LKK Auto Consultants Pte Ltd
Company Registration No. 199607198R
51 UBI AVE 1, #01-25 PAYA UBI INDUSTRIAL PARK, SINGAPORE 408933 TEL : (065) 62563561 FAX : (065) 67414108

Your Ref: TP/IP/25247/2021 15 October 2021
Our Ref : CI/TPD21010815/N

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

MECHANICAL INSPECTION REPORT OF MOTORCYCLE FBG 9095G

1. We refer to your request on 22 September 2021 to conduct a physical inspection of a motorcycle bearing registration number FBG 9095G (herein referred to as **"Motorcycle"**), which was involved in a fatal road traffic accident on 23 May 2021.

2. The objective of the inspection is to 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 15 October 2021 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

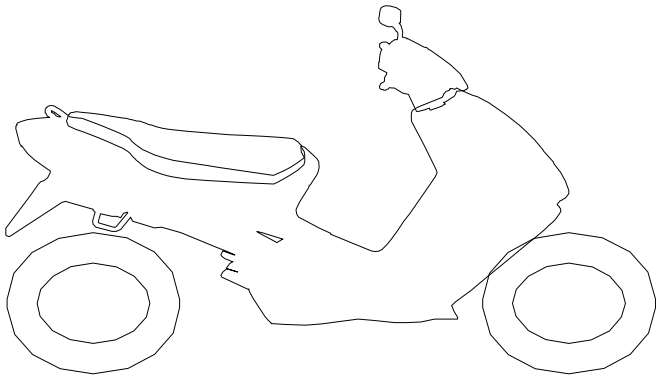
4. The mileage of the Motorcycle could not be recorded at the time of our inspection due to a missing speedometer gauge.

5. The Motorcycle had sustained damages all around. Body parts that were found to have been damaged include its head cowling, front cowling, speedometer gauge, front mudguard, side cowlings, side mirrors, front brake lever, clutch lever, rear brake pedal and top box, amongst others.

Tyres and Wheel Rims

6. The condition of the 2 tyres of the Motorcycle was observed to be in serviceable condition. 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 the tyres were observed to be sufficiently inflated for vehicular operation.

7. The tyre brand, tyre size and remaining tread depth of the 2 tyres of the Motorcycle were recorded as follows:-



Michelin 100/80 R17 (4mm) Michelin 80/90 R17 (4mm)

8. The 2 tyres were wrapped around alloy wheel rims. At the time of our inspection, we did not observe any visible damage on the front and rear wheel rim of the Motorcycle. See photos 1 – 14 below.

Photo 1 shows the missing speedometer gauge of the Motorcycle as a result of the accident (arrowed). Hence the mileage of the Motorcycle could not be recorded at the time of our inspection

Photo 2 shows a general view of the frontal portion of the Motorcycle at the time of our inspection. The Motorcycle had sustained damages all around. Body parts that were found to have been damaged include its head cowling, front cowling, speedometer gauge, front mudguard, side cowlings, side mirrors, front brake lever, clutch lever, rear brake pedal and top box, amongst others.

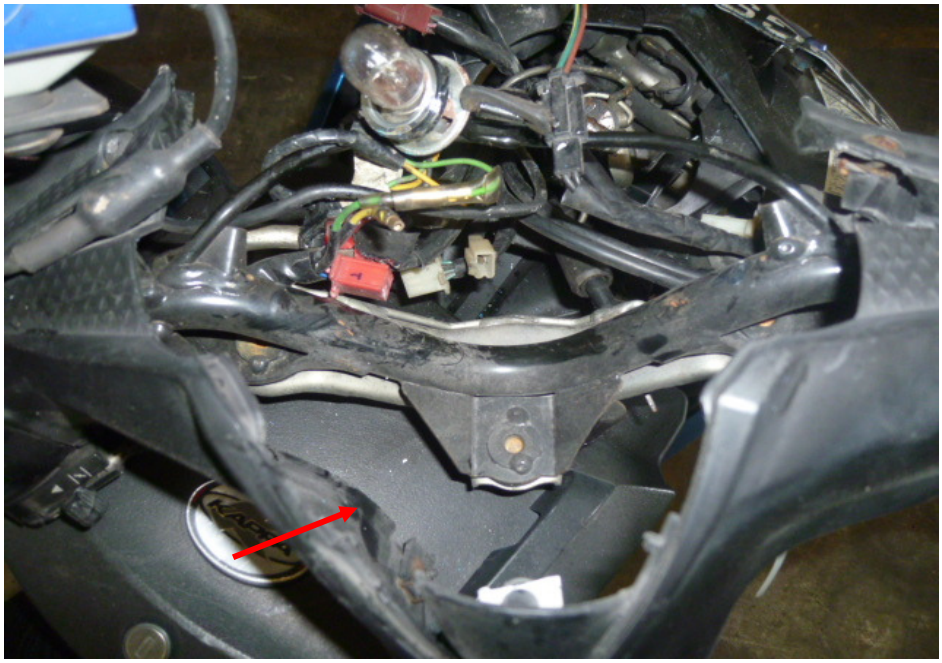


Photo 3 shows a closer view of the cracked head cowling (arrowed) which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident (circled).

Photo 4 shows a closer view of the front cowling (arrowed) which was amongst the body parts at the front body of the Motorcycle that had sustained damage as a result of the accident (circled).

Photo 5 shows a closer view of the front brake lever, right side mirror and right handlebar end of the Motorcycle (arrowed). These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.

Photo 6 shows a closer view of the front mudguard, which was amongst the body parts of the Motorcycle that had sustained damage as a result of the accident (arrowed).

Photo 7 shows a closer view of the right cowling which was amongst the body parts at the front body of the Motorcycle that had sustained damages as a result of the accident (arrowed).

Photo 8 shows a closer view of the right front foot rest and rear brake pedal (arrowed) which were amongst the body parts of the Motorcycle that had sustained damages as a result of the accident.

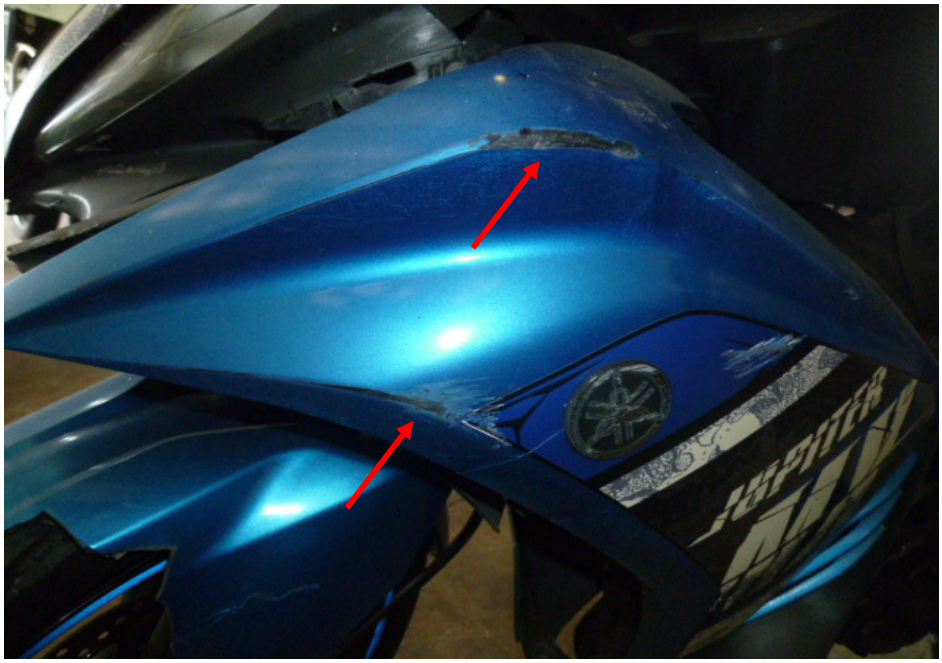


Photo 9 shows a closer view of the left cowling which was amongst the body parts at the front body of the Motorcycle that had sustained damages as a result of the accident (arrowed).

Photo 10 shows a closer view of the grazed left pillion grab rail which was amongst the body parts of the Motorcycle as a result of the accident (circled).

Photo 5 shows a closer view of the clutch lever, left side mirror and left handlebar end of the Motorcycle (arrowed). These parts were amongst the body parts of the Motorcycle which were damaged as a result of the accident.

Photo 12 shows the grazed top box of the Motorcycle at the time of our inspection.

Photo 13 shows the condition of the Motorcycle's front tyre. The front tyre was observed to be in serviceable condition with remaining tread depth of approximately 4mm. 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 front tyre.

Photo 14 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 4mm. 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

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. See photos 15 – 18 below.

Photo 15 shows the left 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 left engine area of the Motorcycle.

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 gear chain (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes. The gear chain rotates the rear wheel of the Motorcycle.

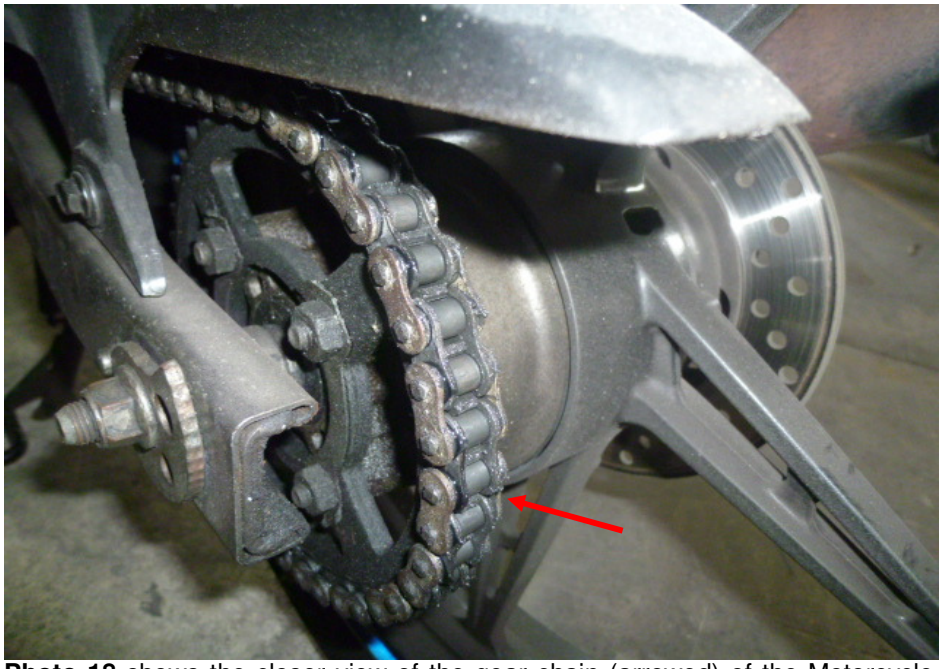


Photo 18 shows the closer view of the gear chain (arrowed) of the Motorcycle, which was observed to be intact with no misalignment. It was also adequately lubricated for operating purposes.

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 to its steering stem. The steering stem was observed to be broken as a result of the accident.

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 pressing 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. Our visual examination of the various components in the Motorcycle's braking system like the brake discs, brake calipers, brake lever, brake foot pedal and rear brake hose 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 caliper and rear brake caliper of the Motorcycle. The brake fluid for the front brake and rear brake was also found to be of sufficient level for operational purposes and without any contamination. However, we had observed that the front brake hose had been cut as a result of the accident.

14. Static brake tests conducted on the Motorcycle had appeared to indicate that the front brake system of the Motorcycle was not in serviceable condition. There was no resistance felt (spongy like feel) upon pressing the front brake lever. This would indicate that there may be a leakage of pressure/vacuum in the front brake system.

15. Static brake tests conducted on the Motorcycle had appeared to indicate that the rear brake system of the Motorcycle was in serviceable condition. There was some resistance felt (spongy like feel) upon stepping on the rear brake pedal. This would indicate that there's no leakage of pressure/vacuum in the rear brake system.

16. 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 steering stem, 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 19 – 26 below.

Photo 19 shows the steering stem of the Motorcycle. The steering stem (circled) was observed to be broken as a result of the accident. We were hence not able to conduct any tests on the steering system of the Motorcycle.

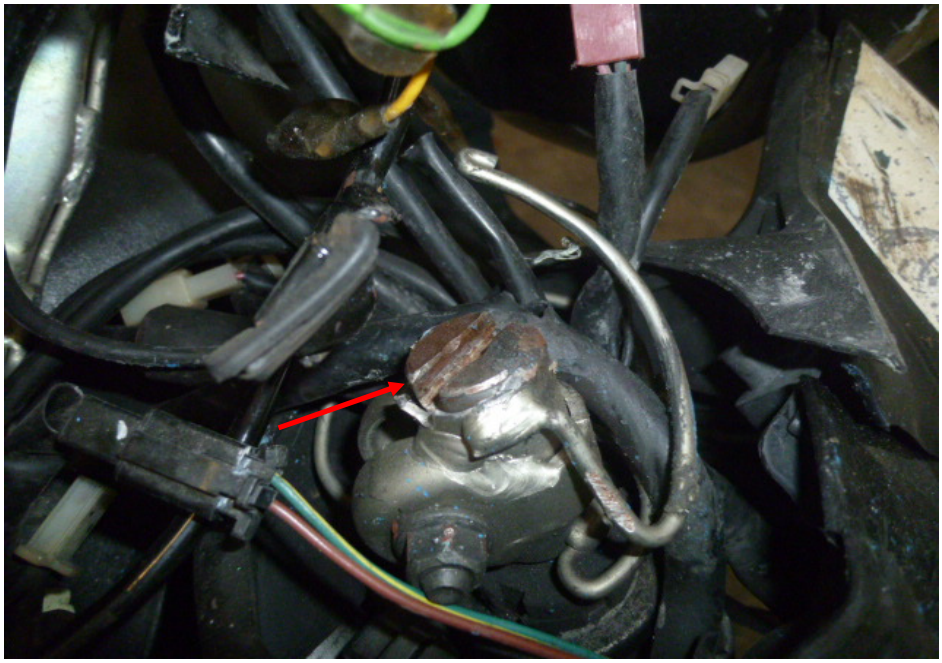


Photo 20 shows a close up view of the steering stem of the Motorcycle. The steering stem (arrowed) was observed to be broken as a result of the accident.

We were hence not able to conduct any tests on the steering system of the Motorcycle.

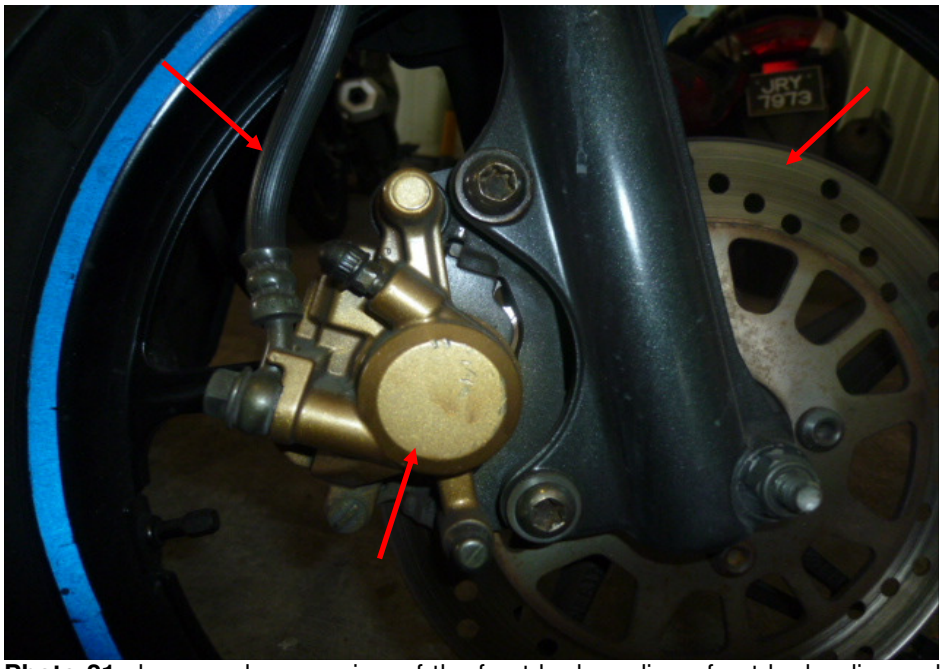


Photo 21 shows a close up view of the front brake caliper, front brake disc and front brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic front brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

Photo 22 shows the brake fluid reservoir for the front brake of the Motorcycle. The brake fluid was observed to be without contamination and of sufficient level for operational purposes.

Photo 23 shows the front brake lever being depressed. There was no resistance felt (spongy like feel) upon pressing the front brake lever (arrowed). This would indicate that there may be a leakage of pressure/vacuum in the front brake system.

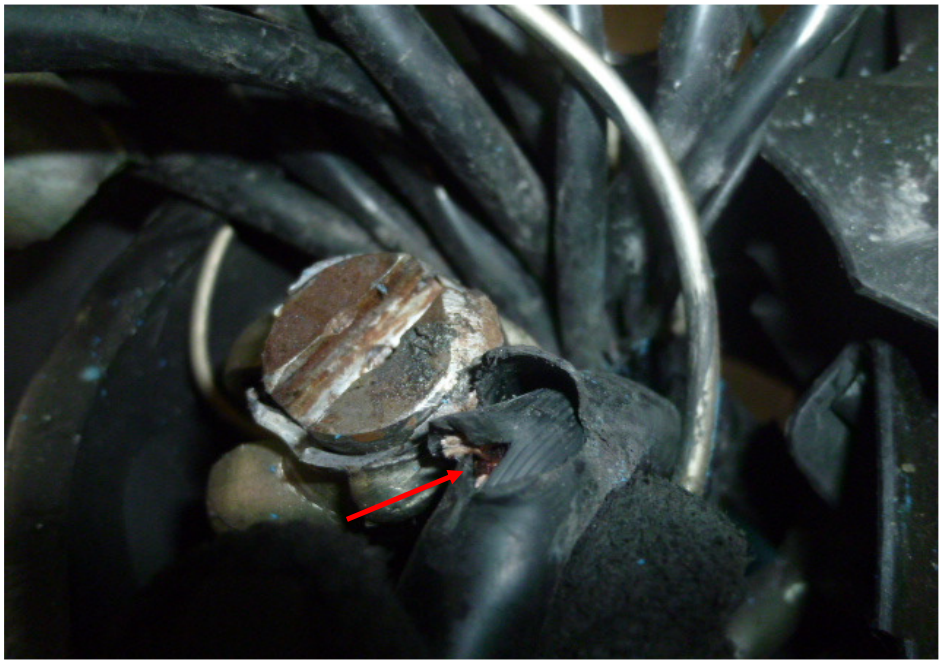


Photo 24 shows upon closer examination, we observed that the front brake hose was cut as a result of the accident (arrowed).

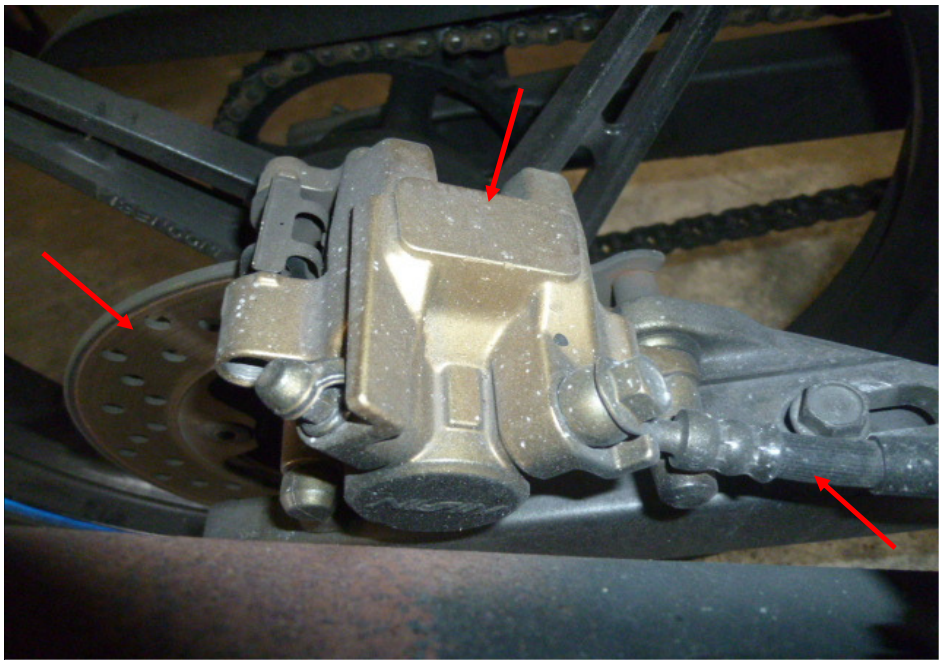


Photo 25 shows a close up view of the rear brake caliper, rear brake disc and rear brake hose (arrowed) of the Motorcycle, which are all part of the components in the hydraulic rear brake system of the Motorcycle. Our visual checks of these various components had revealed all to be intact with no visible damage. No leakage of brake fluid was also observed.

Photo 26 shows the brake fluid reservoir for the rear brake of the Motorcycle. The brake fluid was observed to be without contamination and of sufficient level for operational purposes.

Conclusion

17. For this particular case, we were unable to determine whether there was any possible mechanical failure to the Motorcycle that may have contributed to the accident. This was mainly due to the extent of damage that it had sustained. Its steering system and front braking system was damaged as a result of the accident. However the rear braking system of the Motorcycle was observed to be in serviceable condition.

18. The 2 tyres of the Motorcycle were found to be in 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 2 tyres. The 2 tyres were sufficiently inflated for vehicular operation with remaining tread depth of approximately 4mm each.

Muhd Nazril
Senior Technical Investigator

Ang Bryan Tani
AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA
Senior Technical Investigator
Technical Investigation & Reconstructionist (SAE-A)