

Your Ref : S0M02WWJ
Our Ref: CS4/ASM20012443/P

18th November 2020

M/s AXA Insurance Pte Ltd
8 Shenton Way #24-01
AXA Tower
Singapore 068811
(Motor Claims Department)

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE
INSURED MOTORCYCLE FBP 67A ON 09th November 2020**

1. We refer to your request dated 12th November 2020 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured motorcycle FBP 67A (herein referred to as “**Insured Motorcycle**”) are set out below.

Inspection of the Insured Motorcycle

3. The Insured Motorcycle was physically inspected on 13th November 2020 at the premises of M.1 Motoring (Changi), located at 411 Changi Road, Singapore 419860.
4. A static inspection was carried out to the Insured Motorcycle where the following general information was recorded: -

Vehicle Registration No.	: FBP 67A
Make / Model	: YAMAHA XMAX300
Chassis No	: MH3SH0847KK005925
Year of Registration	: 2019 (FEB)
Mileage	: N.A (Wiring Affected)

5. The Insured Motorcycle was observed to have sustained severe fire damage all around. Its exterior body as well as its engine components were found to be severely burnt and/or melted.
6. The body parts of the Insured Motorcycle that were burnt and/or melted as a result of the fire had included its front and rear number plate, front fairings; handle bar assembly, instrument panel, fuel tank, engine and seats amongst others. See photos 1 – 9 below.



Photo 1 shows the general view of the right of the Insured Motorcycle at the time of inspection. The Insured Motorcycle was observed to have sustained severe fire damage all around. Its front and rear number plate, front fairings; handle bar assembly, instrument panel, fuel tank, engine and seats amongst others that were found to have been affected as a result of the fire.



Photo 2 shows the general view of the front of the Insured Motorcycle at the time of inspection. The Insured Motorcycle was observed to have sustained severe fire damage all around. Its front and rear number plate, front fairings; handle bar assembly, instrument panel, fuel tank, engine and seats amongst others that were found to have been affected as a result of the fire.



Photo 3 shows the general view of the left side of the Insured Motorcycle at the time of inspection. The Insured Motorcycle was observed to have sustained severe fire damage all around. Its front and rear number plate, front fairings; handle bar assembly, instrument panel, fuel tank, engine and seats amongst others that were found to have been affected as a result of the fire.



Photo 4 shows the general view of the rear of the Insured Motorcycle at the time of inspection. The Insured Motorcycle was observed to have sustained severe fire damage all around. Its front and rear number plate, front fairings; handle bar assembly, instrument panel, fuel tank, engine and seats amongst others that were found to have been affected as a result of the fire.



Photo 5 shows the front number plate and fairings of the Insured Motorcycle had been burnt and/or melted as a result of the fire.



Photo 6 shows the general view of the handle bar assembly and instrument panel of the Insured Motorcycle had been partially burnt and/or melted as a result of the fire.



Photo 7 shows the general view of the fuel tank (circled) of the Insured Motorcycle partially burnt and/or melted as a result of the fire.



Photo 8 shows the top view of the seat and the engine of the Insured Motorcycle was totally burnt and/or melted as a result of the fire.

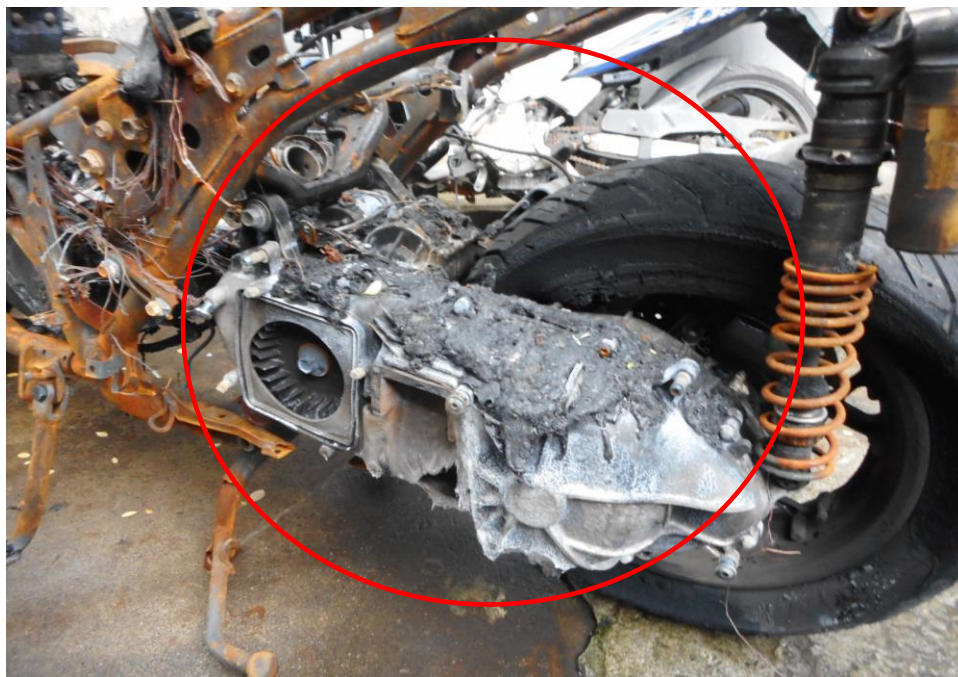


Photo 9 shows the close up view of the engine of the Insured Motorcycle partially burnt and/or melted as a result of the fire.

7. At the time of our inspection of the Insured Motorcycle, we did not find any modification(s) and/or additionally fitted electronic and/or electrical component(s) on the Insured Motorcycle.

Investigation and Technical Analysis

8. Based on the circumstances for this particular case, the fire appears to have originated from the middle of the Insured Motorcycle, somewhere around the centre portion below the seat where the engine and its components is located at. This can be determined basing on the area where the extent of fire damage was most severe, the circumstances of the fires' origin at the material time of incident and also the high heat intensity burn marks (whitish burn marks) that were found on the exterior surface around the engine area below the seat

9. These whitish burn marks are a result of exposure to prolong heat intensity. Rust would normally start to develop around these areas soon after a fire as the prolonged exposure to high heat intensity usually causes the bare steel/metal material of the body parts to be exposed to natural environmental condition. The rust that had developed on the centre portion, in the immediate vicinity of where these whitish burn marks were found, would also support our findings of where the fire had likely started from on the Insured Motorcycle. See photo 10- 12 below.

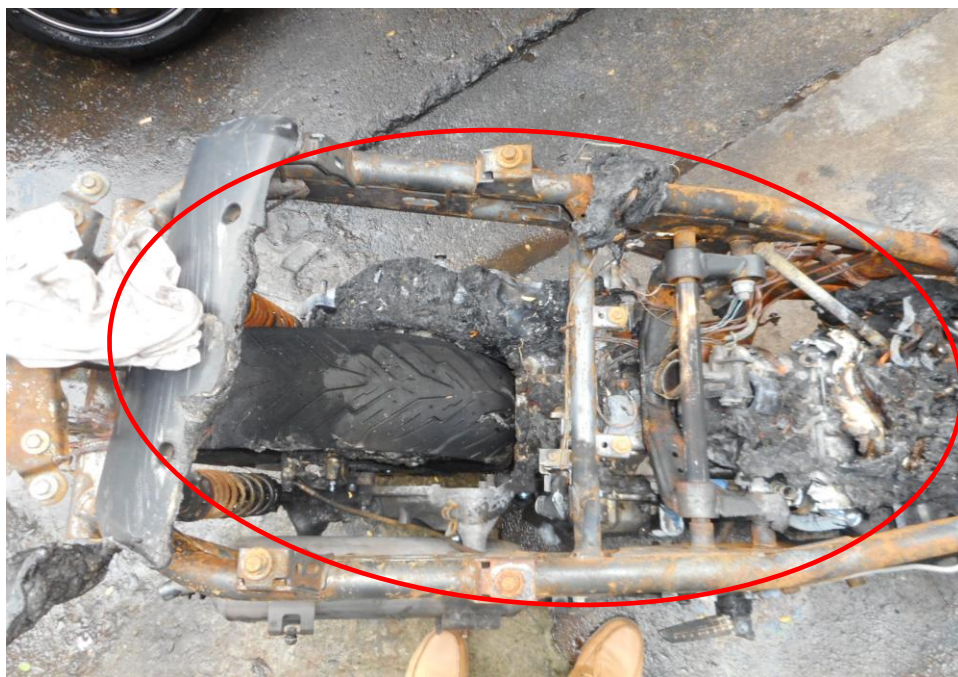


Photo 10 shows general view of the engine portion of the Insured Motorcycle at the time of our inspection. The high heat intensity burn marks (whitish burn marks) and rust (circled) that had development found on the exterior surface around the engine area indicates that the fire had originated from this area of the Insured Motorcycle.

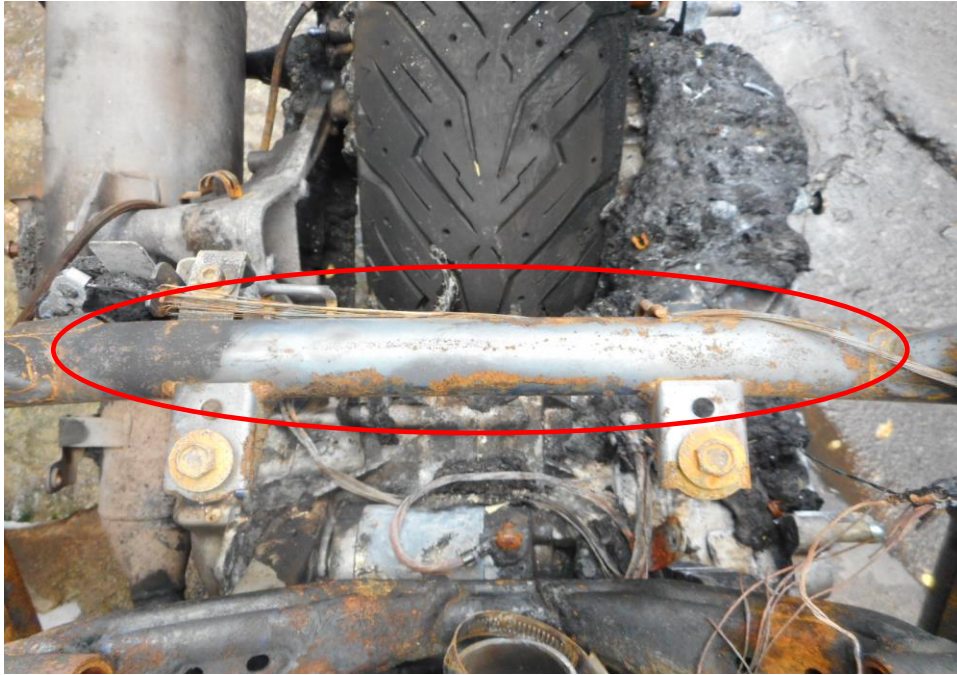


Photo 11 shows close up view of the engine portion of the Insured Motorcycle at the time of our inspection. The high heat intensity burn marks (whitish burn marks) and rust (circled) that had development found on the exterior surface around the engine area indicates that the fire had originated from this area of the Insured Motorcycle.

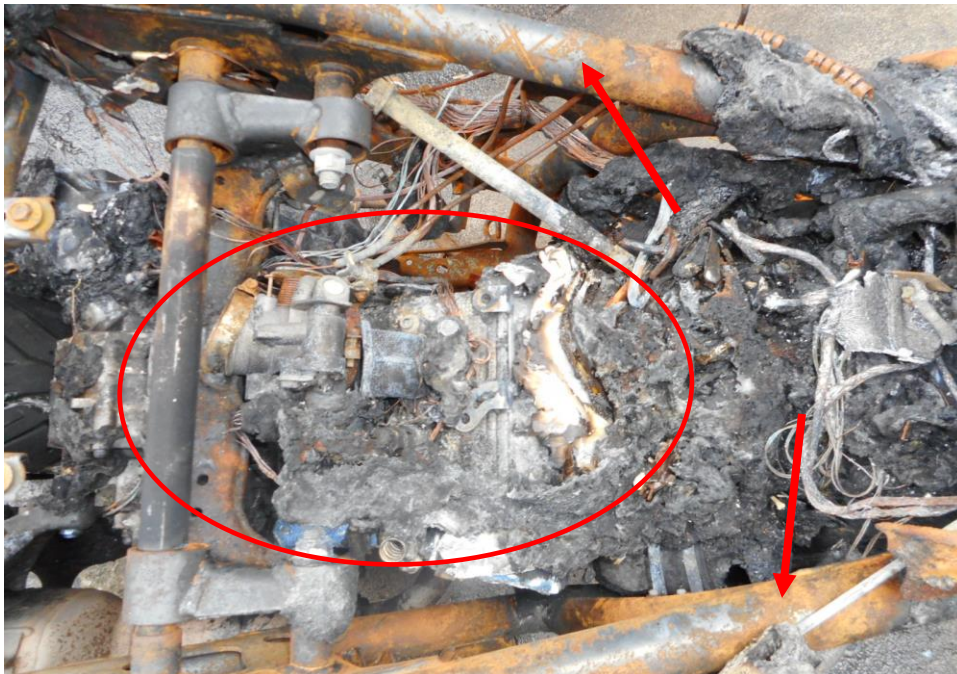


Photo 12 shows close up view of the engine portion of the Insured Motorcycle at the time of our inspection. We observed engine and its throttle body of the Insured Motorcycle and the components in its vicinity had sustained the high heat intensity burn marks (whitish burn marks) (circled) and rust (arrowed) that had development found on the exterior surface around the engine area indicates that the fire had originated from this area of the Insured Motorcycle.

10. From the Singapore Police Report No. L/20201110/2004 and the Singapore Accident Statement which were made by Mr Shafiq Bin Sulaiman (herein referred to as "**Mr Shafiq**"), we note that the fire to the Insured Motorcycle had started at a time when it was driven. Mr Shafiq was first alerted of the fire when he was riding on the Insured Motorcycle.
11. We managed to speak to Mr Shafiq on 16th November 2020 where we were able to gather further information pertaining to the incident as well as information pertaining to the history of the Insured Motorcycle.
12. According to Mr Shafiq, at about 0015hrs on 9th November 2020, he was riding the Insured Motorcycle from Keat Hong to his parents place at Marsiling. He mentioned that 15 minutes into riding the Insured Motorcycle when he was on the expressway, he smelled a little petrol smell and continued riding. Upon exiting the expressway and arriving at the traffic junction, Mr Shafiq got down the Insured Motorcycle to inspect it and subsequently he saw flames started to appear out from the centre of the Insured Motorcycle.
13. Mr Shafiq immediately drove the Insured Motorcycle to a side, turn off the ignition and attempt to put out the fire while retrieving his belongings. The fire got stronger and Mr Shafiq decided to call for SCDF assistance. SCDF arrived within 10 minutes and the fire was put out shortly.
14. Mr Shafiq informed us that he had his statement taken by the SCDF officers. Mr Shafiq called his insurance company and had the Insured Motorcycle arranged to be towed M.1 Motoring (Changi), located at 411 Changi Road, Singapore 419860. Mr Shafiq had taken a few photos and videos of the fire at the scene.
15. Mr Shafiq mentioned that he had not experienced any mechanical or electrical/electronic problems with the Insured Motorcycle till the day of the incident.

16. With regard to the history of the Insured Motorcycle, we were able to gather from Mr Shafiq that the Insured Motorcycle was purchased new in February 2019 this was 1 year 10 months prior to the fire incident and He did not do any modification(s) and/or additionally fitted any electrical or electronic component(s) to the Insured Motorcycle.
17. Pertaining to the maintenance aspect, the Insured Motorcycle was newly bought 1 year 10 months ago and has always gone for its periodic servicing. However, Mr Shafiq mentioned that he does not keep servicing records and the Insured Motorcycle has not gone for its LTA inspection as it is still newly within the first 3 years of its age.

Incident Scene Photographs

18. During the course of our investigations, we were able to obtain coloured photographs showing the Insured Motorcycle at the incident location after the fire was extinguished by SCDF personnel. These were provided to us by Mr Shafiq.
19. In general, the information that could be gathered from these photographs had corresponded to the events that were related to us by Mr Shafiq. The photographs had also showed the Insured Motorcycle on fire and similar extent of damage and burn pattern to the Insured Motorcycle as per what we had observed during our physical inspection of the Insured Motorcycle. Apart from the aforesaid, there was no further notable information that could be gathered from these photographs. See photos 13 - 15

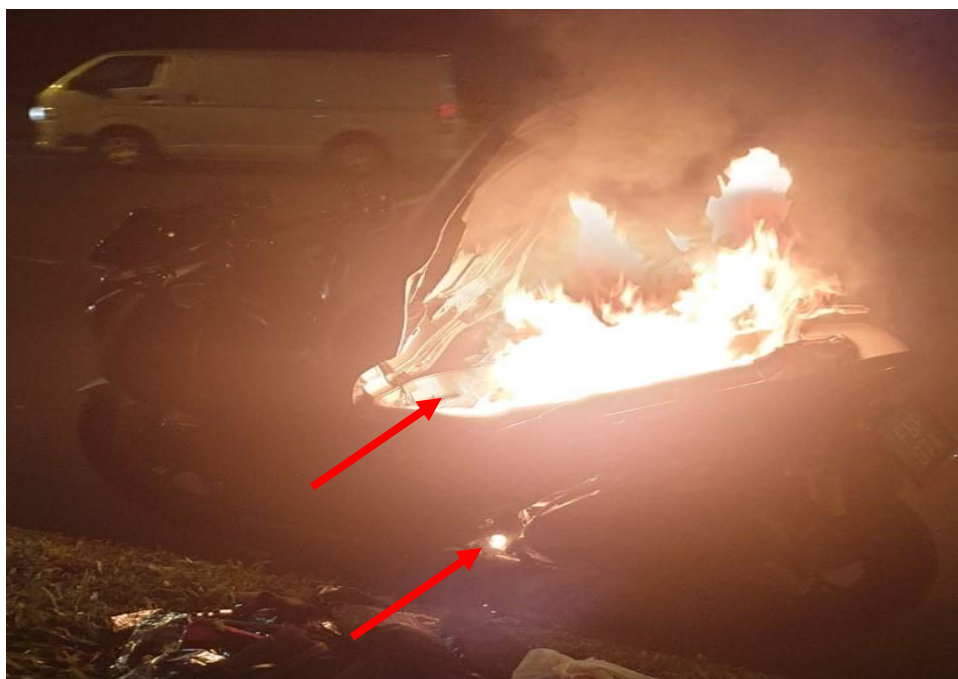


Photo 13 shows the flames started engulfing the centre part of the Insured Motorcycle at the incident scene. The fire could be seen burning from the seat and the engine below (arrowed) of the Insured Motorcycle



Photo 14 shows the flames started engulfing the whole of the Insured Motorcycle at the incident scene. The fire could be seen burning the whole of the Insured Motorcycle



Photo 15 shows the SCDF officer (arrowed) in attempting to put out the fire on the Insured Motorcycle at the incident scene. In general, the information that could be gathered from these photographs had corresponded to the events that were related to us by Mr Shafiq.



Photo 16 shows the Insured Motorcycle at the incident location after the fire was extinguished. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Shafiq, location when the fire broke out.

20. Given the circumstances of the incident as reported, the possibility of the cause of fire to the Insured Motorcycle being due to engine overheating would seem unlikely as the Insured Motorcycle was still able to be driven to a side before turning the engine off.
21. The possibility of the fire being due to electrical in nature would also seem unlikely as our examinations observed that there were no signs of internal short circuit to electrical components of the Insured Motorcycle as the electrics would be shut off upon turning off of the Insured Motorcycle's engine.
22. 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. As the location where the Insured Motorcycle caught fire was also observed to be not at a secluded location.

23. Since engine overheating, electrical in nature and fire to external factors were all unlikely the cause of fire, the most probable cause would then be the leakage of fluid, which was also what we had observed between the throttle body and its engine area where the fuel hose is supplying petrol to the throttle body that maybe leaking petrol to the area of the engine and cause a fire to be ignited on Insured Motorcycle. The leaked fluid comes into contact with hot surfaces; such the heated engine surfaces would possibly have been at a sufficient temperature that could result in leaked fluid to self-ignite and started burning the seat of the Insured Motorcycle and spread onto the whole Insured Motorcycle. This is further supported by Mr Shafiq statement that he had smell petrol while he was in the midst of riding the Insured Motorcycle.

24. 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 Motorcycle as the Insured Motorcycle that may possibly pose a fire risk. See search result from LTA below.



Vehicle Recall Details

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

Owner ID Type Singapore NRIC	Owner ID 071D
Vehicle No. FBP67A	Make/Model YAMAHA/ CZD300A / XMAX300
Engine No.: H336E0048385	Chassis No.: MH3SH0847KK005925
Recall Details: No Recall Detail records	

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Conclusion

25. 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 leakage of fluid which contacted on to hot surface that caused the self-ignition of fire. For this particular case, the fire had originated from between the throttle body and the heated engine surfaces, somewhere around the from the engine area below the seat portion of the insured Motorcycle.
26. We did not find any evidence which had suggested that the cause of fire to the Insured Motorcycle was due to poor maintenance and/or recurring electrical problem.
27. There was no modification(s) or additional electronic and/or electrical component(s) fitted on the Insured Motorcycle at the time of inspection of the Insured Motorcycle.
28. Our investigations had also revealed that at the time of writing this report, there is no manufacturer recall of similar make and model motorcycle as the Insured Motorcycle that could possibly pose a fire risk.

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