shows the brake pipe (arrowed) at the rear left wheel of the Motor Truck. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Truck. My static tests of the Motor Truck's braking system, along with my visual examination of the various mechanical components in the braking system, had indicated that these was no internal leakage of pressure/vacuum and these components were generally in good condition.



Photo 14 shows the brake pipe (arrowed) at the front right wheel of the Motor Truck. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Truck. My static tests of the Motor Truck'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 these components were generally in good condition.



Photo 15 shows the brake pipe (arrowed) at the front left wheel of the Motor Truck. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Truck. My visual examination of the various mechanical components in the braking system had indicated that there was no internal leakage of pressure/vacuum and these components were generally in good condition.



Photo 16 shows the air brake cylinders (arrowed) at the undercarriage of the Motor Truck. I did not observe any leakage of air brake fluid at the time of my inspection of the Motor Truck. My visual examination of the various mechanical components in the braking system had indicated that these was no internal leakage of pressure/vacuum and these components were generally in good condition.



Photo 17 shows the various undercarriage components at the front right wheel of the Motor Truck, 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 Truck 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 18 shows the various undercarriage components at the front left wheel of the Motor Truck, in particular the steering tie rod end (arrowed). The various undercarriage components of the Motor Truck 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 19 shows the steering box component (arrowed) at the undercarriage of the Motor Truck 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 Truck automatic self-test of the functionality of its various electronic operating systems was not conducted as the Motor Truck was not started up.

Operational Behaviour of the Truck

10. As the engine of the Motor Truck 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. For this particular case, the time of my inspection of the Motor Truck, its steering system and braking system could not be tested as the Motor Truck's engine could not be started. However, basing on my observations, it would appear that the steering system and braking system of the Motor Truck 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 2 front tyres, 7 rear tyres fitted on the Motor Truck 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 Truck 10 tyres. The other 9 tyres of the Motor Truck were observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 6.5mm – 12.4mm. However, at the time of inspection we observed that the rear left inner tyre was deflated and slipped out of the wheel rim.

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



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