

Your Ref: M2404769
Our Ref: CS/TMI24090111/Pqp3e2

17th August 2024

M/s TOKIO MARINE INSURANCE SINGAPORE LTD

20 MCCALLUM STREET #09-01

TOKIO MARINE CENTRE

Singapore 069046

(Motor Claims Department)

**TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE
INSURED VEHICLE GBK 6307U ON 2nd August 2024**

1. We refer to your letter dated 6th August 2024 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle GBK 6307U (herein referred to as “**Insured Vehicle**”) are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 6th September 2024 at the premises of MTM Performance Garage located at 48 Toh Guan Rd E, #01-138, Enterprise Hub, Singapore 608586.
4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	:GBK 6307U
Make / Model	:NV200 DX 1.6 Auto
Chassis No	: VM20160428
Year of Registration	: 28 SEP 2020
Mileage	: N.A (wiring affected)

5. The Insured Vehicle was observed to have sustained severe fire damage all around. Its engine compartment and interior compartment was completely burnt. Rust had accumulated around the whole Insured Vehicle as a result of exposure to environmental condition for a period of time. See photos 1 – 6 below.



Photo 1 shows the general view of the front portion of the Insured Vehicle at the time of our inspection. The Insured Vehicle was observed to have sustained extensive fire damage all around. Its engine compartment and interior compartment were completely burnt. Rust had accumulated all around the Insured Vehicle as a result of exposure to environmental condition for a period of time.



Photo 2 shows the general view of the right body of the Insured Vehicle at the time of our inspection. The Insured Vehicle was observed to have sustained extensive fire damage all around. Rust had accumulated all around the Insured Vehicle as a result of exposure to environmental condition for a period of time.



Photo 3 shows the general view of the left body of the Insured Vehicle at the time of our inspection. The Insured Vehicle was observed to have sustained extensive fire damage all around. Rust had accumulated all around the Insured Vehicle as a result of exposure to environmental condition for a period of time.



Photo 4 shows the general view of the rear portion of the Insured Vehicle. The Insured Vehicle was observed to have sustained extensive fire damage all around. Rust had accumulated all around the Insured Vehicle as a result of exposure to environmental condition for a period of time.



Photo 5 shows the general view of the interior compartment of the Insured Vehicle at the time of our inspection. Its interior compartment was completely burnt as a result of the fire.



Photo 6 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.

6. At the time of inspection, we did not find any unusual skeletal remains which could have suggested that there was possible modification(s) on the Insured Vehicle.
7. From the Singapore Accident Statement, which was made by Mr Chan Hua Hui Hector (herein referred to as **“Mr Chan”**); we note that the fire to the Insured Vehicle had started at a time when it was driven. Mr Chan was first alerted of the fire when he saw smoke emitting from the interior front dashboard of the Insured Vehicle’s cabin.
8. We managed to speak to Mr Chan on 2nd February 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.
9. According to Mr Chan, on 6th September 2024, Mr Chan had just ended work at NEX shopping centre and was driving the Insured Vehicle towards home at Chinatown. Upon exiting the carpark of NEX shopping centre, he came to the junction and stopped at the junction of the traffic light shortly after he saw white smoke emitting from the front right dashboard area and smell smoke right in the interior cabin of the Insured Vehicle, he subsequently turned off the ignition and proceed to find the cause.
10. Mr Chan alighted the Insured Vehicle and then he saw flames started to form along the wirings located at the driver’s right portion. Mr Chan informed that passerby passed him bottled water and he started to put out the fire however, the fire was too strong, and it had started to spread to the other parts of the Insured Vehicle, he proceeded to called for SCDF assistances and they arrived within 20 minutes and the fire was put out shortly. He then had his statement was taken by the SCDF and Police officers and proceeded to contact his company, and they arranged for towing arrangements.
11. The tow truck arrived, and the Insured Vehicle was towed to MTM Performance Garage. Mr Chan made an insurance report on 21st August 2024 at 1327 hours.
12. Mr Chan mentioned that he not experienced any other mechanical or electrical/electronic problems with the Insured Vehicle till the day of the incident. He also mentioned that there were neither warning lights displayed nor was there an abnormal rise in temperature throughout the period the Insured Vehicle and when driven, prior to the fire.

13. With regards to the history of the Insured Vehicle, we were able to gather from Mr Chan that the Insured Vehicle was bought brand new 5 years ago. The Insured Vehicle is a company vehicle. Mr Chan informed us that he is the sole driver of the Insured vehicle since the day he was handed the keys 3 weeks ago.
14. Pertaining to the maintenance aspect, Mr Chan informs that he had not sent the Insured Vehicle for servicing however, the last periodical servicing was conducted on 2nd April 2024, about 3 months ago and they had provided us with the latest servicing record and informed that there was no major overhaul done or modifications done to the Insured Vehicle.



MTM PERFORMANCE GARAGE
48 Toh Guan Road East,
Enterprise Hub, #01-138/139/140
Singapore 608586
ROC:202230215G

INVOICE

INV-000014

Bill To
CHUAN HONG SENG TRADING

Subject :
GBK6307U NISSAN NV200

→ Invoice Date : 02 Apr 2024
Terms : Net 30
Service Advisor : Daniel
→ VRN : GBK6307U
Mileage : 114170

S/N	Item & Description	Qty	Amount
1	SERVICING PACKAGE 5L 10W40 ENGINE OIL WITH OIL FILTER →	1.00	65.00
2	CHANGE AUTO OIL	1.00	98.00
Sub Total			163.00
Total			SGD163.00

Notes

Thanks for your business! Looking forward to see you here again!
Payment Mode: CASH / PAYNOW / BANK TRANSFER / CREDIT CARD
Bank Account: UOB 388-325-916-3 / PayNow: 202230215G
Please indicate your VRN or Invoice Number when making payment.
*Do take note that payment by credit card will incur an additional of 3%.



Please scan QR code for payment

Investigation and Technical Analysis

15. Based on the circumstances for this particular case, the fire appears to have originated from the interior cabin of the Insured Vehicle, somewhere around the driver's portion and had spread to the whole vehicle. 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 of its front right portion.

16. 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 whole vehicle, in the immediate vicinity of where these whitish burn marks were found, would also support our findings of where the fire had affected the Insured Vehicle. See photo 7 and 8 below.



Photo 7 shows the exterior of the front right portion of the Insured Vehicle at the time of our inspection. The high heat intensity burn marks (whitish burn marks) and rust that had development found on the exterior surface of the bonnet indicates that the fire had originated from the front right portion of the Insured Vehicle.



Photo 8 shows the front right fender of the Insured Vehicle at the time of our inspection. The High heat intensity burn marks (whitish burn marks) and rust that had development found on the exterior surface of the front right fender indicates that the fire had originated from the front right portion of the Insured Vehicle.

17. Upon closer examination of the cabin interior right portion of the Insured Vehicle which was where the fire had started, we had observed that the front driver's portion of the engine compartment had sustained a stronger high heat intensity burn mark as compared to the surrounding areas of the engine compartment.
18. We had also found broken copper wirings and traces of greenish residue on these wirings harnesses that were leading from the battery to the electrical components in the cabin of the Insured Vehicle. This due likely been where the fire had started from.
19. The wirings were original wirings fitted from the manufacturer. 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 the oxidation as a result of chemical reaction involving the copper wires and the broken copper wiring was due to the intense heat generate from the short circuit that had caused it to break off. 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 9 - 11 below.



Photo 9 shows the general view of the driver interior compartment of the Insured Vehicle at the time of our inspection. We had observed that the driver's right portion (circled) had sustained a stronger high heat intensity burn marks.



Photo 10 shows the close up view of the driver interior compartment of the Insured Vehicle at the time of our inspection. We had observed that the driver's right portion we had also found traces of greenish residue on the wirings harnesses (circled) leading from the battery to the electrical components in the cabin of the Insured Vehicle.

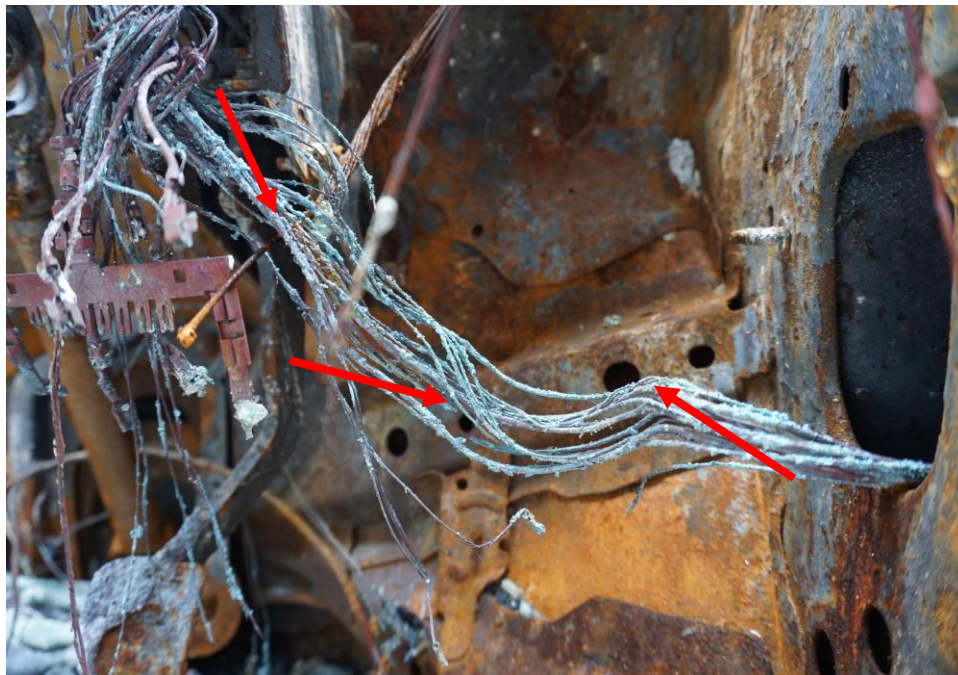


Photo 11 shows the close up view of the driver interior compartment of the Insured Vehicle at the time of our inspection. We had also found traces of greenish residue on the wirings harnesses and the broken copper wirings this is due to the intense heat generate from the short circuit that had likely been where the fire had started from (arrowed) leading from the battery to the electrical components in the cabin of the Insured Vehicle.

Incident Scene Photographs

20. During the course of our investigations, we were able to obtain coloured photographs showing the Insured Vehicle at the incident before and after the fire was extinguished by SCDF personnel. These were provided to us by Mr Chan.
21. Our examination of these photographs revealed that the fire had started from the front of the Insured Vehicle. The photographs had also showed the Insured Vehicle on fire and similar extent of damage and burn pattern to the Insured Vehicle as per what we had observed during our physical inspection of the Insured Vehicle. Apart from the aforesaid; there was no further notable information that could be gathered from these photographs. See photos 12 and 13 below which were provided to us by Mr Chan.



Photo 12 shows the Insured Vehicle on fire and the fire observed to be emitting from the interior of the Insured Vehicle. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Chan, location when the fire broke out.

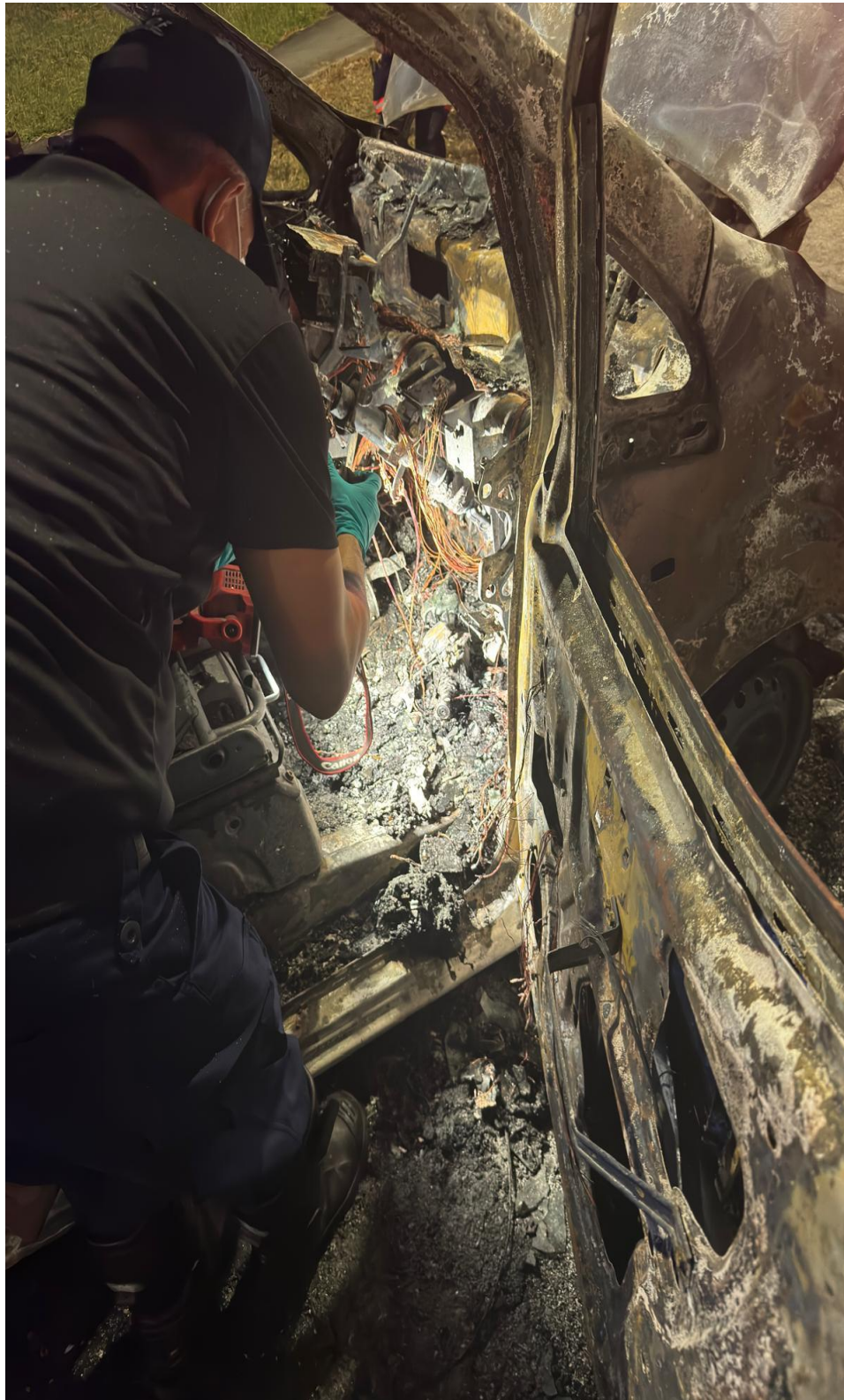


Photo 13 shows the SCDF officers on scene investigating the Insured Vehicle after the fire was put out. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Chan, location when the fire broke out.

22. 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 Mr Chan had mentioned to us that the Insured Vehicle was driven and the engine was able to be turned off.
23. 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 occurred as Mr Chan was driving the Insured Vehicle. The location where the Insured Vehicle caught fire was also observed to be not at a secluded location.
24. 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 original wiring harnesses wirings that were found leading from the battery assembly to the electrical components on the Insured Vehicle, which was earlier discussed in paragraph 18 above.
25. Our checks with both local and international bodies and associations had also revealed that at the time of writing this report, there is no manufacturer recall of similar make and model vehicle as the Insured Vehicle that may possibly be related to fire being originated from the engine or interior compartment of the Insured Vehicle. See search result from LTA below.

1

2

Vehicle Recall Details

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

Owner ID Type Business	Owner ID 700K
Vehicle No. GBK6307U ←	Make/Model NISSAN/ NV200 DX 1.6 AUTO ←
Engine No.: HR16175277D	Chassis No.: VM20160428
Recall Details: No Recall Detail records ←	

Conclusion

26. 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 nature. For this particular case, the fire had originated along the original wiring harnesses leading from the battery to the electrical components 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 was 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 to similar make and model vehicle as the Insured Vehicle that may possibly be related to this incident.



Sherwin Beh
Technical Investigator



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

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