

Your Ref: 7140128801SG  
Our Ref : CS/AIG21004477/N

15 April 2021

**M/s AIG Asia Pacific Insurance Pte. Ltd.**

78 Shenton Way #08-16  
CHARTIS Building  
Singapore 079120  
(Motor Claims Department)

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE INSURED VEHICLE SJJ 1001U ON 31 MARCH 2021**

1. We refer to your letter dated 9 April 2021 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle SJJ 1001U (herein referred to as "**Insured Vehicle**") are set out below.

**Inspection of the Insured Vehicle**

3. The Insured Vehicle was physically inspected on 14 April 2021 at the premises of MBM Wheelpower Pte. Ltd. (herein referred to as "**MBM**") located at 160 Sin Ming Drive, #06-02, Sin Ming AutoCity, Singapore 575722.
4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: SJJ 1001U
Make / Model	: BMW M3 SEDAN AT ABS D/AIRBAG 2WD LED NAV HUD
Chassis No	: WBS3C920X0P818163
Year of Registration	: June 2015
Mileage	: 61,632km

5. The Insured Vehicle was noted to have sustained fire damage that was confined to within its interior compartment. The door panel and floor panel on the driver side of the Insured Vehicle was observed to be partially burnt and/or melted while the exterior of the Insured Vehicle was observed to have been relatively unaffected by the fire with the exception of the driver window glass.

6. The fire had resulted in several components in the interior compartment to be slightly burnt and/or damaged. This had included its driver seat, floor carpet, insulating material covering the floor panel and driver door panel amongst others. See photos 1 – 7 below.



**Photo 1** shows the general view of the frontal portion of the Insured Vehicle at the time of our inspection. The fire damage was confined to its interior compartment. The exterior portion of the Insured Vehicle was observed to be relatively unaffected by the fire with the exception of the driver window glass.



**Photo 2** shows the general view of the engine compartment of the Insured Vehicle at the time of our inspection. The fire damage was confined to its interior compartment. The engine compartment of the Insured Vehicle was observed to be relatively unaffected by the fire.



**Photo 3** shows the general view of the rear portion of the Insured Vehicle at the time of our inspection. The fire damage was confined to its interior compartment. The exterior portion of the Insured Vehicle was observed to be relatively unaffected by the fire with the exception of the driver window glass.





**Photo 4** shows the general view of the driver window glass of the Insured Vehicle at the time of our inspection. The driver window glass had sustained slight damage as a result of the fire.



**Photo 5** shows the interior compartment of the Insured Vehicle at the time of our inspection. The fire had resulted in several components in the interior compartment to be slightly burnt and/or damaged. This had included its driver seat (circled), floor carpet, insulating material covering the floor panel and driver door panel (red arrows) amongst others.



**Photo 6** shows the driver door panel of the Insured Vehicle at the time of our inspection. The fire damage was confined to its driver side. The driver door panel was observed to be partially burnt and/or melted.



**Photo 7** shows the driver seat of the Insured Vehicle at the time of our inspection. The fire damage was confined to its driver side. The driver seat was observed to be partially burnt and/or melted (circled).

7. At the time of physical inspection of the Insured Vehicle, we had found several modifications and additionally fitted electronic and/or electrical component(s) on the Insured Vehicle. These included 4 aftermarket speakers, an amplifier, an active subwoofer, an audio display remote control (which had sustained minor fire damage) and non- standard rear exhaust mufflers. All these fitted components were not the standard type for the Insured Vehicle. See photos 8 - 14 below.



**Photo 8** shows the audio display remote control additionally fitted onto the Insured Vehicle upon our inspection which had sustained minor fire damage. The brand of the remote control was 'HELIX' (circled).





**Photo 9** shows the aftermarket amplifier fitted at the boot of the Insured Vehicle upon our inspection. The brand of the amplifier was 'HELIX' (circled).



**Photo 10** shows a close up view of the aftermarket active subwoofer fitted at the boot of the Insured Vehicle upon our inspection. The brand of the subwoofer was 'FOCAL' (circled).



**Photo 11** shows the 1st aftermarket speaker fitted at the driver door panel (circled). The brand of the speaker was 'FOCAL'.

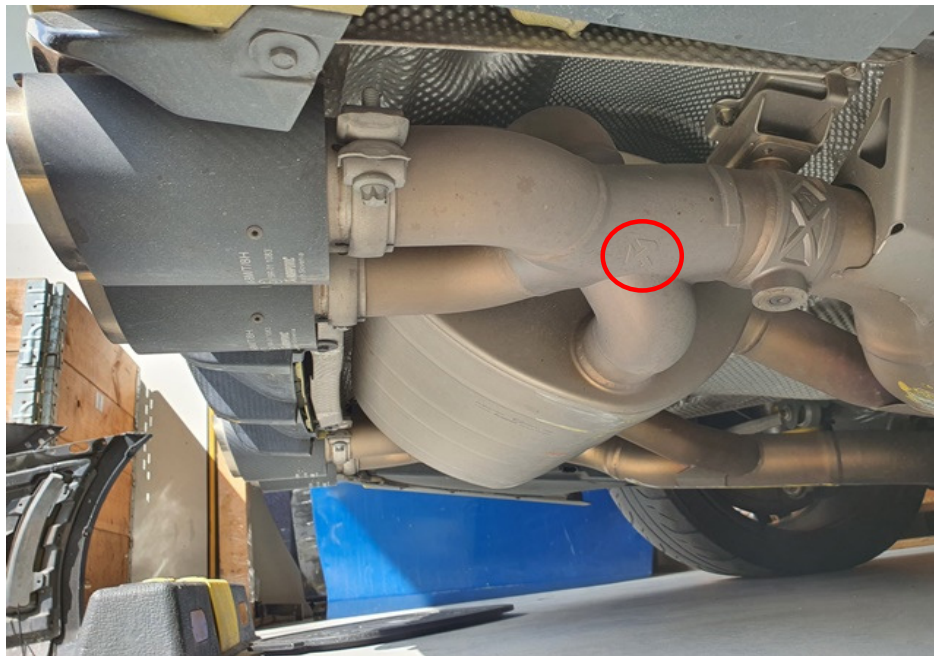


**Photo 12** shows a front view of the non-standard rear exhaust mufflers that were found to be fitted on the Insured Vehicle at the time of our inspection.





**Photo 13** shows a close up top view of the non-standard rear exhaust mufflers that were found to be fitted on the Insured Vehicle at the time of our inspection. The brand of the rear exhaust mufflers was 'AKRAPOVIC' (circled).



**Photo 14** shows a close up bottom view of the non-standard rear exhaust mufflers that were found to be fitted on the Insured Vehicle at the time of our inspection. The brand of the rear exhaust mufflers was 'AKRAPOVIC' (circled).

### **Investigation and Technical Analysis**

8. For this particular case, the fire appears to have originated from the right portion of the driver seat of the Insured Vehicle. This can be observed from the burnt components of the driver seat. See photos 15 & 16 below.



**Photo 15** shows the dismantled driver seat of the Insured Vehicle. The fire appears to have originated from the right portion of the driver seat of the Insured Vehicle. This can be observed from the burnt components of the driver seat (circled).





**Photo 16** shows the underside of the dismantled driver seat of the Insured Vehicle. The components on the underside of the driver seat were relatively unaffected by the fire. Hence the fire appears to have originated from the right portion of the driver seat of the Insured Vehicle (circled).

9. Upon closer examination of the area where the fire to the Insured Vehicle had likely started, we found greenish residue on some of the wirings leading from one of the motors of the driver seat. The presence of greenish residue further indicates internal heating of copper wires, another 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 then appear to suggest that the cause of fire to the Insured Vehicle could have possibly been due to electrical in nature. See photos 17 - 20 below.





**Photo 17** shows upon closer examination, the fire appears to have started from one of the motors located at the right portion of the driver seat (circled).



**Photo 18** shows a closer look at the wirings leading from the motor located at the right portion of the driver seat of the Insured Vehicle. We found greenish residue on some of the wirings (circled). The presence of such greenish residue suggest occurrence of an electrical short circuit. The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires.



**Photo 19** shows a closer view of some of the wirings with greenish residue (arrowed). The presence of such greenish residue suggest occurrence of an electrical short circuit.



**Photo 20** shows a close up view of some of the wirings with greenish residue (arrowed). The presence of such greenish residue suggest occurrence of an electrical short circuit.

10. From our observations, we did not find any fire damage to the wirings of the aftermarket audio system. We were able to record a video of the aftermarket audio system which was working fine post- incident.
11. From the Singapore Accident Statement, which was made by Mr Simon Kastono (herein referred to as “**Mr Simon**”), we note that the fire to the Insured Vehicle had started at a time when it was parked. Mr Simon was first alerted of the fire by one of the workers in the golf driving range.
12. We managed to speak to Mr Simon on 15 April 2021 where we were able to gather further information pertaining to the incident as well as information pertaining to the history of the Insured Vehicle.
13. According to Mr Simon, at about 2130hrs on 15 April 2021, he had driven the Insured Vehicle to Champion’s Golf Driving Range located at Fairways Drive. He reached the driving range in less than 15 minutes. He parked the Insured Vehicle at the open carpark and proceeded to the driving range. About 20 minutes in, one of the range workers informed Mr Simon that the Insured Vehicle was on fire. Mr Simon immediately ran to the Insured Vehicle, unlocked it and retrieved a fire extinguisher. He managed to put out the fire in less than 5 minutes. Mr Simon then wound down the driver window and took photographs of the Insured Vehicle. Mr Simon called MBM.
14. He was advised to make towing arrangements and was given the contact number of the towing company. The tow truck arrived by 2300 hours. The Insured Vehicle was towed to MBM. Mr Simon made an insurance report at Lai Huat Meng Kee Motor Pte. Ltd. the following day, on 1 April 2021 at 1746 hours.
15. With regard to the history of the Insured Vehicle, we were able to gather from Mr Simon that the Insured Vehicle was purchased second-hand from Autobahn Motors in 2017 with 7 years of COE left. Mr Kastono is the registered owner and main driver of the Insured Vehicle. To the best of his recollection, there has not been any major mechanical problem and/or electrical problem with the Insured Vehicle.



16. We asked Mr Simon regarding the 4 aftermarket speakers, amplifier, subwoofer, audio display remote control and non- standard rear exhaust mufflers. He mentioned that he had the aftermarket audio system installed after he purchased the Insured Vehicle. As for the after-market rear exhaust mufflers, Mr Simon was given a choice to have them installed when he purchased the Insured Vehicle which are LTA- compliant. We were able to obtain the exhaust authentication certificate as well as the inspection acknowledgement letter issued by the LTA to prove that the after-market rear exhaust mufflers had passed inspection on 17 June 2017. See photos 21 & 22.



**E26** 59R-01 1083

**AKRAPOVIC**

**ECE Type-Approval Certificate**

with respect to the use as non-original exhaust system for a type of car in road traffic

**CAR**

Barcode: 594559

Approval No.: E26 59R-01 1083\*03

Issued by: SLOVENIAN TRAFFIC SAFETY AGENCY  
Vehicle department  
Rakovska ulica 15a, SI-1000 LJUBLJANA, SLOVENIA

Place & date of type-approval: Ljubljana, 25.07.2014

Report No.: 04-00004-VA-08M-03

Issued by: TÜV SÜD Auto Service GmbH  
Westendstrasse 193  
DE-80686 MÜNCHEN

Date of issue: 07.07.2014

Approval identification: E26 59R-01 1083

**Technical data:**

Type and version of exhaust: **M-0M/T/BH, M-0M/SS/BH**

Technical unit: Technical unit, consisting of a silencer according to drawing no. 241501, 293 x 229 x 430 absorption-reflection-principle with tail pipes according to drawing no. 241500 opt. 241576

Marking: Engraved by laser / plate fixed with rivets

Field of application:

Manufacturer / Trade mark	Commercial description	Vehicle type (and no. of homologation)	Engine type	Component parts, accessories or test	Description of the part or new or original part / modification part	Accessories, accessories or homologation no.
BMW (D) / BMW	BMW (D)	BMW (D) / BMW	BMW (D)	BMW (D)	BMW (D)	BMW (D)

**STA INSPECTION PTE LTD**  
17/6/17  
SJJ10014  
SINGAPORE

**Customer's details:**

Name: SIMON KASTONJO

NRIC No: 922039638P

Model of Car: BMW M5

Car Registration No: S331904 U

Date of Installation: 14/6/2017

**Photo 21** shows the AKRAPOVIC rear exhaust mufflers authentication certificate (circled). The rear exhaust mufflers were fitted onto the Insured Vehicle on 14 June 2017 (red arrows).

**Land Transport Authority**10 Sin Ming Drive Singapore 575701  
Tel: 1800-CALL LTA (1800-2255 582) Fax: (65) 6553 5329

17 Jun 2017

Our ref: 1706172301N005041507

SIMON KASTONO  
43 SIXTH AVENUE  
#01-03  
SINGAPORE 276484

Dear MR SIMON KASTONO

**INSPECTION ACKNOWLEDGEMENT FOR CHANGE OF VEHICLE PARTICULARS APPLICATION**

Please refer to the VIR No. VIR20170673338 for the following vehicle:

Vehicle No. : SJJ1001U ←  
Applicant Name : SIMON KASTONO  
Make : B.M.W.  
Model : M3 SEDAN AT ABS D/AIRBAG 2WD LED NAV HUD  
Chassis No. : WBS3C920X0P818163  
Engine No. : 06979068S55B30A  
Change Description : CHANGE VEHICLE ACCESSORY  
Remark : CHECK OK

2. This is to acknowledge that your vehicle has passed the inspection on 17 Jun 2017.

3. The new vehicle specification(s) is (are) as follows.

- Not Applicable

The accessory details are as follows:

Make: AKRAPOVIC ←  
Model Name: AKRAPOVIC SLIP ON EXHAUST SYS M-BM/T/8H  
EEC/ECE/JASMA/JMCA No.: E26 59R-01 1083  
Type No.: M-BM/T/8H

4. Your vehicle's particulars have been changed.

5. Thank you for presenting the above vehicle for inspection.

**Photo 22** shows the inspection acknowledgement letter issued by the LTA to prove that the AKRAPOVIC rear exhaust mufflers fitted onto the Insured Vehicle (red arrows) had passed inspection on 17 June 2017 (circled).

**Incident Scene Photographs**

17. We were able to obtain from Mr Simon several photographs of the Insured Vehicle which were taken after the fire had been extinguished. In general, the information that could be gathered from these photographs had corresponded to the events that were related to us by Mr Simon. Our close examination of these photographs also showed no unusual foreign material(s) and/or object(s) found on the ground in the immediate area of the lot where the Insured Vehicle was parked. See photos 23 – 25 below.



**Photo 23** shows the Insured Vehicle being prepped to be towed to MBM post-incident. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Simon, which is the fire had occurred while the Insured Vehicle was parked at the open carpark of the golf driving range (arrowed).






**Photo 24** shows the interior compartment of the Insured Vehicle post- incident. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Simon, which is the fire had started from the driver seat of the Insured Vehicle (arrowed).



**Photo 25** shows a close up view of the driver seat of the Insured Vehicle post-incident. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Simon, which is the fire had started from the driver seat of the Insured Vehicle (circled).

18. During the course of our investigations, we were able to obtain from Mr Simon, a document relating to the installation of the aftermarket audio system onto the Insured Vehicle by Xtremez Audio Accessories Pte. Ltd. The installation was done on 2 September 2017. Refer to Invoice 1 below.



→ Xtremez Audio Accessories Pte. Ltd.  
Company No.: 201228899G  
53 Ubi Avenue 1, #01-06 Paya Ubi Industrial Park  
Singapore 408934  
Tel: 6841 6882 Fax: 6841 8978  
Email: xtremezaudio@gmail.com

INVOICE # 14513

**Bill To :**  
Name: SIMON KASTONO  
Contact No: 96952682 / BM  
Mode of Payment: CASH

→ Date: 02-09-2017

**Vehicle Information:**  
→ License plate no: SJJ1001  
Vehicle Make: BMW M3

Description:	Quantity:	Price:	Line Total:
FOCAL BEND6+MID RANGE	1.00	S\$0.00	S\$0.00
FOCAL KIT 33W X2	1.00	S\$0.00	S\$0.00
HELIX P-SIX	1.00	S\$0.00	S\$0.00
HELIX G-TWO	1.00	S\$0.00	S\$0.00
STP DR ARTEX 2 FOR FRONT 2DOOR SINGER LAYER	1.00	S\$0.00	S\$0.00
CUSTOMIZED WOOFER BOX	1.00	S\$0.00	S\$0.00
TCHERNOV STANDARD 1 IC 1.0M RCA CABLE	1.00	S\$0.00	S\$0.00
TCHERNOV ORIGINAL ONE SPEAKER CABLES	1.00	S\$0.00	S\$0.00
TCHERNOV 8AWG POWER CABLES	1.00	S\$0.00	S\$0.00
MAIN FUSE	1.00	S\$0.00	S\$0.00
AMP FUSE	1.00	S\$0.00	S\$0.00
BLACKVUE DR650S-2CH (16GB)	1.00	S\$0.00	S\$0.00
CELLINK B6	1.00	S\$0.00	S\$0.00
INCLUSIVE OF LABOUR	1.00	S\$11,300.00	S\$11,300.00
<b>Subtotal:</b>			S\$11,300.00
<b>Total:</b>			S\$11,300.00
<b>Received:</b>			S\$11,300.00
<b>Total Due:</b>			S\$0.00


Remarks:

THIS IS A COMPUTER GENERATED INVOICE. NO SIGNATURE

**Invoice 1** shows the installation of the aftermarket audio system onto the Insured Vehicle by Xtremez Audio Accessories Pte. Ltd. The installation was done on 2 September 2017 (arrowed).



19. Mr Simon mentioned that he had not experienced any mechanical problems with the Insured Vehicle till the day of the incident. He mentioned that there were neither warning lights displayed nor was there an abnormal rise in temperature of the Insured Vehicle.
20. Given the circumstances of the incident as reported, the possibility of the cause of fire to the Insured Vehicle being due to engine overheating would seem unlikely as the fire had started after the Insured Vehicle was parked and the engine was switched off for a period of time (about half an hour).
21. 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 fire was confined to within its interior compartment, with no visible exterior damage. Our examination of the available incident scene photographs also did not reveal any unusual material(s)/object(s) found on the lot near where the Insured Vehicle was parked. The location of where the Insured Vehicle was parked was also observed to be not at a secluded location.
22. 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 in nature is also supported by the condition of the wirings that were found at the right portion of the driver seat of the Insured Vehicle, which was earlier discussed in paragraph 9 above.
23. Although the engine of the Insured Vehicle was switched off at the material time of incident, some electrical current would still be flowing within the electrical system as several electrical and/or electronic components on the Insured Vehicle would require current to remain in operation and/or in standby mode. These components may include the alarm system, clock, radio and cabin light amongst others.
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 vehicle as the Insured Vehicle 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

<p><i>Owner ID Type</i></p> <p><b>Singapore NRIC</b></p>	<p><i>Owner ID</i></p> <p><b>963F</b> ←</p>
<p><i>Vehicle No.</i></p> <p><b>SJJ1001U</b> ←</p>	<p><i>Make/Model</i></p> <p><b>B.M.W./ M3 SEDAN AT ABS D/AIRBAG 2WD LED NAV HUD</b></p>

*Engine No.:*

**06979068S55B30A**

*Chassis No.:*

**WBS3C920X0P818163**

*Recall Details:*

**No Recall Detail records** ←

### Conclusion

25. Having investigated and technically analysed the damages of burnt nature to the Insured Vehicle, we are of the view that the cause of fire to the Insured Vehicle was of electrical in nature. For this particular case, the fire had originated along the wirings leading from one of the motors somewhere around the right portion of the driver seat. The wirings were original factory wirings of the Insured Vehicle.
26. 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.
27. The information gathered does not seem to suggest that the cause of fire was due to the installation of the aftermarket audio system carried out by Xtremez Audio Accessories Pte. Ltd. This is because we did not observe any fire damage to the wirings of the aftermarket audio system. Furthermore, the audio system was working fine post- incident.

28. We are further of the view that the additionally fitted electrical/electronic component (aftermarket audio system) found on the Insured Vehicle could not have possibly caused overloading to the electrical system of the Insured Vehicle considering that the installation was carried out a few years prior to the fire incident.
29. We found the Insured Vehicle to be fitted with 4 aftermarket speakers, an amplifier, an active subwoofer, an audio display remote control and non-standard rear exhaust mufflers. The aftermarket speakers, amplifier, active subwoofer and audio display remote control fitted do not require prior approval from LTA however the non-standard rear exhaust mufflers would require prior approval from LTA. Mr Simon has provided documents to prove that the non-standard rear exhaust mufflers have been approved by the LTA.
30. Although the aftermarket speakers, amplifier, active subwoofer, audio display remote control and non-standard rear exhaust mufflers fitted on the Insured Vehicle were not the standard type for the Insured Vehicle, we are of the view that these parts did not cause and/or contribute to the fire incident.
31. SCDF officers did not attend to the incident scene hence there will not be any SCDF fire report that may be forthcoming.

**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)*

**DISCLAIMER OF LIABILITY TO THIRD PARTIES:-** This Report is made solely for the use and benefit of the Client named on the front page of this Report. No liability or responsibility whatsoever, in contract or tort, is accepted to any third party who may rely on the Report wholly or in part. Any third party acting or relying on this Report, in whole or in part, does so at his or her own risk.