

Your Ref: M2100440
Our Ref: CS4/TMI21001430/P

4th February 2021

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 GBD 8221G ON 21th January 2021**

1. We refer to your letter dated 29th January 2021 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle GBD 8221G (herein referred to as “**Insured Vehicle**”) are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 1st February 2021 at the premises of Think One Autocare Pte Ltd located at 60 Jalan Lam Huat #02-32, 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.	: GBD 8221G
Make / Model	: NV200 1.5LMT ABS AIRBAG 2WD 6DR EURO 5
Chassis No	: VSKYBAM20Z0096837
Year of Registration	: 28 MAY 2015
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 front and centre portion of the 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 over the front and centre portion of 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 over the front and interior compartment of 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 over the front and centre portion of 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 over the front and centre portion of 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.

Investigation and Technical Analysis

7. 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 front 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 left engine compartment portion.
8. 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- 10 below.



Photo 7 shows the exterior of the front bonnet 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 portion of the Insured Vehicle.



Photo 8 shows the underside of the front bonnet cover 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 portion of the Insured Vehicle.



Photo 9 shows the exterior of the centre 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 indicates that the fire had originated from the frontal portion of the Insured Vehicle.



Photo 10 shows the interior of the Insured Vehicle at the time of our inspection. The High heat intensity burn marks (whitish burn marks) and rust that had developed on the interior surfaces of the Insured Vehicle due to the fire that had spread all around..

9. Upon closer examination of the front engine compartment and cabin interior 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.
10. 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.
11. 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 11 - 16 below.



Photo 11 shows the general view of the engine compartment of the Insured Vehicle at the time of our inspection. We had observed that the front driver's portion (circled) of the engine compartment had sustained a stronger high heat intensity burn marks as compared to the surrounding areas of the engine compartment



Photo 12 shows the close up view of the engine compartment of the Insured Vehicle at the time of our inspection. We had observed that the front driver's portion of the engine compartment had sustained a stronger high heat intensity burn marks as compared to the surrounding areas of the engine compartment and we had also found traces of greenish residue on the wirings harnesses (arrowed) leading from the battery to the electrical components in the cabin of the Insured Vehicle.

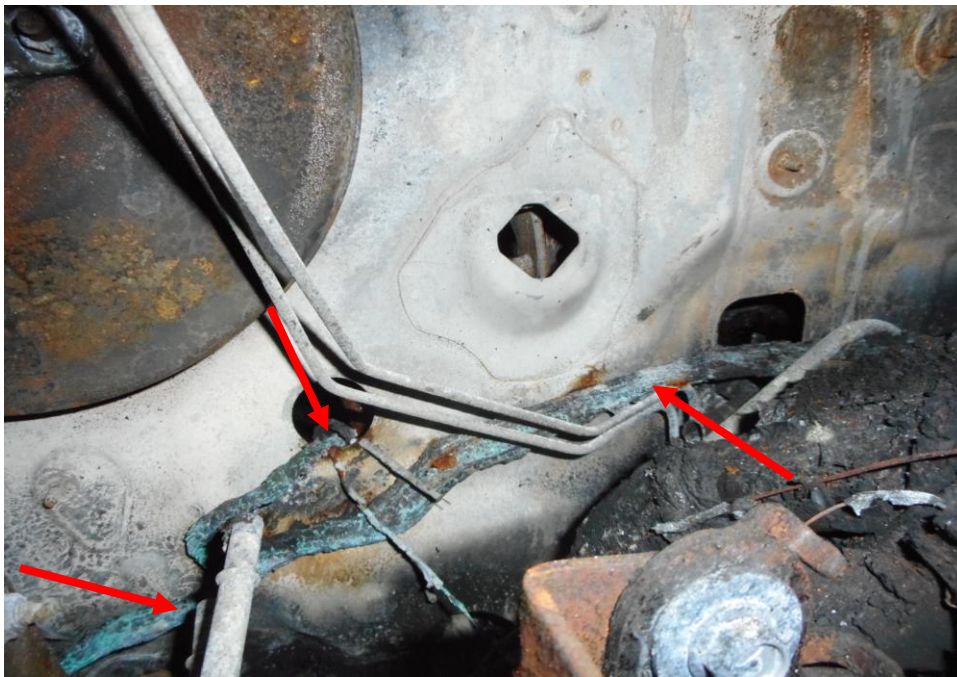


Photo 13 shows the close up view of the engine compartment of the Insured Vehicle at the time of our inspection. We had also found traces of greenish residue on the wirings harnesses (arrowed) leading from the battery to the electrical components in the cabin of the Insured Vehicle.



Photo 14 shows the general view of the interior compartment of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle has affected its engine and interior compartment. Its interior dashboard (circled), radio head unit (arrowed), various original wiring harnesses was amongst the parts in the compartment that were found to have been affected as a result of the fire.



Photo 15 shows the close up view of the 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.




Photo 16 shows the close up view of the 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 generated from the short circuit and this had likely been where the fire had started from and spread to the whole vehicle (arrowed)

12. From the Singapore Accident Statement, which was made by Mr Mohamed Irman Bin Mohamed Misran (herein referred to as **“Mr Irman”**); we note that the fire to the Insured Vehicle had started at a time when it was parked stationary at the parking lot. Mr Irman was first alerted of the fire when he saw smoke emitting from the interior front dashboard of the Insured Vehicle’s cabin.
13. We managed to speak to Mr Irman 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.
14. According to Mr Irman, on 21st January 2021, Mr Irman parked the Insured Vehicle at a parking lot of Block 311 Ubi Avenue 1. He mentioned that he was doing deliveries around the area and had arrived early for the allocated delivery time slot so he choose to parked the Insured Vehicle. During parking of the Insured Vehicle he realised that the Air-Conditioner unit had turned off by itself, however he proceed to park the Insured Vehicle and turned off the ignition.

15. Mr Irman alighted the Insured Vehicle and proceeded make a phone call to the customer beside the Insured Vehicle, just as he returned back into the Insured Vehicle to retrieve some documents he noticed smoke and fire emitting from the driver side dashboard and foot well. Subsequently, he when to retrieve water from the bottles kept behind and tried to put off the fire, however the fire was getting too strong so he had to evacuate away from the Insured Vehicle and request for SCDF assistance.
16. The SCDF officers arrived within 10 minutes and fire was extinguished within 5 minutes. Mr Irman then had his statement was taken by the SCDF and Police officers.
17. Mr Irman subsequently contacted his leasing company (Think one) as the Insured Vehicle was rented and the rental company made towing arrangements. The tow truck arrived and the Insured Vehicle was towed to Think One Autocare Pte Ltd. The authorised workshop and the Insured Vehicle's leasing company. Mr Irman made an insurance report on the next day at 1142 hours.
18. Mr Irman mentioned that he only experienced the shutting off of the Air-conditioner unit prior to the fire. However, had 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.
19. With regards to the history of the Insured Vehicle, we were able to gather from Mr Irman that the Insured Vehicle was leasing from Think One Autocare Pte Ltd 7 months ago and was pre-owned. The leasing company (Think One Autocare Pte Ltd) is the registered owner of the Insured Vehicle. Mr Irman informed us that he is the sole driver of the Insured vehicle since the day he leased the Insured Vehicle 7 month ago.

20. Pertaining to the maintenance aspect, Mr Irman sends the Insured Vehicle for periodical servicing. We have contacted the leasing company 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.



THINK ONE AUTOCARE PTE LTD

60 JALAN LAM HUAT, #02-32 CARROS CENTRE, SINGAPORE 737869
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Email: enquiry_autocare@thinkone.com.sg

WORK ORDER

JO202101-0123

CLIENT NAME : THINK ONE LEASING PTE LTD

ATTENTION :

ADDRESS : 20 UBI ROAD 4 #02-06 THINK ONE BUILDING
SINGAPORE 408622

Tel : 68443300/96303300 Fax: H/P : 68443300/96303300

WORK ORDER DATE : 12/01/2021

CHECK IN DATE : 09/01/2021

CHECK IN TIME :

REQUIRED DATE :

INCHARGE ID : CHUNG

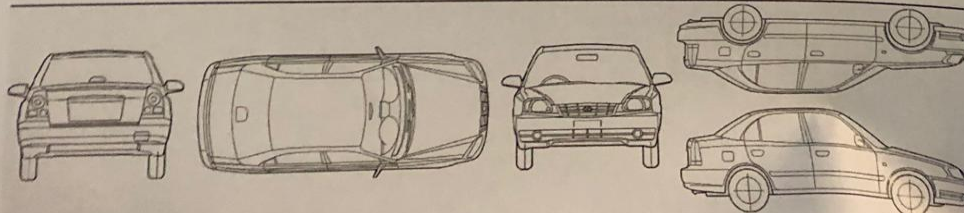
REG NO : GBD8221G **MAKE :** NISSAN **MODEL :** NV200 1.5L MT **YEAR :**

TYPE : **ENGINE NO :** K9KC400D054441 **CHASSIS :** VSKYBAM20Z0096 **MILEAGE :** 313,996

SERVICES :

REPAIR/SERVICES	SERVICING	QTY
STCK C-2516	OIL FILTER	1
STCK A-6128	AIR FILTER	1
LABR LABOUR	LABOUR CHARGE FOR SERVICING	1
STCK LMC MXESP15W40	ENGINE OIL - MOBIL DELVAC MX ESP 15W40	5

NOTES:



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Incident Scene Photographs

21. 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 Irman.
22. 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. There were one Vehicles that were parked beside the Insured Vehicle that had also sustained fire damage from the burning of the Insured Vehicle. Apart from the aforesaid; there was no further notable information that could be gathered from these photographs. See photos 17 - 22 below which were provided to us by Mr Irman.



Photo 17 shows the Insured Vehicle at the parking lot when the fire had just started up, 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 Irman, location when the fire broke out.



Photo 18 shows the Insured Vehicle at the parking lot when the fire had gone out of control, there was a vehicle parked right next to it and had been affected by the fire from the Insured Vehicle. 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 Irman, location when the fire broke out.



Photo 19 shows the SCDF officers arriving on scene and preparing to put out the fire. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Irman, location when the fire broke out.



Photo 20 shows the SCDF officers on scene putting out the fire. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Irman, location when the fire broke out.



Photo 21 shows the SCDF officers on scene investigating the scene 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 Irman, location when the fire broke out.



Photo 22 shows the exterior of the Insured Vehicle after the fire was put out. The high heat intensity burn marks (whitish burn marks) and rust that had development found on the exterior surface 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 Irman, location when the fire broke out.

23. 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 Irman had mentioned to us that the Insured Vehicle was driven and was park stationary prior to the fire incident.
24. 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 Irman was driving the Insured Vehicle. The location where the Insured Vehicle caught fire was also observed to be not at a secluded location.
25. 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 10 above.
26. 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.

Vehicle Recall Details

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

Owner ID Type Company	Owner ID 609M
Vehicle No. GBD8221G ←	Make/Model NISSAN/ NV200 1.5L MT ABS AIRBAG 2WD 6DR EURO 5
Engine No.: K9KC400D054441	
Chassis No.: VSKYBAM20Z0096837	
Recall Details: No Recall Detail records	

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Conclusion

27. 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.
28. 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.
29. 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.

30. 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.

31. We have applied and pending for the SCDF fire investigation report. The report will be made known to you once we have received it.



Sherwin Beh

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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