

Your Ref :1202200044463  
Our Ref : CS4/FWD22010948/N

18 November 2022

**M/s FWD Singapore Pte. Ltd.**  
6 Temasek Boulevard  
#18-01  
Suntec Tower 4  
Singapore 038986

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE INSURED MOTORCYCLE FBB 7707P ON 21 OCTOBER 2022**

1. We refer to your request dated 2 November 2022.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured motorcycle FBB 7707P (herein referred to as “**Insured Motorcycle**”) are set out below.

**Inspection of the Insured Motorcycle**

3. The Insured Motorcycle was physically inspected on 9 November 2022 at the premises of Ban Hock Hin Co Pte. Ltd. (herein referred to as “**BHH**”) located at 6 Defu Lane 4, Singapore 539410.
4. A static inspection was carried out to the Insured Motorcycle where the following general information was recorded:-

Vehicle Registration No.	: FBB 7707P
Make / Model	: YAMAHA YZF-R6S
Chassis No	: JYARJ111000023628
Year of Registration	: July 2007
Mileage	: N.A (wiring affected)

5. The Insured Motorcycle was observed to have sustained severe fire damage at its left body and right body. The body parts around the left body and right body of the Insured Motorcycle that were burnt and/or melted as a result of the fire had included its side fairings, radiator, radiator hoses, left horn, rectifier, exhaust headers, crankcase covers and oil pan, amongst others. See photos 1 – 7 below.



**Photo 1** shows the general view of the frontal portion of the Insured Motorcycle at the time of our inspection. The fire damage to the Insured Motorcycle was confined mainly to its left body and right body.



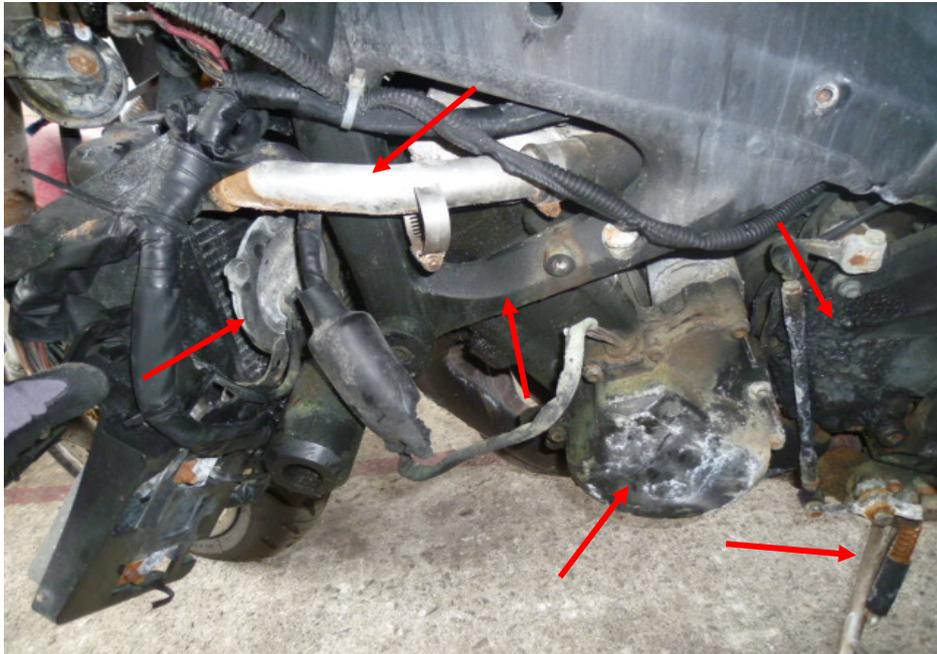
**Photo 2** shows the general view of the left frontal portion of the Insured Motorcycle at the time of inspection. The fire damage to the Insured Motorcycle was confined mainly to its left body and right body.



**Photo 3** shows the general view of the right frontal portion of the Insured Motorcycle at the time of inspection. The fire damage to the Insured Motorcycle was confined mainly to its left body and right body. Its side fairings, radiator, radiator hoses, left horn, rectifier, exhaust headers, crankcase covers and oil pan were amongst the body parts that were found to have been affected as a result of the fire.



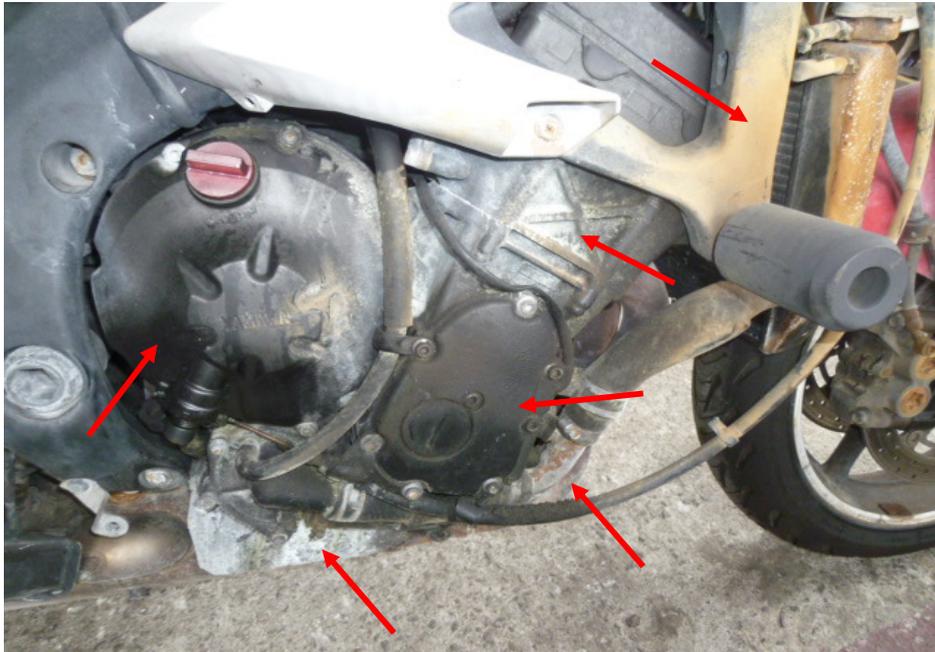
**Photo 4** shows the radiator and rectifier of the Insured Motorcycle which had been partially burnt and/or melted as a result of the fire (arrowed).



**Photo 5** shows the radiator fan, radiator hose, left crankcase, front sprocket cover, side stand and left subframe of the Insured Motorcycle which had been partially burnt and/or melted as a result of the fire (arrowed).



**Photo 6** shows the left horn of the Insured Motorcycle which had been partially burnt and/or melted as a result of the fire.



**Photo 7** shows the engine cylinder, clutch crankcase, oil pump cover, exhaust headers, oil pan and right subframe of the Insured Motorcycle which had been partially burnt and/or melted as a result of the fire (arrowed).

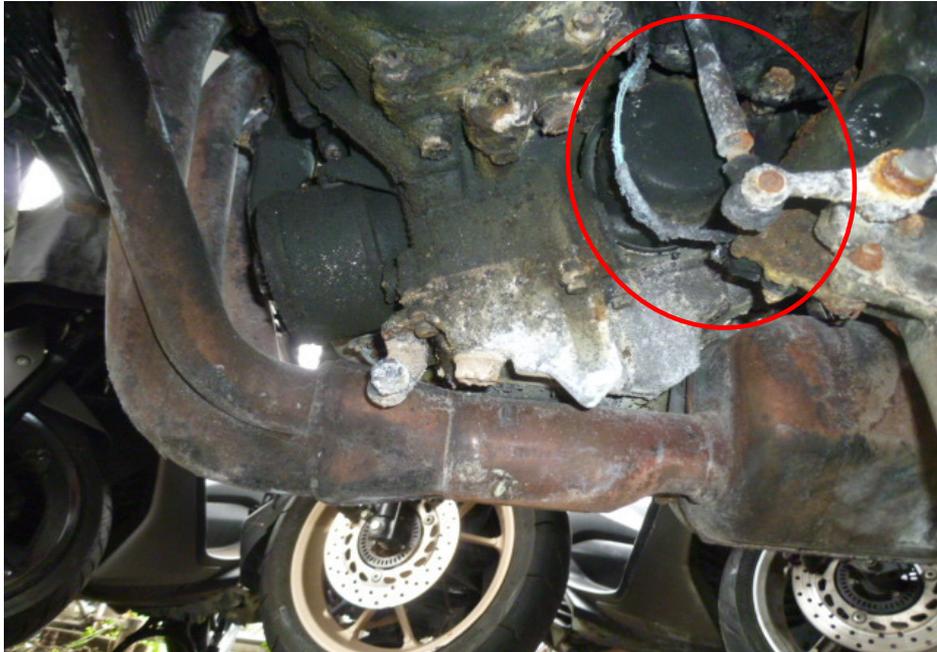
6. At the time of physical inspection of the Insured Motorcycle, we had found an additionally fitted electronic and/or electrical component(s) on the Insured Motorcycle. It was a voltmeter. This fitted component was not the standard type for the Insured Motorcycle. See photo 8 below.



**Photo 8** shows the voltmeter found fitted on the Insured Motorcycle. The brand of the voltmeter was 'KOSO' (circled).

### **Investigation and Technical Analysis**

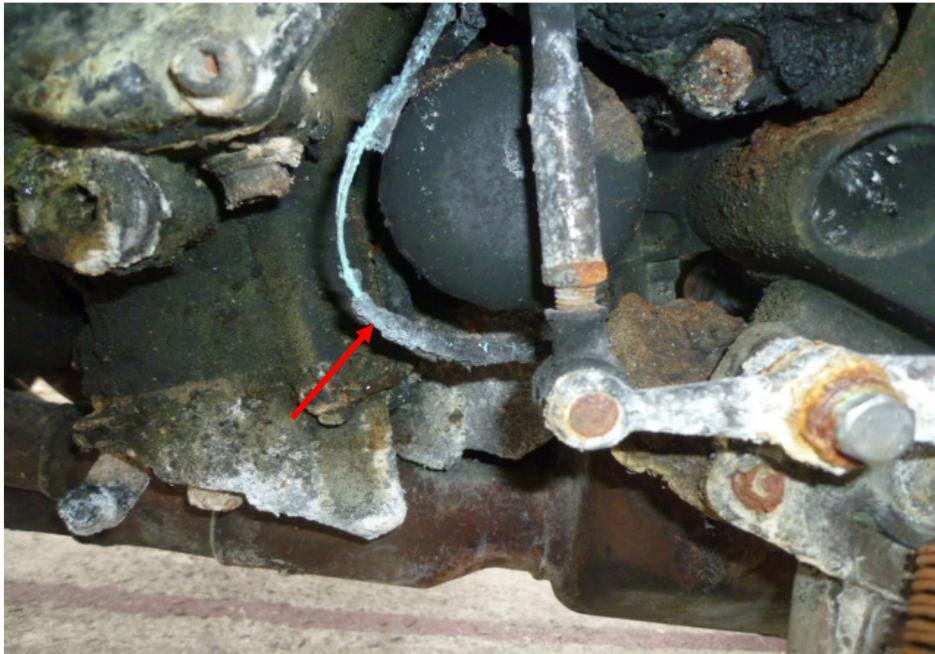
7. For this particular case, based on the nature of fire damage, the fire seemed to have started from the left lower centre portion of the Insured Motorcycle.
8. Upon closer examination of the left lower centre portion of the Insured Motorcycle where the fire had likely started, we had found several stretches of wirings with greenish residue. These wirings were original factory fitted wirings leading from the side stand sensor of the Insured Vehicle. The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring. The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires. This physical evidence would appear to suggest that the cause of fire to the Insured Motorcycle could have possibly been due to electrical in nature. See photos 9 – 14 below.



**Photo 9** shows a view of the left lower centre portion of the Insured Motorcycle. Upon closer examination of the left lower centre portion of the Insured Motorcycle which was where the fire had likely started, we had found several stretches of wirings with greenish residue (circled). These wirings were original factory fitted wirings leading from the side stand sensor of the Insured Motorcycle. The presence of such greenish residue suggests occurrence of an electrical short circuit.



**Photo 10** shows a closer view of the left lower centre portion of the Insured Motorcycle which was where the fire had likely started. We had found several stretches of wirings with greenish residue (circled).



**Photo 11** shows a closer view of the wirings with greenish residue (arrowed). The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring. The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires.



**Photo 12** shows a closer view of the wirings with greenish residue (arrowed) leading from the side stand sensor (circled) of the Insured Vehicle. The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring.



**Photo 13** shows a close up view of the wirings with greenish residue (arrowed) leading from the side stand sensor (circled) of the Insured Vehicle. The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring.



**Photo 14** shows a close up view of the wirings with greenish residue (red arrows). The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring.

### **Investigation and Technical Analysis**

9. According to the Singapore Police Report No. G/20221022/7016 and Accident Statement made by Mr Abdul Haffiz bin Abdul Aleem (herein referred to as “**Mr Haffiz**”), who is the registered owner of the Insured Motorcycle, we note that on 21 October 2022 at about 1935 hours he was riding the Insured Motorcycle along Bartley Road East. He was headed home to Tampines from Alkaff Mosque after the evening prayers. Mr Haffiz noticed a trail of white smoke emitting from the left lower portion of the Insured Motorcycle. He continued to ride and mentioned he felt heat around his left foot. He quickly glanced at the left lower portion of the Insured Motorcycle where he saw a small fire around the side stand area of the Insured Motorcycle.
10. Mr Haffiz immediately switched off the engine and stopped the Insured Motorcycle. He pushed the Insured Vehicle to the traffic stop in between Bartley Road East and Bedok North Road. He attempted to put out the fire with a dry cloth and a bag that he was carrying. However the fire had gotten bigger and spread to the right portion of the Insured Motorcycle.
11. Mr Haffiz mentioned that a foreign worker in a lorry stopped by the incident scene and put out the fire with a fire extinguisher within a couple of minutes. Mr Haffiz did not take any photographs of the incident as he was in a state of shock. After he regained composure, with the help of the foreign worker, the Insured Vehicle was placed at the back of the lorry and towed to BHH.
12. Mr Haffiz made an online police report the following day, on 22 October 2022 at 0721 hours. Mr Hafiz proceeded to make an insurance report at BHH later that same day at 1147 hours.
13. With regards to the history of the Insured Motorcycle, we were able to gather from Mr Haffiz that the Insured Motorcycle was purchased secondhand in 2012 from a private owner. Mr Haffiz was the insured rider and paid the instalments of the Insured Motorcycle till 2016 after which the ownership was transferred to him. He renewed the COE of the Insured Motorcycle in 2017 for another 10 years. He is the only rider of the Insured Motorcycle.
14. To the best of his recollection, there has not been any major mechanical problem and/or electrical problems with the Insured Motorcycle. To the best of his recollection, there has not been any major mechanical problem and/or electrical problems with the Insured Motorcycle. Hence his decision to renew the COE.

15. We asked Mr Haffiz regarding the voltmeter that was fitted onto the Insured Vehicle. He mentioned that he installed the voltmeter shortly after he purchased the Insured Motorcycle.
16. Pertaining to the maintenance aspect, Mr Haffiz mentioned that he had changed the engine oil of the Insured Motorcycle by himself earlier this year. Hence he does not have a receipt. He did inform us that he had sent the Insured Motorcycle to YP Motorsports located at Tampines Industrial Park A, 9004 Tampines Street 93, Singapore 528838 on 11 May 2022 for some repairs. We were able to obtain a receipt of the most recent servicing and repairs done to the Insured Vehicle. The rear tyre, tyre valve and rear wheel bearing were replaced. Refer to Invoice 1 below.

**YP MOTORSPOITS TRADING**  
BLOCK 900A, TAMPINES ST 93  
SINGAPORE 528838  
TEL: 6787 1335 EMAIL: ypmotorsports@ypmoo.com.sg  
No. 0257

SPECIALISE IN: Tyres, Battery, Servicing, Insurance Claims.

Customer: F0B F70FP Date: 11/05/22

數量 QUANTITY	貨名 PARTICULARS	金額 AMOUNT
1pc	Tyre	\$220
2pc	Tubeless valve	\$30
2pc	Rear wheel bearing	\$90
TOTAL		\$340

貨物出門，概不運還  
Goods Sold are not Returnable.

經手人  
Signature

收貨人  
Received by

Invoice 1 shows the latest repairs done on the Insured Vehicle on 11 May 2022 at YP Motorsports Trading (red arrows). The rear tyre, tyre valve and rear wheel bearing were replaced (circled).

17. Mr Haffiz mentioned that after the repairs were done, he had not experienced any mechanical or electrical problems with the Insured Motorcycle till the incident occurred. He mentioned that there were neither warning lights displayed nor was there an abnormal rise in temperature of the Insured Motorcycle when he was riding the Insured Motorcycle on the day of the incident.
18. Given the circumstances of incident as reported, the possibility of the cause of fire to the Insured Motorcycle being due to engine overheating would seem unlikely as Mr Haffiz had mentioned to us there were no indications of abnormally high temperatures on the Insured Motorcycle when he was riding on the day of the incident. Moreover, an overheated engine would have caused the Insured Motorcycle to stall. However in this case, Mr Haffiz was the one who noticed white smoke emitting from the left lower portion of the Insured Motorcycle while he was riding and stopped the Insured Motorcycle. Therefore, we are of the opinion that the fire was not caused by an overheated engine.
19. The possibility of the fire being due to external factors (foreign material(s) stuck on hot surfaces, arson and sabotage amongst others) would also seem unlikely given that the location of where the Insured Motorcycle was positioned was observed to be not at a secluded location.
20. The possibility of the fire being due to electrical in nature would then seem more likely given that engine overheating and external factors would both seem unlikely. The fire being due to electrical nature is also supported by the condition of the wirings that were found at the left rear portion of the Insured Motorcycle, which was earlier discussed in paragraph 8 above.
21. Our checks with both local and international bodies and associations had revealed that at the time of writing this report, there is no manufacturer recall of electrical nature to similar make and model vehicle as the Insured Motorcycle that may possibly be related to this incident. See search result from LTA below.



## Vehicle Recall Details

ONLY INFORMATION ON VEHICLE RECALLS SUBMITTED FROM 9 APRIL 2007 IS AVAILABLE

<i>Owner ID Type</i> Singapore NRIC	<i>Owner ID</i> 277H ←
<i>Vehicle No.</i> FBB7707P ←	<i>Make/Model</i> YAMAHA/ YZF-R6S
<i>Engine No.:</i> J511E028285	<i>Chassis No.:</i> JYARJ111000023628
<i>Recall Details:</i> No Recall Detail records ←	

### Conclusion

22. Having investigated and technically analysed the damages of burnt nature to the Insured Motorcycle, we are of the view that the cause of fire to the Insured Motorcycle was of electrical in nature. For this particular case, the fire had originated along the wirings at the left lower centre portion of the Insured Motorcycle. The wirings were original factory wirings leading from the side stand sensor of the Insured Motorcycle.
  
23. We did not find any evidence which had suggested that the cause of fire to the Insured Vehicle was due to poor maintenance and/or recurring electrical problem.

24. We found the Insured Motorcycle to be fitted with a voltmeter. The abovementioned electrical/electronic component does not require prior approval from LTA.
25. Although the voltmeter fitted on the Insured Motorcycle was not the standard type for the Insured Motorcycle, we are of the view that this part did not cause and/or contribute to the fire incident.
26. Our investigations had also revealed that at the time of writing this report, there is no manufacturer recall of electrical nature to similar make and model motorcycle as the Insured Motorcycle that may possibly be related to this incident.



**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)*

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