

Your Ref: s58nqhgWcY
Our Ref : CI/III23001781/P

16th February 2023

M/s India International Insurance Pte. Ltd.

64 Cecil Street #04, #05
IOB Building
Singapore 049711

**TECHNICAL INVESTIGATION REPORT OF WARRANTY CLAIM INVOLVING
THE INSURED VEHICLE SNC 636J ON 15th December 2022**

1. We refer to your letter dated 15th December 2022 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of abnormalities to the insured vehicle SNC 636J (herein referred to as “**Insured Vehicle**”) are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 15th December 2022 at the premises of AutoSprint Pte Ltd located at 24 Leng Kee Rd, #07-01, Singapore 159096
4. A physical inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: SNC 636J
Make / Model	: MERCEDES BENZ E300 MILD HYBRID
Chassis No	: W1K2384832F163834
Year of Registration	: APRIL 2021
Mileage	: 16,233KM

5. The complaint on the Insured Vehicle was noted be an error and warning message light regarding the electronic 48V battery Systems (ISG) for the integrated starter generator system. There is a recommendation by the workshop to replace 48V battery. The vehicle was observed to be unaffected by any signs of accident.

6. Prior to our inspection, the workshop had informed us that they had already conducted check of the components and the electrical systems of the 48V battery Systems (ISG) for the integrated starter generator system and visually all components was intact without any damage. However, the issue was still present during our inspection of the Insured Vehicle. See photos 1 – 9 below.



Photo 1 shows the mileage of the Insured Vehicle recorded at the time inspection at 16,233KM



Photo 2 shows the general view of the front portion of the Insured Vehicle at the time of our inspection. The Insured Vehicle is observed to be unaffected by any signs of accident.



Photo 3 shows the general view of the engine portion of the Insured Vehicle at the time of our inspection. The engine compartment is observed to be unaffected by any signs of accident.

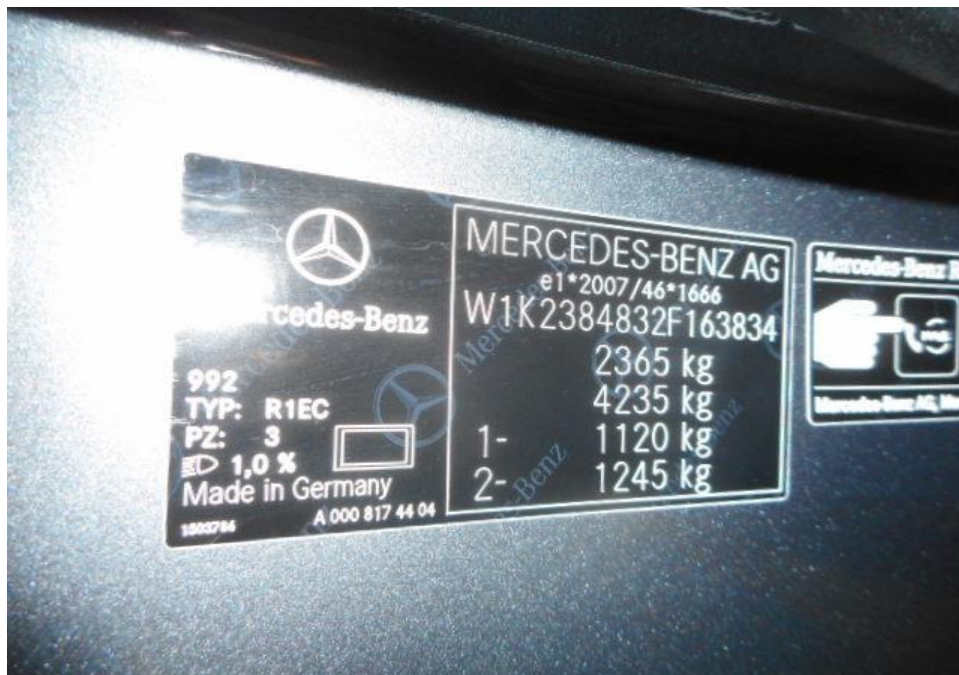


Photo 4 shows the chassis number of the Insured Vehicle at the time of our inspection.



Photo 5 shows the general view of the 48v battery and its components in the engine compartment portion of the Insured Vehicle at the time of our inspection. The 48v battery and its components is observed to be unaffected and by any signs of accident.




Photo 6 shows the close up view of the 48v battery and its components (arrowed) in the engine compartment portion of the Insured Vehicle at the time of our inspection. The 48v battery and its components is observed to be unaffected and by any signs of accident.



Photo 7 shows the close up view of the 48v battery and its components (arrowed) in the engine compartment portion of the Insured Vehicle at the time of our inspection. The 48v battery and its components is observed to be unaffected and by any signs of accident.



Photo 8 shows the conducted ECU diagnosis of the Insured Vehicle at the time of our inspection. There was an electronic error (arrowed) on the 48v battery integrated starter system (ISG) of the Insured Vehicle.

XENTRY  **Mercedes-Benz**

N83/1 - DC/DC converter (DDW) ✓

Model	Part number	Supplier	Version
Hardware	000 901 46 09	Hella	17/38 000
Software	000 902 30 55	Hella	19/10 000
Boot software	---	---	16/42 000

Diagnosis identifier: 000011 Control unit variant: DCDC48_222_Variante_00 0011_D1_6

LIN: G1/3 - 48-V on-board electrical system battery (48 V LIB) ←

Model	Part number	Supplier	Version
Hardware	000 901 45 09	Unidentified	17/43 000
Software	000 902 12 60	Deutsche Accumotive GmbH & Co KG	19/46 000
Boot software	---	---	19/50 000

Diagnosis identifier: 00000C Control unit variant: LIB48_222_Variante_000 012

Fault	Text	Status
B183319	The battery for the 48V on-board electrical system has a malfunction. The limit value for current has been exceeded. ←	S
	Name	First occurrence
	Frequency counter	---
	Main odometer reading	16208.00km
	Number of ignition cycles since the last occurrence of the fault	13.00
B183349	The battery for the 48V on-board electrical system has a malfunction. There is an internal electrical fault. ←	A+S
	Name	First occurrence
	Frequency counter	---
	Main odometer reading	16224.00km
	Number of ignition cycles since the last occurrence of the fault	0.00
B183371	The battery for the 48V on-board electrical system has a malfunction. The actuator is blocked.	A+S
	Name	First occurrence
	Frequency counter	---
	Main odometer reading	16224.00km
	Number of ignition cycles since the last occurrence of the fault	0.00

S=STORED, A+S=CURRENT and STO

48 V on-board electrical system battery (48 V LIB)

Photo 9 shows the conducted ECU diagnosis of the Insured Vehicle at the time of our inspection. There was an electronic error (arrowed) on the 48V battery of the Insured Vehicle.

7. 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 abnormalities being originated from the 48V battery Systems (ISG) 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 Singapore NRIC	Owner ID 012F
Vehicle No. SNC636J ←	Make/Model MERCEDES BENZ/ E300 PREMIUM AMG LINE NIGHT ED CABRIOLET
Engine No.: 26492030383492	Chassis No.: W1K2384832F163834 ←
Recall Details: No Recall Detail records ←	

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Recall details. Shows the vehicle recall results retrieved from LTA's website. There was no recall on the Insured Vehicle at the time of incident.

Conclusion

8. We did not find any evidence which had suggested that the cause of abnormalities to the Insured Vehicle was due to poor maintenance and/or recurring problem.
9. The recommendation to replace the 48V battery at \$3,654.05 is justifiable as all the relevant checks has been conducted.



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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