



Your Ref: S9M01SZX
Our Ref : CI/ASM19015583/P

1st October 2019

M/s AXA Insurance Pte. Ltd.
8 SHENTON WAY #24-01
AXA TOWER
SINGAPORE 068811
(Motor Claims Department)

**TECHNICAL INVESTIGATION REPORT OF MECHANICAL INCIDENT
INVOLVING THE INSURED VEHICLE XE 1588D ON 01 JULY 2019**

1. We refer to your letter dated 24 July 2018 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of damage to the insured vehicle XE 1588D (herein referred to as "**Insured Vehicle**") are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 12th September 2019 at the premises of Focus Auto (herein referred to as "**Focus Auto**") located at Auto Bay 1 Kaki bukit avenue 6, #02-50 Singapore 417883.
4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: XE 1588D
Make / Model	: IVECO TRAKKER DIESEL AUTO AT260A4 (EURO V)
Chassis No	: WJME2NSS40C265667
Year of Registration	: APRIL 2016
Mileage	: 231,622KM

5. The Insured Vehicle was noted to have sustained mechanical damage that was confined to its rear portion. The mechanical damage was observed to be most severe at its rear tipper portion. The driver cabin of the Insured Vehicle was relatively unaffected by the damage except for the rear tipper portion. The rear tipper portion of the Insured Vehicle was affected as a result of the mechanical damage. See photos 1 – 3 below.



Photo 1 shows the front view of the Insured Vehicle at the time of our inspection. The driver's cabin of the Insured Vehicle was relatively unaffected by the mechanical damage.



Photo 2 shows the right side view of the Insured Vehicle at the time of our inspection. The rear tipper of the Insured Vehicle was observed to be tilted to the right side. (circled).



Photo 3 shows the rear left view of the Insured Vehicle at the time of our inspection. The rear tipper of the Insured Vehicle was observed to be tilted to the right side. (circled).

6. 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

7. For this particular case, the mechanical damage appears to have originated at the centre tipper portion of the Insured Vehicle, where the tipper container and chassis are located at and the damage can be observed to be at the hoisting assembly of the Insured Vehicle. This can be determined from the damage of the hoisting frame components which were observed to have been bended as a result of the accident. See photos 4 - 6 below.



Photo 4 shows the centre tipper portion of the Insured Vehicle, where the hoisting assembly and hoisting frame are located and tilted to one side and the damage was confined to these particular areas (arrowed).



Photo 5 shows a general view of the hoisting frame. The various components of the frame assembly were observed to have been tilted and bend out of place (circled).

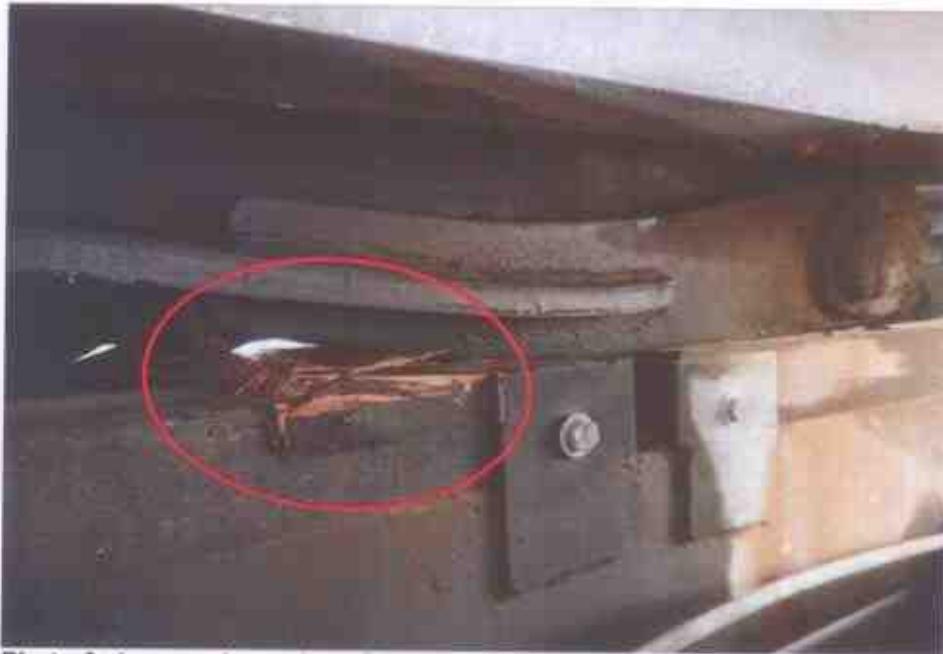


Photo 6 shows a closer view of the hoisting frame. The components of the frame assembly were observed to have been tilted, bend out of place and contacted and causing damage onto the chassis (arrowed) of the Insured Vehicle.

8. Upon closer examination of the centre tipper portion of the Insured Vehicle where the damage was confined to, we had found traces of hydraulic fluid residue on the Insured Vehicle's chassis leading from the hydraulic cylinder as well as on the hoisting frame of the of the Insured Vehicle. The leak of hydraulic fluid leaks is likely due to the broken seal in the hydraulic cylinder. This physical evidence would then appear to suggest that the cause of damage to the Insured Vehicle could have possibly been due to mechanical malfunction in nature. See photos 7 - 9 below.



Photo 7 shows the front general view of the hydraulic cylinder of the Insured Vehicle. We observed traces of hydraulic fluid residue on the hydraulic cylinder and the various components around it (circled). This physical evidence would then appear to suggest that the cause of damage to the Insured Vehicle could have possibly been due to mechanical malfunction in nature.



Photo 8 shows the front close up view of chassis of the Insured Vehicle. We observed traces of hydraulic fluid residue on the chassis itself and the various components around it (circled). This physical evidence would then appear to suggest that the cause of damage to the Insured Vehicle could have possibly been due to mechanical malfunction in nature.



Photo 9 shows the rear close up view of the hydraulic cylinder and the chassis of the Insured Vehicle. We observed traces of hydraulic fluid residue on the hydraulic cylinder, the chassis itself and the various components around it (circled). This physical evidence would then appear to suggest that the cause of damage to the Insured Vehicle could have possibly been due to mechanical malfunction in nature.

9. We managed to speak to Mr Shi on 12th September 2019 We were able to gather information pertaining to the incident as well as information pertaining to the history of the Insured Vehicle.
10. From the Singapore Accident Statement which was made by Mr Shi Jianjun (herein referred to as "Mr Shi"), we note that the incident to the Insured Vehicle had started at a time when he was unloading. Mr Shi was first alerted of the incident when he was in the process of unloading the load off from the Insured Vehicle.
11. The Insured Vehicle belongs to Orient Natural Resources Pte Ltd which was the company Mr Shi is working in. Mr Shi uses the Insured Vehicle for delivery purposes. He is the only driver of the Insured Vehicle. According to Mr Shi, on the day of the incident he was driving the Insured Vehicle alone from the company's material plant located at Punggol to the G&W cement plant at Lor halus. He parked the Insured Vehicle stationary in the unloading bay of the cement plant.

12. He proceeded out of the cabin of Insured Vehicle to check that it is on even ground before proceeding back into the cabin of the Insured Vehicle to begin the process of unloading the material load that he was carrying on the Insured Vehicle. Moments into operation of tilting the tipper container to unload the material he realised that the tipper container started to sway down to the right side of the Insured Vehicle and coming to a halt. Mr Shi immediately stopped the operation of the unloading process, switched off the running engine and exited the Insured Vehicle and contacted his company for assistance.
13. Due to the remaining load left on the Insured Vehicle, Mr Shi's company arrangements to have an excavator send over to the site to remove the remaining material left in the Insured Vehicle and subsequently made towing arrangements to have the Insured Vehicle toll away once the removing of the remaining material was fully unloaded off. Two photos were taken at the incident scene by Mr Shi. See Photo 10 and 11 below.



Photo 10 shows the left view of the Insured Vehicle at the incident scene. We observed the loaded tipper container to be lifted up and swayed out of position towards the right side upon the unloading process of the material load from the Insured Vehicle (circled).



Photo 11 shows the right view of the Insured Vehicle at the incident scene. We observed the loaded tipper container to be swayed out of position and towards the right side upon the unloading process of the material load from the Insured Vehicle (circled).

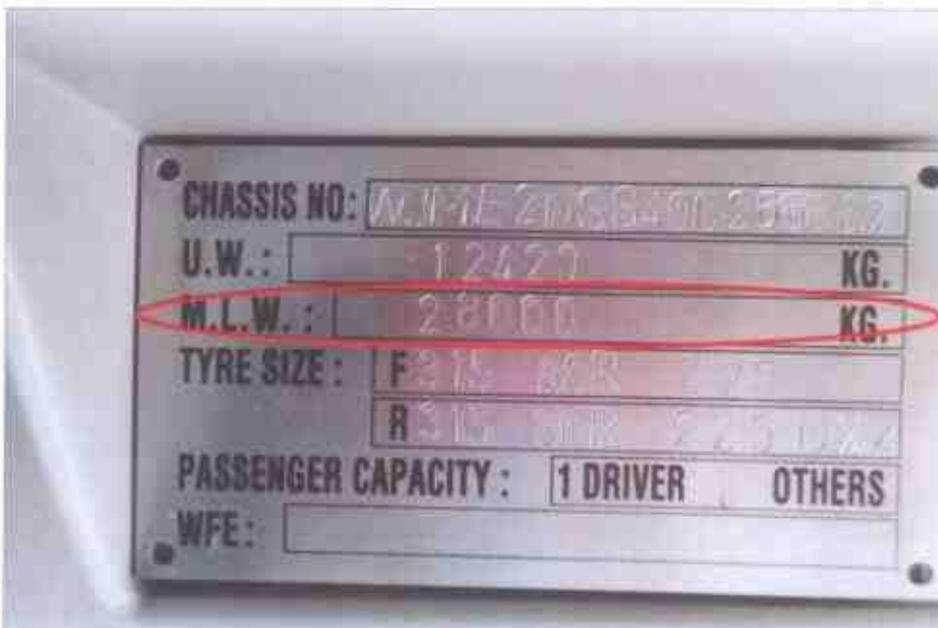


Photo 12 shows the chassis plate of the Insured Vehicle. The Max Laden Weight (M.L.W) permitted to carry by the Insured Vehicle is 28,000KG = 28 (Metric Ton) (circled).

14. The Insured Vehicle was towed to Focus Auto Pte Ltd. After upon the removal of the material load. Mr Shi made an insurance report later that week at 0913 hours.
15. Mr Shi mentioned that he had not experienced any 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 was driven.
16. With regard to the history of the Insured Vehicle, we were able to gather from Mr Shi's company that the Insured Vehicle was purchased new in 2016 and there has not been any major mechanical problem and/or electrical problem with the Insured Vehicle. And he is the sole driver of the Insured vehicle.



17. Pertaining to the maintenance and authorising to drive aspect, Mr Shi has just joined the company for 2 months and only started driving the Insured Vehicle for 2 weeks prior to the incident. However from the servicing records provided by his company. The last servicing was on 18th April 2019 prior to the incident and there have not been any major mechanical repairs and/or electrical repairs done the Insured Vehicle. And the company have provided the Letter of authorization for Mr Shi to operate the Insured Vehicle.
18. Mr Shi and company informed that since the purchased of the Insured Vehicle, there has not been any modification(s) done and/or any additionally fitted electrical or electronic component(s) to the Insured Vehicle.
19. Pertaining to the overloading aspect, Mr Shi's company has provided the material load job card that the Insured Vehicle was carrying when the incident happened. (Ref photo 12 below and Job card below)
20. 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 to similar make and model vehicle as the Insured Vehicle that may possibly be related to this incident. See search result from LTA below.



Auto
Consultants
Pte Ltd

Company Registration No. 199607198R

51 UBI AVE 1, #01-25 PAYA UBI INDUSTRIAL PARK, SINGAPORE 408933 TEL : (065) 62563561 FAX : (065) 67414108

ORIENT NATURAL RESOURCES PTE LTD

BLK 24 SEN MING LANE #02-04 MIDVIEW CITY SINGAPORE 570970

CO. REG. NO: 201015702G

EMAIL: ORIENT@ORIENTNR.COM

TEL: (05) 63903258

FAX: (05) 63709919

Date : 01/07/19

Dear Sir /Mdm

RE : Letter Of Authorization

We write to confirm that Mr Shi Junjun , Fin number: G5410970P was authorized to drive our vehicle XE1588D on 01/07/19 for work purpose

You can contact me or my administration department at 63583268, if you require any clarification.

Yours Sincerely,

Cecilia Lim



Letter of Authorization shows that Mr Shi is the authorized driver to pilot the Insured Vehicle of work purposes prior to the incident. (arrowed)



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MOTORVIVA PTE LTD
111 Tuas Avenue, #2, Singapore 630994 Tel: +65 6967 0088 Fax: +65 6967 0426
Website: www.motorviva.com.sg
Auto Rep. No. (Optional)



Service / Repair Report

SRR NO: **002828**

PART 1 TO BE FILLED BY CUSTOMER SERVICE AGENT/DEALER		
1. Customer Name: <i>David Seah</i>	11. MOTORVIVA LOCATION	
2. Approved Date: <i>18/04/2019</i>	12. Complete Operation	
3. Dealer Name: <i>Motorviva</i>	13. Make / Model / Year	
4. Service / Operation No:	14. Make / Model / Year / Mileage	
5. Service No: <i>111111</i>	15. Make / Model / Year / Mileage	
6. Mileage: <i>111111</i>	16. Make / Model / Year / Mileage	
7. Vehicle Description:	17. Make / Model / Year / Mileage	
8. Vehicle No: <i>111111</i>	18. Make / Model / Year / Mileage	
9. Vehicle Type:	19. Make / Model / Year / Mileage	
10. Operation / Repair / Job:	20. Make / Model / Year / Mileage	
11. Vehicle / Mileage / Date: <i>111111 / 111111 / 18/04/2019</i>	21. Make / Model / Year / Mileage	
12. Repair / Mileage / Date:	22. Make / Model / Year / Mileage	
23. Make of Component / Job Description		
<i>1. Front & Rear Wheel</i> <i>2. Lighting Assembly</i> <i>3. Periodical Servicing</i>		
PART 2 TO BE FILLED BY TECHNICIAN		
<i>1. Servicing done</i> <i>2. Check and replace engine oil</i> <i>3. Replace engine oil</i>		
PART 3 TO BE FILLED BY CLAIMANT		
PART 4 TO BE FILLED BY TECHNICIAN / OEM		
PART 5 TO BE FILLED BY CGA		

Service record shows the last periodical servicing done on the Insured Vehicle at Motorviva Pte Ltd. On 18th April 2019 (arrowed) prior to the incident, which had included the standard engine oil change and replacements of wear and tear parts. None was related to and could have caused the incident.



51 LUBI AVE 1, #01-25 PAYA UBI INDUSTRIAL PARK, SINGAPORE 408933 TEL : (065) 62563561 FAX : (065) 67414108

Orient Natural Resources Pte Ltd			
Plot 7, 74 Seletar North Link Singapore 797596 Tel: 6509 6998/9021 0012 Email: orient@orientnr.com			
Supply Contract Title:	SUPPLY OF FINE AGGREGATES TO THE HDB (BATCH 88).	DO No.:	HDB8801728
Supply Contract No.:	L/114/19	Delivery Date:	01/JUL/2019
Source Location ID:	S0068-FT-P8	Delivery Time:	17:45
Customer Name:	JIA YI CONSTRUCTION PTE. LTD.	Material:	SAND-CS
Building Contract No.:	D/479/17	Package Type:	8U
Building Part No.:	A	Gross WT(MT):	39.79
Building Contract Title:	BUILDING WORKS AT BIDADARI C10 TO C12 AND PARK	Tare WT(MT):	12.47
		Net WT(MT):	27.32 ←
Delivery Location ID:	GNW-LRHL-R-01	Seal Number (Cement Only)	
Delivery Vehicle No.:	XE1568D ←		
Delivery Address:	T3 LORONG HALUS - GNW		
PLEASE RECEIVE THE ABOVE MENTIONED GOODS IN GOOD CONDITION AND SIGN THE ANNEXED COPY IN ACKNOWLEDGEMENT.			
ISSUED BY:	RECEIVED BY:	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Jia Yi Construction Pte Ltd Bidadari C10-C12 CONTRACT NO.: D/479/17</p> <p style="text-align: center;">Delivered to: JAWA KARYA MHC Pte Ltd T3 Lorong Halus Singapore 538950 Tel: 6354 5186 / 8384 4385 Email: kccoadmin@jcw-group.com</p> </div>	
 DELIVERED BY:	 27 x 11.70 in		

Job card shows that The Maximum load that the Insured Vehicle was permitted to carry is 28 (Metric ton), and the load that it was carrying at the time the accident occurred was 27.32(Metric ton) which is well within the permitted load range as stated in the job card provided by the company. (arrowed)

Enquiry on Vehicle Recall - Vehicle Specific

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

Vehicle Owner Particulars	
Owner ID Type:	Company
Owner ID:	7020
Vehicle Details	
Vehicle Registration number:	XE1588D ←
Make:	IVECO
Vehicle Model:	TRAKKER DIESEL AUTO AT260T41 (EURO V)
Engine No.:	206356
Chassis No.:	WJME2N5S40C265567 ←
Recall Details	
No Recall Detail records	

Please do not use your browser's Back or Forward buttons as this may result in information loss



LTA Recall shows that there was no recall detail to the Insured Vehicle at the time of writing this report. (arrowed)

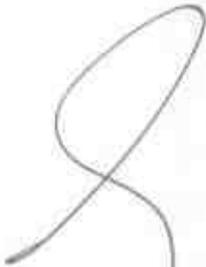
Conclusion

21. Having investigated and technically analysed the damages to the Insured Vehicle, we are of the view that the cause of damage to the Insured Vehicle was of mechanical malfunction. For this particular case, the mechanical malfunction had originated along the original factory fitted hoist cylinder from the Insured Vehicle.
22. We did not find any evidence which had suggested that the cause of damage to the Insured Vehicle was due to poor maintenance and/or recurring problem.
23. We did not find any evidence which had suggested that the cause of damage to the Insured Vehicle was due to overloading factor as the load it was carrying at the time of incident did not exceed the maximum load permitted.

24. 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.
25. 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.



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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