

Your Ref: SNM24D204964
Our Ref: CS/CTI24090067/N

10 September 2024

M/s China Taiping Insurance (Singapore) Pte. Ltd.

3 Anson Road #16-00
Springleaf Tower
Singapore 079909
(Motor Claims Department)

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE
INSURED VEHICLE SLH 144J ON 3 SEPTEMBER 2024**

1. We refer to your letter dated 5 September 2024 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle SLH 144J (herein referred to as “**Insured Vehicle**”) are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 5 September 2024 at the premises of Ding Auto Pte. Ltd. (herein referred to as “**Ding Auto**”) located at 60 Jalan Lam Huat, #06-46/47 Carros Centre, Singapore 737869.
4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: SLH 144J
Make / Model	: B.M.W. 216D GRAN TOURER LED NAV 7 SEATER
Chassis No	: WBA2E320005B45406
Year of Registration	: October 2016
Mileage	: N.A. (battery melted)

5. The Insured Vehicle was noted to have sustained fire damage that was confined to its frontal portion. The entire engine compartment of the Insured Vehicle was observed to be severely burnt while the interior compartment was observed to be relatively unaffected by the fire.
6. The fire had resulted in the body parts at the frontal portion of the Insured Vehicle to be burnt. This had included its front bumper, front bonnet, front support panel, front grille, headlamps, front windscreen, front wheel rims, front fenders and front tyres, amongst others. See photos 1 – 6 below.



Photo 1 shows the general view of the frontal portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its frontal portion.



Photo 2 shows the general view of the left front body of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its frontal portion. The entire engine compartment of the Insured Vehicle was observed to be severely burnt while the interior compartment was observed to be relatively unaffected by the fire.



Photo 3 shows the closer view of the right front body of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its frontal portion. Its front bumper, front bonnet, front support panel, front grille, headlamps, front windscreen, front wheel rims, front fenders and front tyres, amongst others were amongst the body parts that were found to have been affected by the fire.



Photo 4 shows the general view of the front windscreen of the Insured Vehicle at the time of our inspection. The front windscreen had sustained serious fire damage.



Photo 5 shows the engine compartment of the Insured Vehicle at the time of our inspection. The entire engine compartment of the Insured Vehicle was observed to be severely burnt. Most of the parts inside the engine compartment were found to be burnt and/or melted as a result of the fire.



Photo 6 shows the interior compartment of the Insured Vehicle, which was relatively unaffected by the fire.

7. At the time of inspection of the Insured Vehicle, we did not find any additionally fitted electronic and/or electrical component(s) on the Insured Vehicle. There also appears to be no modification(s) fitted on the Insured Vehicle.

Investigation and Technical Analysis

8. For this particular case, the fire appears to have originated within the engine compartment of the Insured Vehicle as this was the area where the damage of fire nature was most severe.
9. Upon closer examination of the right frontal portion of the engine compartment, which was where the fire to the Insured Vehicle had likely started, we had found traces of greenish residue on several stretches of burnt wirings. 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 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 7 - 9 below.



Photo 7 shows the wirings around the right frontal portion of the engine compartment, which is in the immediate vicinity where the fire to the Insured Vehicle had likely started. We noticed greenish residue on several stretches of burnt wirings (circled). The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring.

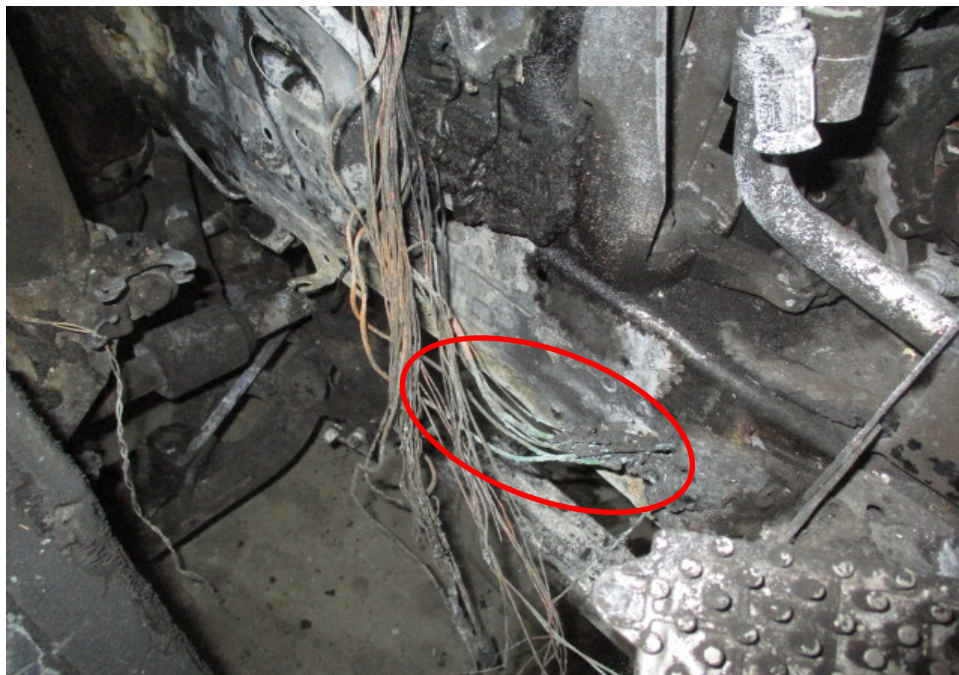


Photo 8 shows a closer view of the burnt wirings around the right frontal portion of the engine compartment. We noticed greenish residue on several stretches of the burnt wirings (circled). The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires.

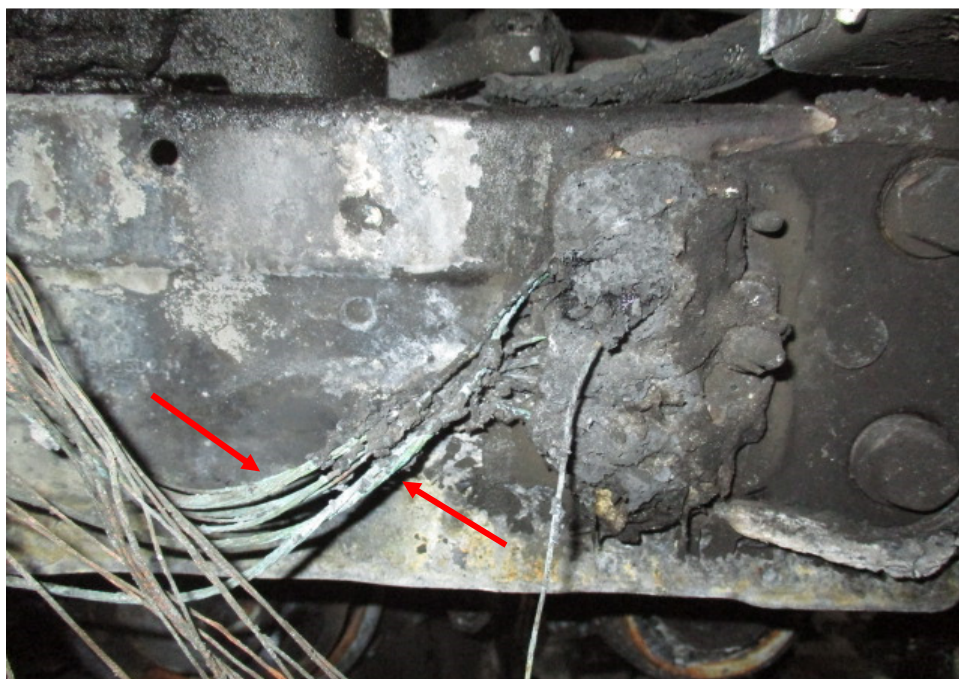
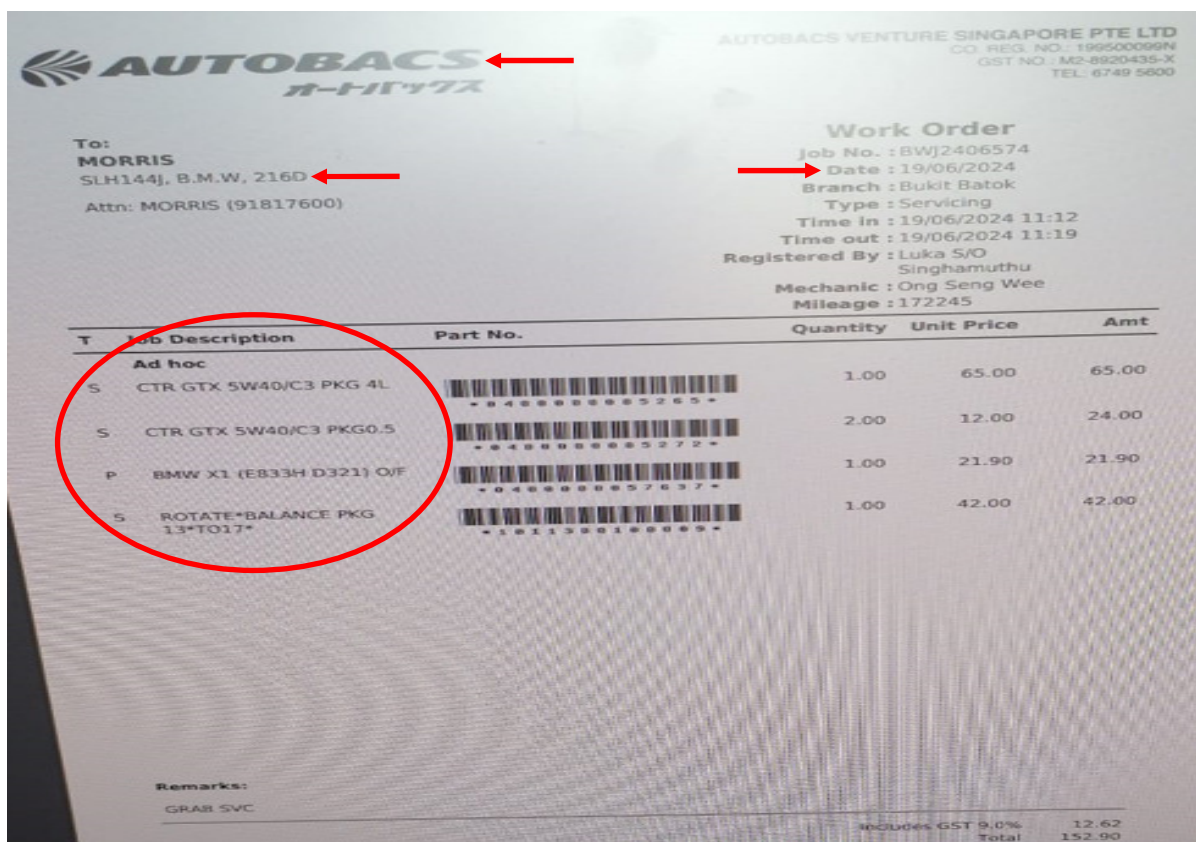



Photo 9 shows a close up view of the greenish residue found on several stretches of burnt wirings (red arrows). The presence of such greenish residue suggests occurrence of an electrical short circuit.

10. From the Singapore Police Report No. E/20240903/7042 and Accident Statement, which was made by Mr Kong Chee Wee (herein referred to as “**Mr Kong**”), we note that the fire to the Insured Vehicle had started at a time while he was driving. He was alerted of the fire after seeing white smoke emitting from the front bonnet when he stopped the Insured Vehicle to get help.
11. We managed to speak to Mr Kong where we were able to gather further information pertaining to the incident as well as information pertaining to the history of the Insured Vehicle.
12. According to Mr Kong, he was driving the Insured Vehicle alone around 1000 hours from Orchard Road and was headed to his office located in Bukit Panjang. He was travelling along Stevens Road towards PIE (Tuas). It was then that he mentioned he saw a message stating the battery was not charging on the display panel. He immediately called his mechanic located at Sin Ming who asked him to bring the Insured Vehicle in for a check. He entered PIE (Changi) and took the Thomson Road exit. Within a few minutes later, he saw another warning message stating that the engine temperature was high. Mr Kong mentioned that the Insured Vehicle was starting to slow down and lose power as he was driving. He decided to enter a slip road and stopped the Insured Vehicle in front of Fun's Florist & Nursery and switched off the engine. He exited the Insured Vehicle. It was then he saw white smoke emitting from the right portion of the front bonnet. He entered the shop and asked for help. He returned to the Insured Vehicle with some of the shop staff equipped with 2 fire extinguishers and a hose reel. He mentioned he saw flames emitting from the underneath the engine compartment. Mr Kong called 995 whilst the staff assisted him in putting out the fire.
13. SCDF arrived in 10 minutes. By the time firefighters arrived the fire had already been extinguished and the shop staff were spraying water at the engine compartment of the Insured Vehicle. Firefighters prised open the front bonnet and sprayed water at the engine compartment to ensure the fire was completely put out. Mr Kong assisted the SCDF in their preliminary investigations. He asked SCDF what had caused the fire but was told that they were still investigating. Mr Kong called the insurance hotline and towing arrangements were made. The tow truck arrived within 2 hours and the Insured Vehicle was towed to Ding Auto as it was the nearest reporting centre to his home located in Choa Chu Kang. Mr Kong lodged a police report at the Tanglin Division HQ on the same day at 1615 hours. He made an insurance report the following day, on 4 September 2024 at Ding Auto at 1839 hours.

14. With regards to the history of the Insured Vehicle, we were able to gather from Mr Kong that the Insured Vehicle was purchased secondhand in 2020 from a used car dealer with almost 6 years COE left. Mr Kong is the owner and only 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.
15. Pertaining to the maintenance aspect, Mr Kong sends the Insured Vehicle for periodic servicing at Autobacs Bukit Batok (herein referred to as **"Autobacs"**) located at 30 Bukit Batok East Avenue 6, Singapore 659761.
16. During the course of our investigations, we were able to obtain from Mr Kong, a document relating to the latest servicing and repair records of the Insured Vehicle. The Insured Vehicle was last serviced on 19 June 2024. The servicing package had included the changing of engine oil and oil filter. The tyres were also rotated and balanced. Refer to Invoice 1 below.



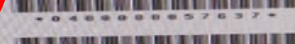
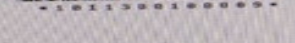


AUTOBACS  **アトバックス**

AUTOBACS VENTURE SINGAPORE PTE LTD
CO. REG. NO. : 199500099N
GST NO. : M2-8920435-X
TEL. 6749 5600

To:
MORRIS
SLH144j, B.M.W, 216D
Attn: MORRIS (91817600)

Work Order
Job No. : BWJ2406574
Date : 19/06/2024
Branch : Bukit Batok
Type : Servicing
Time in : 19/06/2024 11:12
Time out : 19/06/2024 11:19
Registered By : Luka S/O
Singhamuthu
Mechanic : Ong Seng Wee
Mileage : 172245

T	Job Description	Part No.	Quantity	Unit Price	Amt
	Ad hoc				
S	CTR GTX SW40/C3 PKG 4L		1.00	65.00	65.00
S	CTR GTX SW40/C3 PKG0.5		2.00	12.00	24.00
P	BMW X1 (E833H D321) O/F		1.00	21.90	21.90
S	ROTATE*BALANCE PKG 13*TO17*		1.00	42.00	42.00

Remarks:
GRAB SVC

includes GST 9.0% 12.62
Total 152.90

Invoice 1 shows the last servicing package done on the Insured Vehicle on 19 June 2024 at Autobacs (red arrows) which included changing of engine oil and oil filter. The tyres were also rotated and balanced (circled).

17. Mr Kong mentioned that after the servicing was done, he had not experienced any mechanical or electrical problems with the Insured Vehicle till the day of the incident.

18. Mr Kong mentioned that since driving the Insured Vehicle, he has not done any modification(s) and/or additionally fitted any electrical or electronic component(s) to the Insured Vehicle.

Incident Scene Photographs

19. We were able to obtain from Mr Kong, photographs of the Insured Vehicle which were taken during and after the fire was put out. In general, the information that could be gathered from these photographs had corresponded to the events that were related to us by Mr Kong. 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 where the Insured Vehicle was positioned. See photos 10 - 13 below.



Photo 10 shows the Insured Vehicle on fire before the arrival of the SCDF. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Kong which is the staff from Fun's Florist & Nursery were assisting him to put out the fire to the Insured Vehicle with fire extinguishers and a hose reel (red arrows).



Photo 11 shows the SCDF spraying water on the engine compartment of the Insured Vehicle to make sure the fire is completely put out after prising open the front bonnet. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Kong which is the SCDF was present at the incident location (arrowed).

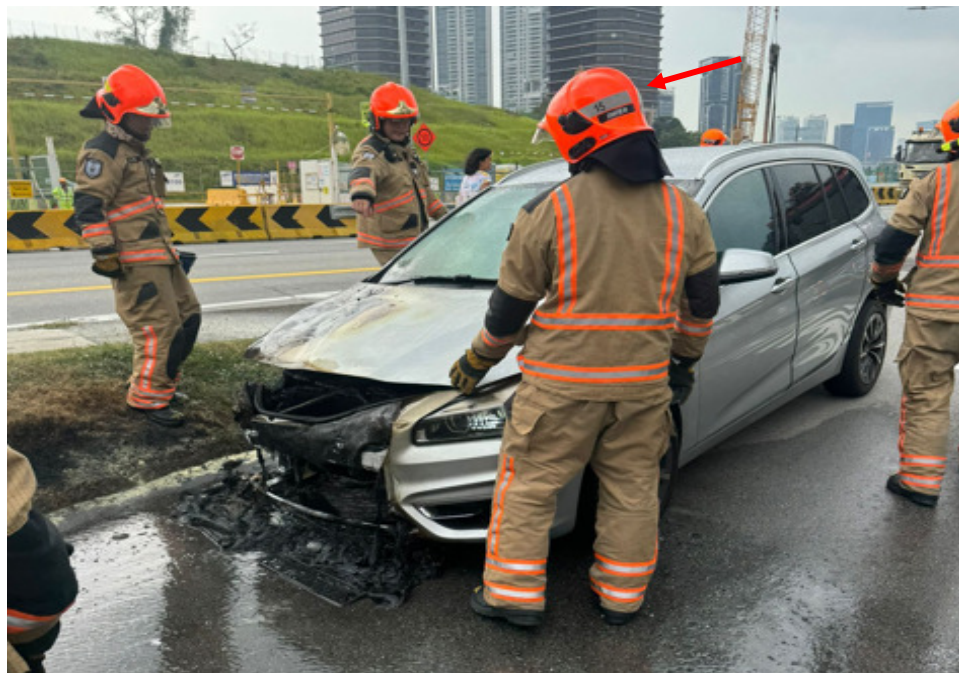


Photo 12 shows the SCDF conducting preliminary investigations after putting out the fire to the Insured Vehicle (arrowed).



Photo 13 shows 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 Kong which is the fire had started from the engine compartment of the Insured Vehicle (arrowed).

20. Based on the vehicle service record invoice provided, we are of the opinion that it is unlikely that the fire could have been caused by poor maintenance of the Insured Vehicle.

21. 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 an overheated engine would have caused the Insured Vehicle to stall. However in this case, Mr Kong was the one who noticed a loss of power while he was driving and stopped the Insured Vehicle. Therefore, we are of the opinion that the fire was not caused by an overheated 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 given that our examination of the available incident scene photographs did not reveal any unusual material(s)/object(s) found on the ground where the Insured Vehicle was positioned. The location of where the Insured Vehicle was positioned was also observed to be not at a secluded location.
23. 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 in the engine compartment of the Insured Vehicle, which was earlier discussed in paragraph 9 above.
24. Our checks with both local and international bodies and associations had revealed that at the time of writing this report, there was a manufacturer recall on 28 November 2018 for the exhaust gas recirculation (EGR) cooler. It was rectified on 27 October 2019. There was a 2nd manufacturer recall on 29 June 2021 for the (Takata) gas generator of the driver's airbag. It was rectified on 27 June 2023. There was a 3rd manufacturer recall on 21 April 2023 for the EGR coolers. However it was not rectified at the time of writing this report. 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 685D
Vehicle No. SLH144J	Make/Model B.M.W./ 216D GRAN TOURER LED NAV 7 SEATER
Engine No.: 30219660B37C15A	Chassis No.: WBA2E320005B45406

Recall Details

Recall No.: R2018120631

Manufacturer Recall Date:

28 Nov 2018

Estimated Completion Year of Recall:

2019

Brief Description (As Provided by Motor Dealer):

The exhaust-gas recirculation cooler is not robust enough for the service life of the vehicle.

Date Rectified:

27 Oct 2019

Hotline Information:

PERFORMANCE MOTORS LIMITED at 63190100
BMW EUROKARS AUTO at 6219-8388

For more details, contact BMW ASIA PTE LTD

Recall No.: R2023041252

Manufacturer Recall Date:

21 Apr 2023 ←

Estimated Completion Year of Recall:

2025

Brief Description (As Provided by Motor Dealer):

In-house quality analyses have led to the realisation that the exhaust gas recirculation coolers can possibly leak over the service life of the vehicle and do not meet BMW quality standard. ←

Date Rectified:

- ←

Hotline Information:

PERFORMANCE MOTORS LIMITED at 1800-2255269
BMW EUROKARS AUTO at 6219-8388

For more details, contact BMW ASIA PTE LTD

Recall No.: R2021071012

Manufacturer Recall Date:

29 Jun 2021 ←

Estimated Completion Year of Recall:

2024

Brief Description (As Provided by Motor Dealer):

The (Takata) gas generator of the driver's airbag can malfunction if it has been exposed to high absolute air humidity and high temperature fluctuations for years. ←

Date Rectified:

27 Jun 2023 ←

Hotline Information:

PERFORMANCE MOTORS LIMITED at 1-800-2255-269
BMW EUROKARS AUTO at 6219-8388

For more details, contact BMW ASIA PTE LTD

25. We asked Mr Kong regarding the manufacturer recall on 21 April 2023 which was not rectified. Mr Kong mentioned that he received a letter from PML dated 5 May 2023 that he would be contacted again once the replacement part had arrived. He was also informed that a complimentary leak tightness inspection would be performed on the Insured Vehicle in due course. On 22 August 2023 he brought the Insured Vehicle to Performance Motors Limited located at 303A Alexandra Road, Singapore 159941. Checks were performed on the Insured Vehicle and it was found that the EGR was in good condition. Refer to photo 14 and the Repair Order below.

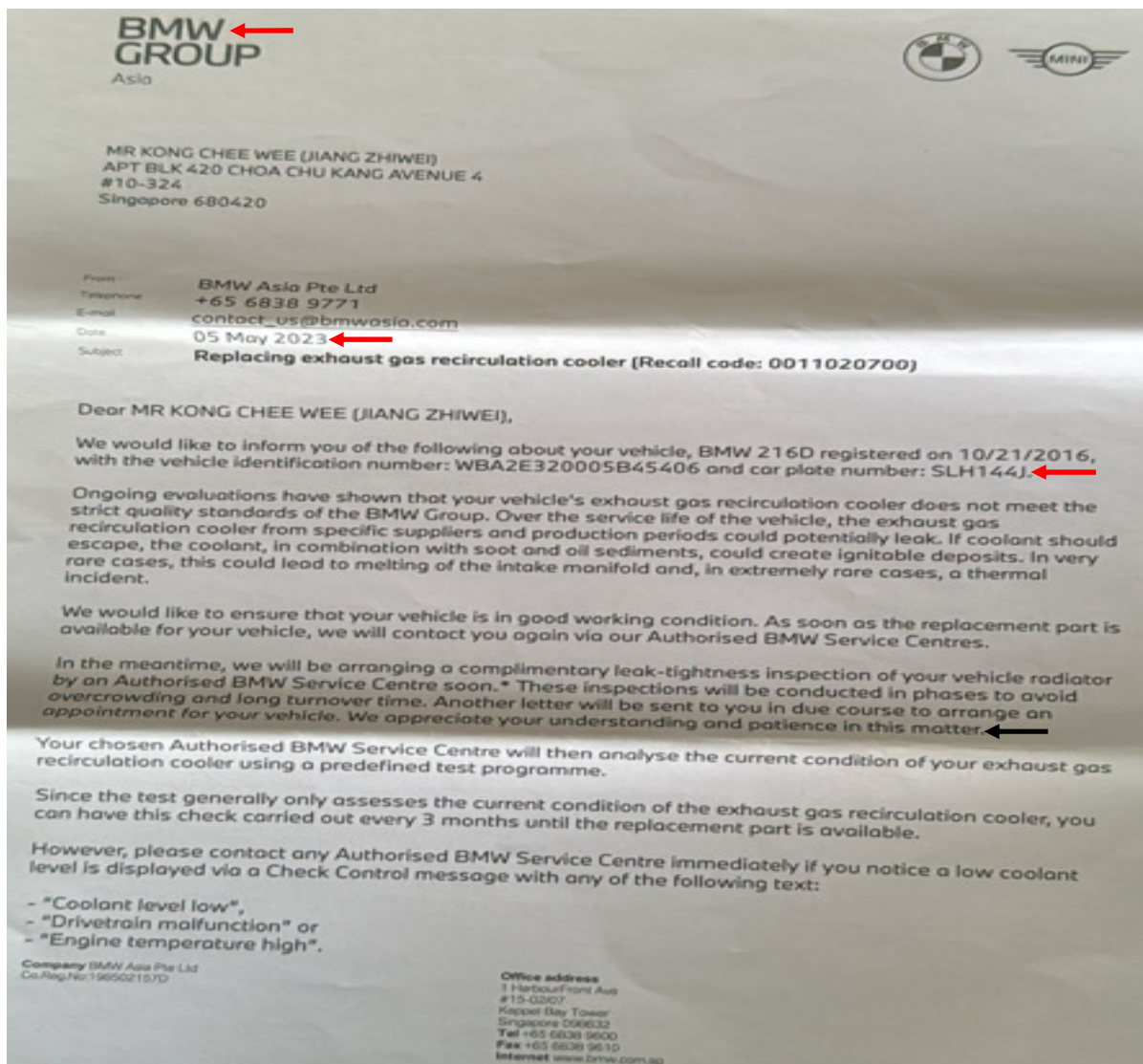


Photo 14 shows the letter dated 5 May 2023 which Mr Kong had received from Performance Motors Limited notifying him of the manufacturer recall and that he would be contacted again once the replacement part had arrived (red arrows). He was also informed that a complimentary leak tightness inspection would be performed on the Insured Vehicle in due course (black arrow).


BMW Dealer

Performance Motors Limited ←

A member of the Sime Darby Group
Co. Reg. No. 197401559W GST Reg. No M2-0020081-X
303, Alexandra Road
Sime Darby Performance Centre
Singapore 159941
Toll Free - 1800 2255 269

280, Kampong Arang Road
East Coast Centre
Singapore 438180

1 Ubi Road 4
Contactless Centre
Singapore 408607



REPAIR ORDER
RE-PRINT

Repair Order No. : W1 1792160 ← Repair Order Date : 22/08/2023 ← Cust. Svc. Advisor : Xueyoung Tiew	Page No. : 1 of 4 Date/Time Printed : 09/09/2024 11:51 Date/Time Promised : 22/08/2023 14:00
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<p>- CUSTOMER INFORMATION -</p> <p>Kong Chee Wee 420 Choa Chu Kang Ave 4 #10-324</p> <p>Singapore 680420</p> <p>Contact Person (Name) : Kong(Mr.) Telephone : 91817600</p>	<p>- ACCOUNT TO - 999938</p> <p>Internal-BMW Svc Wty Claims</p> <p>Appointment Status: BK</p> <p>Colour / Trim Code: A83 - Glacier Silver / PDSW - Leathe</p>
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REGN. NO.	CHASSIS No.	REGN. DATE	MODEL	MILEAGE
SLH144J ←	WBA2E320005B45406	21/10/2016	216d G TOURER	156187

Done By	Line	OP. Code	Job Description	FRU	Charge Type
	2	0068860	Check exhaust-gasrecirculation cooler (radiatoroutlet and inlet side), fill coolant and carry out cooling system bleeding routine ←	22	w 1
	3	0073827	Read out coolant Check Control message (OK) ←	1	w 1
	4	csacom	EGR SACC	0	0

IMPORTANT: Please read the Terms and Conditions of Service overleaf before accepting the Quotation.

I, the undersigned, hereby acknowledge that the work described above and the charges stated above are estimates only and may be exceeded. Subject to clause 2 of the Terms & Conditions of Service, I hereby authorize you to carry out the above work and to repair, replace and/or install any necessary parts and other materials in my vehicle which I agree to pay the same at your customary rates and charges. I understand and accept that you will carry out the above work in accordance with the Terms and Conditions of Service, which together with this my acknowledgement and authorization, all form part of this service agreement. I acknowledge, confirm and/or accept that: (a) I have read and understood all the provisions of this service agreement and that there are no other verbal or written agreements, representations and promises made to or with me by any person (whether your servant, employee, agent or otherwise) relating to this service agreement; (b) I am aware that the identification of issues raised about my vehicle will require verification by you through various means including by the use of manufacturer-approved/provided diagnostic tools; (c) time taken to verify the issues raised, to identify the cause of the issues raised and to repair the vehicle is dependent on the nature and complexity of the

☐ I have read the consent provisions relating to the collection, use, disclosure, retention, access, management and transfer of my personal data in the above terms and conditions and unconditionally agree with them

☐ I agree that you, the Sime Darby Motors Group companies in Singapore and/or their service providers may call me or send marketing messages to me about your or their products and services including via SMS, MMS, fax, mailers or email


Please mark accordingly

Customer's Signature & Date
Name & NRIC of 3rd party
for and on behalf of Customer

☐ Credit ☐ Credit Card

☐ Customer has been reminded to
remove all valuables from the car

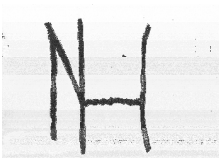
Fuel: R F



Repair Order shows the checks done to the Insured Vehicle on 22 August 2023 at Performance Motors Limited located at 303A Alexandra Road, Singapore 159941 (red arrows). It was found that the EGR was in good condition (black arrows).

Conclusion

26. Having investigated and technically analysed the damages 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 inside the engine compartment, somewhere at the right frontal portion. The wirings were original factory wirings of the Insured Vehicle.
27. 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.
28. There were no modification(s) or additional electronic and/or electrical component(s) fitted on the Insured Vehicle at the time of our inspection of the Insured Vehicle.
29. 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 vehicle as the Insured Vehicle 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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